



Nagar Yuwak Shikshan Sanstha's

# Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

Hingna Road, Wanadongri, Nagpur - 441 110

NAAC Accredited with 'A' Grade

Ph.: 07104-242919, 242623, 242588

Website : www.ycce.edu E-mail : principal@ycce.edu

## Summary of 3.2.1


*Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)*

Year	2020-21	2019-20	2018-19	2017-18	2016-17
INR in Lakhs	31.32	34.99	73.75	45.38	33.83

### Supporting Documents

1. E copies of sanction letters of Government and non-Governmental agencies
2. First page of research base project reports



  
Principal  
Yeshwantrao Chavan  
College of Engineering  
Wanadongri Hingna Road,  
NAGPUR - 441110

## **Index-3.2.1**

**2017-18**

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**E copies of Sanction Letters of  
Government and Non-  
Governmental Agencies**

68  
3

SCIENCE & ENGINEERING RESEARCH BOARD (SERB)  
(Statutory Body Established Through an Act of Parliament : SERB Act 2008)

5 & 5A, Lower Ground Floor  
Vasant Square Mall  
Sector-B, Pocket-5  
Vasant Kunj  
New Delhi - 110 070

**Assistance to Professional Bodies and Seminar Symposia**

**File Number: SSY/2018/000238**

**Dated: 11-Apr-2018**

Subject: Application titled "ENVIRONMENTAL MANAGEMENT: CHALLENGES AND SOLUTION"

**Dear Dr. SHANTANU RAMKRISHNA KHANDESHWAR,**

It is to inform you that your proposal seeking for financial assistance under "Assistance to Professional Bodies & Seminar / Symposia Scheme" has been considered and recommended for the same. We are now agreed to provide **Rs 50,000/-** as partial grant-in-aid to the recommended application.

Kindly note that, no separate communication by post would be sent to you in this regard.

With kind regards,  
(Dr. Ramesh Vijayan)  
Scientist C  
Ph:

Email: seminar.symposia@serb.gov.in

**Dr. SHANTANU RAMKRISHNA KHANDESHWAR**  
**CIVIL ENGINEERING**

**Yeshwantrao Chavan College Of Engineering , Hingna Road Wanadongri, Nagpur, Maharashtra-441110**

No. G-27017/10/2018-KVI Div./446-450  
Government of India  
Ministry of Micro, Small & Medium Enterprises  
KVI-1 Section

Udyog Bhawan, New Delhi-110011

Dated 17.10.2018

To

**Pay & Accounts Officer,**  
Pay & Accounts office,  
Ministry of Micro, Small & Medium Enterprises,  
Nirman Bhawan, New Delhi.

**Sub: Release of funds of Rs. 14,99,900/- (Rupees fourteen lakh ninety nine thousand nine hundred only) to Yashwantrao Chavan College of Engineering (YCCE), Nagpur for the financial year 2018-19 under A Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship (ASPIRE).**

Sir,

I am directed to convey the sanction of the President of India to the release of Rs. 14,99,900/- (Rupees fourteen lakh ninety nine thousand nine hundred only) to Yashwantrao Chavan College of Engineering (YCCE), Nagpur for meeting the expenditure for setting up of a Technical Business Incubation Center (TBI) at District-Nagpur (Maharashtra) being a 1<sup>st</sup> instalment during the current financial year 2018-19 under A Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship (ASPIRE).

2. The Grant-in-Aid will be regulated in accordance with the provisions contained in the Scheme/Guidelines. The Grant-in-Aid is also subject to the provisions contained in Chapter (9) of the General Financial Rules, 2017, as amended from time to time, read with the Government of India's decisions incorporated there under, any other guidelines which may be issued in this regard and in particular to the following conditions: -

(i) The funds shall be utilized for setting up a TBI at District-Nagpur (Maharashtra) approved in the 9<sup>th</sup> Meeting of SSC held on 01.08.2018. The Financial Summary of the TBI is as follows:-

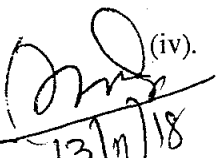
Sr. No.	Area of Operation	Financial Assistance Approved by 9 <sup>th</sup> Scheme Steering Committee held on 01.08.2018	1 <sup>st</sup> installment of 50% of Financial Assistance Sanctioned as per Scheme Guidelines	Funds earmarked for Gen.
1.	District-Nagpur (Maharashtra)	Rs. 29,99,845/-	Rs. 14,99,900/-	Rs. 14,99,900/-

(ii) The funds released will be utilized subject to the condition that actual utilization of funds will be carried out as per detailed scheme guidelines to be operationalized.

(iii) The grantee institution shall maintain separate subsidiary bank accounts for the Government Grants received and utilized. In addition a separate Bank Account shall be maintained for the Government Grants. The bank account should be the same which was authorized for operation at the time of registration under the 'Public Finance Management System' (PFMS) of the Ministry of Finance.

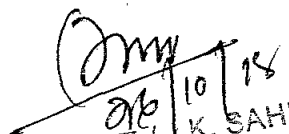
(iv) YCCE should mandatorily use Expenditure, Advance and Transfer (EAT) Module of PFMS as per D/o Expenditure's instructions. Further, release of funds will be processed with the expenditure/balance details available in PFMS.

Conti—p/2

  
13/11/18  
जे. के. साहू / J.K. SAHU  
अवर सचिव / Under Secretary  
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय  
Ministry of Micro, Small and Medium Enterprises  
भारत सरकार, नई दिल्ली  
Govt. of India, New Delhi

- (v). The funds released will be utilized by YCCE for the purpose indicated in Para 2(i) above.
- (vi). YCCE shall furnish performance-cum-achievement report on or before 31.12.2018 to the Sanctioning Authority (Secretary, MSME).
- (vii). YCCE should maintain a register of permanent and semi-permanent assets acquired wholly or mainly out of the above grant in the prescribed format and copy thereof should be furnished to the Ministry.
- (viii). Assets acquired wholly or substantially out of Government Grant shall not be disposed of without obtaining the prior approval of the sanctioning authority Grants.
- (ix). The accounts of YCCE shall be opened for inspection by the sanctioning authority and audit, both by the Comptroller & Auditor General (CAG) of India under the provision of C&AG (DPC) Act, 1971 in accordance with the provisions laid down in Section 14 of the C&AG (DPC 1971) as amended from time to time and Internal Audit by the Principal Accounts Office of the Ministry of MSME, whenever it is called upon to do so.
- (x). YCCE shall furnish the Utilization Certificate in the prescribed form GFR 12A duly signed by the Head of Institution/Grantee latest by 31.12.2018. The Utilization Certificate in respect of grants should also disclose whether the specified, quantified and qualitative targets that should have been reached against the amount utilized were in fact reached, and if not, the reasons there for. YCCE shall contain an output based performance assessment instead of input based performance assessment.
- (xi). YCCE shall also furnish an audited statement of account of the financial year as early as possible.
- (xii). Funds shall be utilized subject to the Economy and other Instructions issued from time to time by the M/o Finance or by the Competent Authority.
- (xiii). YCCE should certify that no Grants-in-Aid for this purpose or activities have been applied for or obtained from any other Ministry or Department of Government of India or State Government.
- (xiv). YCCE shall adhere to all the relevant provisions of GFR and any other instructions/ guidelines issued by the Government from time to time, while making procurement/ purchases of goods and services including compliance to GFR provisions in case of outsourcing of services and engagement of consultants.
- (xv). YCCE has to execute the bond. YCCE shall furnish an undertaking that it will comply with all the terms and conditions stipulated in the sanction order.
- (xvi). YCCE should send a pre-receipted bill to this office for release of funds against this sanction.
- (xvii). In no case the grant released under this sanction will be utilized for any purpose other than those indicated in the sanction. The grantee shall not divert the grants and entrust execution of the Scheme or work concerned to another Institution or Organization and shall abide by the terms & conditions of the grant and follow/ adhere to all the relevant provisions of GFR regarding Grants in aid. If the grantee fails to utilize the grant for the purpose for which the same has been sanctioned or does not adhere to the terms & conditions of Grant and GFR provisions, the grantee/ Institution shall be required to refund the grant with interest @10% per annum.
- (xviii). YCCE shall not utilize the interest earned on the recurring / Non recurring Grants-in-Aid released to the YCCE for any purpose. The interest earned shall be indicated in UC which should be refunded to GOI after finalization of accounts under section 230(8).
- (xix). Shri R.R. Meena, Dy. Secretary, Ministry of MSME in accordance with the Ministry's Memorandum No. G-21017/2/2010-Cash dated 15.01.2013 will act as drawing and disbursing officer for the purpose of grant in aid in respect of this sanction.
- (xx). Being a 1<sup>st</sup> release for New TBI cluster, no unspent balance has been taken in the current sanction.

Conti—p/3

  
26/10/18  
जे. के. साहू / J.K. SAHU  
अवर सचिव / Under Secretary  
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय  
Ministry of Micro, Small and Medium Enterprises  
भारत सरकार, नई दिल्ली  
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3. The total release under this object head, including the present sanction of Rs. 14.999 lakh would be Rs. 15091.299 lakh for Grant- in-aid (General) as against the Budget Provision (BE) of Rs. 17095.00 lakh for (Gen.) under A Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship (ASPIRE) during the current financial year 2018-19. The component wise cumulative release including the present sanction is as below:-

(Rs. in Lakh)

Non-NER					NER	Total
	<u>2851.00.105</u> <u>.16.01.31</u> Grants – in – aid (General)	2851.00.10 5.16.01.20 OAE	<u>2851.00.789.</u> <u>63.01.31</u> Grants – in – aid (SCSP)	<u>2851.00.7</u> <u>96.62.01.3</u> 1 Grants – in –aid (TSP)	<b>Total</b>	<u>2552.00.</u> <u>232.</u> <u>15.01.31</u>
BE-2018-19	17095.00	5.00	2300.00	1400.00	<b>20800.00</b>	2400.00
Funds already sanctioned/ released	15076.30	1.28	2300.00	1400.00	<b>18777.58</b>	-
Funds sanction for release in current Proposal	14.999	-	-	-	<b>14.999</b>	-
<b>Total</b>	<b>15091.299</b>	<b>1.28</b>	<b>2300.00</b>	<b>1400</b>	<b>18792.579</b>	<b>-</b>

4. **Demand No. 64 Ministry of Micro, Small & Medium Enterprises for the year 2018-19.**

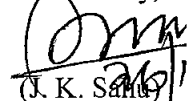
'2851' : Village and Small Industries (Major Head)  
00.105 : Khadi & Village Industries (Minor Head)  
16 : Technology Upgradation and Quality Certificate  
16.01 : A Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship (ASPIRE)  
16.01.31 : Grant-in-Aid of Rs. 14,99,900/- (Rupees fourteen lakh ninety nine thousand nine hundred only).

5. The details of Bank Account of to Yashwantrao Chavan College of Engineering (YCCE), Nagpur is as under:

Name of the beneficiary	Name of Bank where A/c of Org Held	Address/ Code of Bank Branch	A/c No.	MICR Code and IFSC Code
Yashwantrao Chavan College of Engineering (YCCE), Nagpur	Bank of India	Branch- Hingna, Nagpur(Maharashtra)	876620110000226	<b>MICR Code</b> 440013038  <b>IFSC Code</b> BKID0008766

6. This letter issued with the concurrence of the Integrated Finance Wing vide their Diary No. 272/US(Fin-I)/2018 dated 13.09.2018.

Yours Faithfully,

  
(J. K. Sahu)

Under Secretary to the Govt. of India  
ज. क. साह / J.K. SAHU  
अवर सचिव / Under Secretary  
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय  
Ministry of Micro, Small and Medium Enterprises  
भारत सरकार, नई दिल्ली  
Govt. of India, New Delhi

17-18


Copy to:

1. The Principal, Yashwantrao Chavan College of Engineering (YCCE), Hingna Road, Wanadongri, Nagpur-441110, Maharashtra.
2. Director of Audit (Central), Audit Bhawan, Bandra Kurla Complex, Bandra (East), Mumbai - 51
3. Principal Director of Audit, Economic & Service Ministries, IP Estate, AGCR Building, New Delhi.
4. Finance-I/B&A
5. Sanction/Guard File.



Under Secretary to the Govt. of India  
Tel. No.23062573  
जे. के. साह / J.K. SAHU  
अवर सचिव / Under Secretary  
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय  
Ministry of Micro, Small and Medium Enterpr  
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Govt. of India, New Delhi



  
Principal  
Yashwantrao Chavan  
College of Engineering  
Wanadongri Hingna Road,  
NAGPUR-441110



Ref.: NYSS/2018-19/972

Date : 04.02.2019

To  
The Principal,  
Yeshwantrao Chavan College  
of Engineering,  
Wanadongri, Nagpur

Sub.: Approval for expenditure for the proposal under in-house minor project scheme submitted by Dr. S.P. Raut.

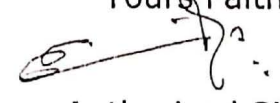
Ref.: Note No.CEO/2018-19/01/22 dated 25.01.2019 by CEO, MGI

Sir,

With reference to above, the Competent Authority of Nagar Yuwak Shikshan Sanstha has approved an expenditure of Rs.97,000/- for the proposal submitted by Dr. S.P. Raut under in-house minor project scheme in the year 2017-18. The review report, duly certified by Committee member with expenditure statement is enclosed herewith for your ready reference. You are requested to do the needful in this regard.

Thanking You,

Yours Faithfully



Authorised Signatory

Encl.: As above

Copy to: Ms. Padmaja Bellam, CA, YCCE Campus

Handwritten initials and date: GB, 02.19

RECEIVED  
Y. C. C. E. CAMPUS  
INWARD NO. 1622  
DATE 02/19  
Signature

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# Meghe Group of Institutions

Atrey layout, Pratap Nagar, Nagpur 440022, India

Dr. Shekhar D. Bhole  
Ph.D. (Civil Engg)  
Chief Executive Officer

Email: ceo@mginagpur.com  
Mobile: +91 9049990511



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To,  
Mr. Nikhil S. Mangrulkar  
Dept. of Computer Tech., YCCE

Subject:- Approval of proposal submitted under In-House Minor Project Scheme for Research & Product Development during phase I

Dear Mr. Nikhil S. Mangrulkar

We are pleased to inform you that your proposal titled "*Research and development of computer forensic and mobile forensic tool in cloud environment.*" was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 100000/- under recurring, Rs. 0/- under Non-recurring expenses, totaling to Rs. 100000/-.

You are requested to initiate work on the project at the earliest.

Dr. S.D. Bhole  
CEO, MGI

Copy to:

- The Principal, YCCE
- HoD, Department of Computer Tech., YCCE
- A/C Section, YCCE

# Meghe Group of Institutions

Atrey layout, Pratap Nagar, Nagpur 440022, India

Dr. Shekhar D. Bhole  
Ph.D. (Civil Engg)  
Chief Executive Officer

Email: ceo@mginagpur.com  
Mobile: +91 9049990511

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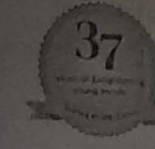
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To,  
Mr. P.B. Joshi  
Dept. of Electrical Engg., YCCE

Subject:- Approval of proposal submitted under In-House Minor Project Scheme for Research & Product Development during phase I

Dear Mr. P.B. Joshi

We are pleased to inform you that your proposal titled "*Intelligent energy management system for smart offices*" was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 65400/- under recurring, Rs. 10000/- under Non-recurring expenses, totaling to Rs. 75400/-.

You are requested to initiate work on the project at the earliest.

Dr. S.D. Bhole  
CEO, MGI

Copy to:

- The Principal, YCCE
- HoD, Department of Electrical Engg., YCCE
- A/C Section, YCCE

**Dr. Shekhar D. Bhole**  
Ph.D. (Civil Engg)  
Chief Executive Officer

Email: ceo@mginagpur.com  
Mobile: +91 9049990511



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To,  
✓ Prof. P.S. Shete  
Dept. of Electrical Engg., YCCE

Subject:- Approval of proposal submitted under In-House Minor Project Scheme for Research & Product Development during phase I

Dear Prof. P.S. Shete

We are pleased to inform you that your proposal titled "*Design and implementation of OFF-Grid PV based Microgrid for effective utilization of Electrical system.*" was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 88000/- under recurring, Rs. 5000/- under Non-recurring expenses, totaling to Rs. 93000/-.

You are requested to initiate work on the project at the earliest.

Dr. S.D. Bhole  
CEO, MGI

Copy to:

- The Principal, YCCE
- ✓ HoD, Department of Electrical Engg., YCCE
- A/C Section, YCCE

# Meghe Group of Institutions

Atrey layout, Pratap Nagar, Nagpur 440022, India

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Ph.D. (Civil Engg)  
Chief Executive Officer

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Mobile: +91 9049990511



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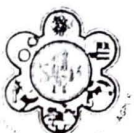
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MGI/CEO/2017-18/784

19.12.2017

To,  
✓ Mr. Yogesh Gaidhane  
Dept. of Electronics & Tele. Engg., YCCE

Subject:- Approval of proposal submitted under In-House Minor Project Scheme for Research & Product Development during phase I

Dear Mr. Yogesh Gaidhane

We are pleased to inform you that your proposal titled "*Analysis of parameter for Hypertension using non invasive and Nerual Sensor*" was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 37000/- under recurring, Rs. 15000/- under Non-recurring expenses, totaling to Rs. 52000/-.

You are requested to initiate work on the project at the earliest.

Dr. S.D. Bhole  
CEO, MGI

Copy to:

- The Principal, YCCE
- HoD, Department of Electronics & Tele. Engg., YCCE
- A/C Section, YCCE

**Dr. Shekhar D. Bhole**  
Ph.D. (Civil Engg)  
Chief Executive Officer

Email: ceo@mginagpur.com  
Mobile: +91 9049990511



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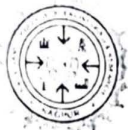
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To,  
Prof. S.S. Chiwnade  
Dept. of Electronics & Tele. Engg., YCCE

yccc.edu  
NAAC A Grade

Subject:- Approval of proposal submitted under In-House Minor Project Scheme for Research & Product Development during phase I



Dear Prof. S.S. Chiwnade

rgceer.edu.in  
NAAC B+ Grade

We are pleased to inform you that your proposal titled "**FPGA Implementation of Low Power Multiplier Using Reversible Logic**" was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 40000/- under recurring, Rs. 5000/- under Non-recurring expenses, totaling to Rs. 45000/-.



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NAAC B+ Grade

You are requested to initiate work on the project at the earliest.



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NAAC B Grade

Dr. S.D. Bhole  
CEO, MGI

Copy to:

- The Principal, YCCE
- HoD, Department of Electronics & Tele. Engg., YCCE
- A/C Section, YCCE



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To,  
 ✓ Dr. R.B. Chadge  
 Dept. of Mechanical Engg., YCCE

Subject:- Approval of proposal submitted under In-House Minor Project Scheme for Research & Product Development during phase I

Dear-Dr. R.B. Chadge

We are pleased to inform you that your proposal titled "*Performance investigations of Solar water pumping system using submersible pump*" was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 85000/- under recurring, Rs. 10000/- under Non-recurring expenses, totaling to Rs. 95000/-.

You are requested to initiate work on the project at the earliest.

Dr. S.D. Bhole  
 CEO, MGI

Copy to:

- The Principal, YCCE
- HoD, Department of Mechanical Engg., YCCE
- A/C Section, YCCE

# Meghe Group of Institutions

Atrey layout, Pratap Nagar, Nagpur 440022, India

**Dr. Shekhar D. Bhole**  
Ph.D. (Civil Engg)  
Chief Executive Officer

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Mobile: +91 9049990511

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To,

Mr. Kuldeep Pande  
Dept. of Electronics Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Proto-Type of Automated Cooling Werable* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 10000/-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

Copy to

1. The Principal, YCCE
2. Head Department of Electronics Engg., YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
5. A/C Section, YCCE

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**Dr. Shekhar D. Bhole**

Ph.D. (Civil Engg)

**Chief Executive Officer**

Email: ceo@mginagpur.com

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To,

**Dr. S.P. Gawande**  
**Dept. of Electrical Engg.**  
**Institute: YCCE**

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Study on Solar Photovoltaic Based System for Smart Grid Application* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 25000/-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

Copy to

1. The Principal, YCCE
2. Head Department of Electrical Engg., YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
5. A/C Section, YCCE

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To,

**Dr. S.P. Gawande**  
**Dept. of Electrical Engg.**  
**Institute: YCCE**

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Some Investigations on Constant Switching Frequency Hysteresis Controller for Smart Grid Applications* was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 22800/-.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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To,

**Dr. S.G. Kadwane**  
Dept. of Electrical Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Design and Development of AC and DC Hybrid System for Residential Applications* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 23000/-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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1. The Principal, YCCE
2. Head Department of Electrical Engg., YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
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To,

Prof. P.S. Shete  
Dept. of Electrical Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Development of OFF-Grid PV Microgrid for effective utilization of Energy* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 24500/-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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2. Head Department of Electrical Engg., YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
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To,

Dr. R.M. Moharil  
Dept. of Electrical Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Experimentation on modified Convex lens solar cooker* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 15000/-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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To,

Mr. G.H. Waghmare  
Dept. of Mechanical Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Design and Development of Ergonomic adjustable chair for multiposition tasking* was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 25000/-.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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1. The Principal, YCCE
2. Head Department of Mechanical Engg., YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
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To,

Prof. Sandip Khedkar  
Dept. of Mechanical Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Design and fabrication of autonomous portable mechanism for "weed removal"*. was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 30000/-.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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1. The Principal, YCCE
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3. The Director R&D, YCCE
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To,

Prof. Sandip Khedkar  
Dept. of Mechanical Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Design and fabrication of cotton stalks removing power tiller with cutting and crushing mechanism for agricultural application.* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 30000/-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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1. The Principal, YCCE
2. Head Department of Mechanical Engg., YCCE
3. The Director R&D, YCCE
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To,

Mr. D.Y. Shahare  
Dept. of Mechanical Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Design and Fabrication of Industrial and Commercial Rope making machine.* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 25000/-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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1. The Principal, YCCE
2. Head Department of Mechanical Engg., YCCE
3. The Director R&D, YCCE
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To,

Mr. Siddhesh J. Yerpude  
Dept. of Mechanical Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Design and febrication of Oil Cake making Machine.* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 25000/-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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1. The Principal, YCCE
2. Head Department of Mechanical Engg., YCCE
3. The Director R&D, YCCE
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To,

Mr. V.M. Korde & Mr. N.J. Giradkar  
Dept. of Mechanical Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Experimental Investigation of solar (Backside) active cooling techniques by the use of phase change material (Liquis to vapor) for improving its conversion efficiency* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 32000/-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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2. Head Department of Mechanical Engg., YCCE
3. The Director R&D, YCCE
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To,

Dr. Kavita Singh  
Dept. of Computer Tech.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *IoT Based sound level monitoring in Healthcare Environment* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 18000/-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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To,

Bhushan Bawankar  
Dept. of Information Tech.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Video Conferencing through Virtual Computer Lab* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 25000/-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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4. CEO, MGI Office
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To,

Sachin Jain  
Dept. of Information Tech.  
Institute: YCCE

Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme

Dear Sir / Madam

We are pleased to inform you that your proposal titled *IoT Based Advanced Garbage Bin* was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 4450/-.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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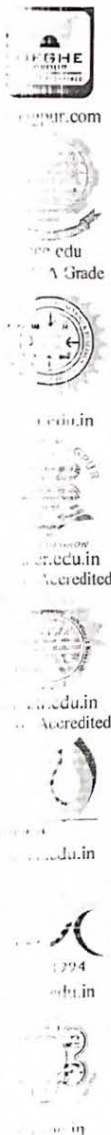
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Chief Executive Officer

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To,  
Ms. Nisha R. Wankhede  
Dept. of Information Tech.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Screening of Diabetic Retinopathy using smart phone* was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 18000/-.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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4. CEO, MGI Office
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To,

Swati Kale  
Dept. of Information Tech.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative UG/PG Project Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *E-Organic Farming* was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 15000/-.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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To,

**Dr. Prachi Palsodkar**  
**Dept.of Electronics Engg.**  
**Institute: YCCE**

**Sub: Approval of proposal submitted under Innovative Minor Patentable Product Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Clever Garbage Basket* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 9000** /-.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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To,

**Dr. P.M. Palsodkar**  
Dept.of Electronics Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative Minor Patentable Product Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Solar Powered Automatic Lawn Mower* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 7000 /-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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To,

**Dr. Ujwala Gawande**  
**Dept. of Information Technology**  
**Institute: YCCE**

**Sub: Approval of proposal submitted under Innovative Minor Patentable Product Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *IOT based Smart Video Surveillance System* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 12000 /-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

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mgi.edu.in



9049990511

To,

Pankaj Hatwar  
Dept. of Information Technology  
Institute: YCCE

Sub: Approval of proposal submitted under Innovative Minor Patentable Product Scheme

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Movement Based Indicator for Vehicles* was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 10000 /-.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

Copy to

1. The Principal, YCCE
- ✓ 2. Head Department of Information Technology, YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
5. A/C Section, YCCE

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Atrey layout, Pratap Nagar, Nagpur 440022, India

Dr. Shekhar D. Bhole  
Ph.D. (Civil Engg)  
Chief Executive Officer

Email: ceo@mginagpur.com  
Mobile: +91 9049990511

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dmims.edu.in



sdmp.ac.in

To,

Dr. Jayant Giri  
Dept. of Mechanical Engg.  
Institute: YCCE

Sub: Approval of proposal submitted under Innovative Experimental Setup Scheme

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Integration of Roboanalyser for forward and inverse kinematics of DOF Robot (Flexible DH parameter)* was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 25000 /-.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

Copy to

1. The Principal, YCCE
2. Head Department of, Mechanical Engg., YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
5. A/C Section, YCCE

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**Dr. Shekhar D. Bhole**  
Ph.D. (Civil Engg)  
Chief Executive Officer

Email: ceo@mginagpur.com  
Mobile: +91 9049990511

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To,

Prof. C.A. Mahatme & Prof. R.B. Chadge  
Dept. of Mechanical Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative Experimental Setup Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Grid Tied Solar System* was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 40000 /-**.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

Copy to

1. The Principal, YCCE
- ✓ 2. Head Department of, Mechanical Engg., YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
5. A/C Section, YCCE

# Meghe Group of Institutions

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Shekhar D. Bhole  
Ph.D. (Civil Engg)  
Chief Executive Officer

Email: ceo@mginagpur.com  
Mobile: +91 9049990511

MGI/CEO/2017-18/584

01.11.2017

To,


Dr. S.S. Khedkar & Dr. S.P. Raut  
Dept. of Mechanical Engg./ Civil Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative Experimental Setup Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled **Design and fabrication of Experimental Setup for Flexural and Shear bond Strength of Brick Masonry** was recommended by the committee for approval, the proposal is approved for financial assistance of **Rs. 40000** /-.

You are requested to initiate work on the project.

  
Dr. S.D. Bhole  
CEO, MGI

Copy to

1. The Principal, YCCE
2. Head Department of, Mechanical Engg./ Civil Engg., YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
5. A/C Section, YCCE

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# Meghe Group of Institutions

Arrey layout, Pratap Nagar, Nagpur 440022, India

r. Shekhar D. Bhole  
Ph.D. (Civil Engg)  
Chief Executive Officer

Email: ceo@mginagpur.com  
Mobile: +91 9049990511

MGI/CEO/2017-18/585

01.11.2017

To,

Mr. Bhupesh P. Nandurkar, Mrs. Amruta A. Yadav & Mr. Atul S. Kurzekar  
Dept.of Civil Engg.  
Institute: YCCE

**Sub: Approval of proposal submitted under Innovative Experimental Setup Scheme**

Dear Sir / Madam

We are pleased to inform you that your proposal titled *1. Demonstration of forces developed in truss members of Truss model. 2. Setup for impulse momentum and work energy demonstration.* was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 25000 /-.

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

Copy to

1. The Principal, YCCE
- ✓ 2. Head Department of, Civil Engg., YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
5. A/C Section, YCCE

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# Meghe Group of Institutions

Atrey layout, Pratap Nagar, Nagpur 440022, India

Dr. Shekhar D. Bhole  
Ph.D. (Civil Engg)  
Chief Executive Officer

Email: ceo@mginagpur.com  
Mobile: +91 9049990511

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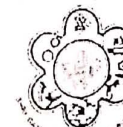
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sdmp.ac.in

To,

Ms. S.G. Hirekhan & Dr. A.M. Pande  
Dept. of Civil Engg.  
Institute: YCCE

Sub: Approval of proposal submitted under Innovative Experimental Setup Scheme

Dear Sir / Madam

We are pleased to inform you that your proposal titled **1. Setup for estimation of fundamental natural frequency of SDOF systems. 2. Setup for demonstration of SDOF behavior and estimation of natural frequency and logarithmic decrement of Damped SDOF system** was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. **11300 /-.**

You are requested to initiate work on the project.

Dr. S.D. Bhole  
CEO, MGI

Copy to

1. The Principal, YCCE
- ✓ 2. Head Department of, Civil Engg., YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
5. A/C Section, YCCE

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Shekhar D. Bhole  
Ph.D. (Civil Engg)  
Chief Executive Officer

Email: ceo@mginagpur.com  
Mobile: +91 9049990511

MGI/CEO/2017-18/587

01.11.2017

To,

Mr. Prashant B. Pande & Dr. S.R. Khandeshwar  
Dept. of Civil Engg.  
Institute: YCCE

Sub: Approval of proposal submitted under Innovative Experimental Setup Scheme

Dear Sir / Madam

We are pleased to inform you that your proposal titled *Mechanized Soil Compaction Lab Equipment* was recommended by the committee for approval, the proposal is approved for financial assistance of Rs. 45000 /-.

You are requested to initiate work on the project.



Dr. S.D. Bhole  
CEO, MGI

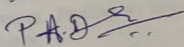
Copy to

1. The Principal, YCCE
- ✓ 2. Head Department of, Civil Engg., YCCE
3. The Director R&D, YCCE
4. CEO, MGI Office
5. A/C Section, YCCE

# **First Page of Research Base Project Reports**

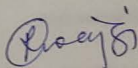
# CERTIFICATE OF APPROVAL

Certified that the project report entitled "Stress Management By Analyzing Stress Behaviour" has been successfully completed by Aishwarya Ingale, Apurva Namewar, Shruti Damhare and Shweta Tabhane under the guidance of Prof. P. Deshkar in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur university)



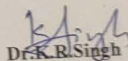
Prof. P. Deshkar

(Guide)



Prof. R.D. Wajgi

(Coordinator)



Dr. K.R. Singh

(HOD, C.Tech. Dept.)

Signature of External Examiner



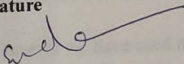
Name Dr. M.A. Tayal

Date of Examination 24/04/18.

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "*Fall Detection Using Accelerometer and Gyroscope in Android Smartphone*" has been successfully completed by Akshay Deosthale, Sanket Sapat, Suraj Meshram, Shubham Dukare under the guidance of Mrs. Shweta A. Gode in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in **Computer Technology**, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**

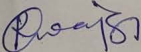
Signature



Mrs. Shweta A. Gode

(Guide)

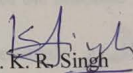
Signature



Mrs. R. D. Wajgi

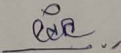
(Co-ordinate)

Signature



Dr. K. R. Singh

(HOD, C.Tech. Dept.)



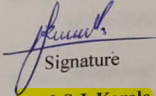
Signature of External Examiner

Name: D.A. Borkar

Date of Examination: 22/09/13

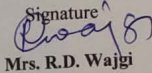
CERTIFICATE OF APPROVAL

Certified that the project report entitled "A Chatbot for Answering Queries of Users About Computer Technology Department of YCCE" has been successfully completed by Isha Ghoshal, Arya Sabane and Latika Kohale under the guidance of Mr. S. J. Karale in recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Computer Technology, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

  
Signature

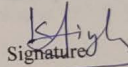
Prof. S.J. Karale

(Guide)

  
Signature

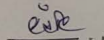
Mrs. R.D. Wajgi

(Coordinator)

  
Signature

Dr. K.R. Singh

(HOD, C.Tech. Dept.)

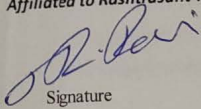
  
Signature of External Examiner

Name: DA Borikar

Date of Examination: 22/Apr/2012

CERTIFICATE OF APPROVAL

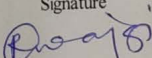
Certified that the project report entitled "IOT BASED BARCODE SCANNER" has been successfully completed by Vinit Bhagat, Aman Ujave, Kunal vanjani, Jay soncharta, praful buche, under the guidance of Prof. T.R.Ravi in recognition to the partial fulfillment for the award of the degree of Computer Technology, Yeshwantrao Chavan College of Engineering, Nagpur (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

  
Signature

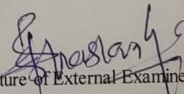
**Prof. T.R.Ravi**

(Guide)

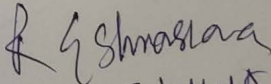
Signature

  
Mrs. R. D. Wajgi

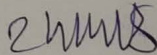
(Coordinator)

  
Signature of External Examiner

Name



Date of Examination:



Signature

  
Dr. Kavita Singh

(HOD, C.tech. Dept.)

## CERTIFICATE OF APPROVAL

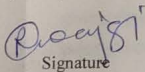
Certified that the project report entitled "*Automated extraction of marks from MSE paper using OCR technique*" has been successfully completed by Rohit Chavan, Rujuta Tikhat, Rohan Kholapurkar, Rohini Aney, and Harshita Udatewar under the guidance of Prof. Smita Kapse in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



Signature

**Mrs. S.R. Kapse**

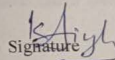
(Guide)



Signature

**Mrs. R. D. Wajgi**

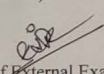
(Coordinator)



Signature

**Dr. K. R. Singh**

(HOD, C.Tech. Dept.)



Signature of External Examiner:

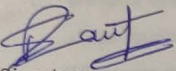
Name: **D. Borkar**

Date of Examination: **April 22, 18**



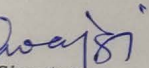
## CERTIFICATE OF APPROVAL

certified that the project report entitled "SMART WATER IRRIGATION SYSTEM" has been successfully completed by Mohammad Anas, AkankshaSariyam, Pooja Chaudhari, and ShaPandeunder the guidance of Prof.SiddhiRautin recognition to the partial fulfillment for the award of the degree of Computer Technology, YeshwantraoChavan College of Engineering, Nagpur (An Autonomous Institution Affiliated to RashtrasantukdojiMaharajpur University)

  
Signature

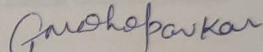
**Prof. Siddhi Raut**

(Guide)

  
Signature

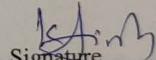
**Prof. R.D. Wajgi**

(Co-ordinator)

  
Signature

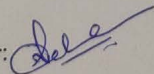
**Prof. Gauri Dhopavkar**

(Co-guide)

  
Signature

**Dr. K.R. Singh**

(HOD, C.Tech. Dept.)

Signature of External Examiner: 

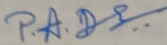
Name: Mrs. A.V. Dchankar

Date of Examination: 23/04/18

CERTIFICATE OF APPROVAL

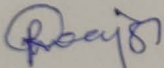
Certified that the project report entitled "*Multidimensional Data analysis to support Decision Making*" has been successfully completed by Avani Chawla , Gargi Naseri and Shruti Bhagwat under the guidance of Prof. Prarthana Deshkar in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).

Signature



Mrs. Prarthana Deshkar

(Guide)

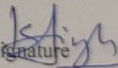


Signature

Mrs. R. D. Wajgi

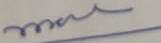
(Coordinator)

Signature



Dr. K. R. Singh

(HOD, C.Tech. Dept.)



Signature of External Examiner

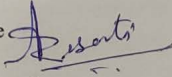
Name: Dr. S. S. Aote

Date of Examination: 24/04/2018

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "SMART ACCIDENT MONITORING" has been successfully completed by MRUNMAYI TULANKAR, PARUL KUMBHALKAR, SAYALI LAWANKAR, SHIVANI ALLEWAR, SUSHMITA JIBHAKATE under the guidance of Prof. Ranjita Asati in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

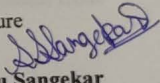
Signature



**Prof. Ranjita Asati**

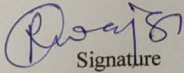
(Guide)

Signature



**Prof. Sharayu Sangekar**

(Co-guide)

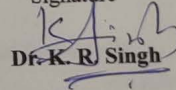


Signature

**Mrs. R. D. Wajgi**

(Coordinator)

Signature



**Dr. K. R. Singh**

(HOD, C.Tech.Dept.)

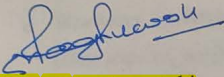
Signature of External Examiner

Name **Dr. S. S. Aote**

Date of Examination: **24/04/18**

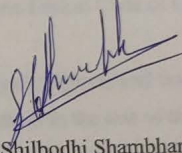
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Holoway – Visualize Anything and Everything" has been successfully completed by Amol Bhalme, Jay Patel, Pallavi Kulkarni, Rohan Vishwakarma, Sejal Zilpe, Tanuja Bhoyar under the guidance of Dr. M. M. Raghuwanshi in recognition to the partial fulfillment for the award of the degree of Computer Technology, Yeshwantrao Chavan College of Engineering, Nagpur (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



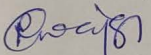
Dr. M. M. Raghuwanshi

(Guide)



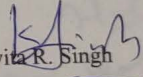
Er. Shilbodhi Shambharkar

(Mentor, Persistent System Ltd.)



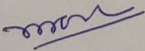
Prof. R. D. Wajgi

(Coordinator)



Dr. Kavita R. Singh

(HOD, C. Tech., Dept.)



Signature of External Examiner:

Name: Dr. S. Aote

Date of Examination: 24-4-18

CERTIFICATE OF APPROVAL

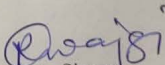
Certified that the project report entitled "*Interactive Navigator For Locating Products in Shopping Mall*" has been successfully completed by Anushree Kakade, Rohini Sondole, Shraddha Sorte, and Atish Sawasakade the guidance of Dr. M.M. Raghuwanshi in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



Signature

**Dr. M. M. Raghuwanshi**

(Guide)

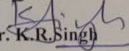


Signature

Mrs. R.D. Wajgi

(Coordinator)

Signature



Dr. K.R. Singh

(HOD, C.Tech. Dept.)



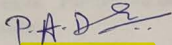
Signature of External Examiner

Name Katresh Malik

Date of Examination:

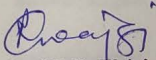
# CERTIFICATE OF APPROVAL

Certified that the project report entitled "Stress Management By Analyzing Stress Behaviour" has been successfully completed by Aishwarya Ingale, Apurva Namewar, Shruti Dambhare and Shweta Tabhane under the guidance of Prof. P. Deshkar in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur university)




**Prof. P. Deshkar**

(Guide)



**Prof. R.D. Wajgi**

(Coordinator)



**Dr. K.R. Singh**

(HOD, C.Tech. Dept.)

Signature of External Examiner



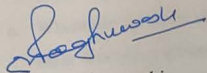
Name **Dr. M.A. Tayal**

Date of Examination

**24/04/2018**

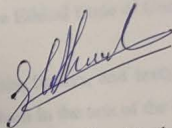
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Holoway - Visualize Anything and Everything" has been successfully completed by Amol Bhalme, Jay Patel, Pallavi Kulkarni, Rohan Vishwakarma, Sejal Zilpe, Tanuja Bhojar under the guidance of Dr. M. M. Raghuwanshi in recognition to the partial fulfillment for the award of the degree of Computer Technology, Yeshwantrao Chavan College of Engineering, Nagpur (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

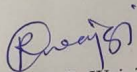


Dr. M. M. Raghuwanshi

(Guide)

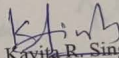


Er. Shilbodhi Shambharkar  
(Mentor, Persistent System Ltd.)



Prof. R. D. Wajgi

(Coordinator)



Dr. Kavita R. Singh  
(HOD, C. Tech., Dept.)

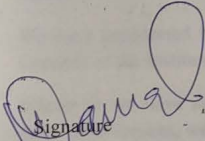
Signature of External Examiner:

Name: Dr. S. Aote

Date of Examination: 24-4-18

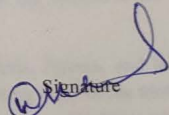
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "*Video Surveillance System for Elderly People*" has been successfully completed by Pranjali Mote, Monali Mendhe, Shreya Mahajan under the guidance of **Prof. Lalit B. Damahe** recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, **Yeshwantrao Chavan College of Engineering** (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



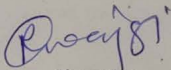
Signature  
**Lalit Damahe**

**(Guide)**



Signature  
**Kalyani Karule**

**(Co-Guide)**

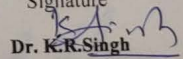


Signature

**R.D. Wajgi**

**(Coordinator)**

Signature



**Dr. K.R. Singh**

**(HOD, C.Tech. Dept.)**



Signature of External Examiner

Name:

Date of Examination:



## CERTIFICATE OF APPROVAL

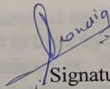
Certified that the project report entitled "Two Tier Authentication for Electoral System" has been successfully completed by Shrutika Bhiwapurkar, Ojashree Sudame, Naman Jain, Pratiksha Dhandar and Pranit Kamble under the guidance of Prof. Nilima Jichkar recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, **Yeshwantrao Chavan College of Engineering**(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



Signature

**Nilima Jichkar**

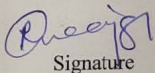
(Guide)



Signature

**Shankar Chourasia**

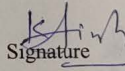
(Co-guide, Persistent Systems Ltd.)



Signature

**R.D. Wajgi**

(Coordinator)

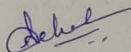


Signature

**Dr. K.R. Singh**

(HOD, C.Tech. Dept.)

Signature of External Examiner



Name: **Mrs. A.V. Dehankar**

Date of Examination: **23/08/18**

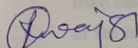
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Application for detecting and converting sign language into text" has been successfully completed by Hridya Joshi, Kshitija Chaware, Niranjana Naik and Ruchika Deshmukh under the guidance of Prof. P. V. Barekar in recognition to the partial fulfillment for the award of the degree of Computer Technology, **Yeshwantrao Chavan College of Engineering, Nagpur (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



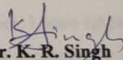
**Prof. P. V. Barekar**

(Guide)



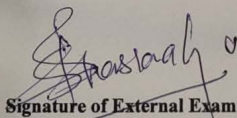
**Prof. R. D. Wajgi**

(Co-ordinator)



**Dr. K. R. Singh**

(HOD, C. T. Dept.)



Signature of External Examiner:

Name:

R. G. Shivasthana

Date of Examination:

24/04/18

CERTIFICATE OF APPROVAL

Certified that the project report entitled "Real Time Vehicle Tracking" has been successfully completed by Name Of The Student under the guidance of Name Of Guide in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, **Yeshwantrao Chavan College of Engineering**( An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

*Gauri Dhopavkar*

**Er. Gauri Dhopavkar**

(Guide)

Signature

*R.D. Wajgi*

**Mrs. R.D. Wajgi**

(Coordinator)

Er. Koustubh Godbole

(Co-guide)

*K. Godbole*

Signature

*K.R. Singh*

**Dr. K.R. Singh**

(HOD, C.Tech. Dept.)

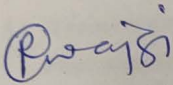
*Dr. Aninash Agrawal*

Signature of External Examiner

Name **Dr. Aninash Agrawal**

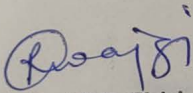
Date of Examination: **23/04/18**

Certified that the project report entitled "Object Detection from an Image" has been successfully completed by Vivek Yadav and Manish Ghadge under the guidance of Prof. R.D. Wajgi in recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Computer Technology, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**



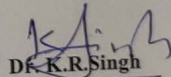
Prof. R.D. Wajgi

(Guide)



Prof. R.D. Wajgi

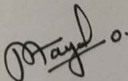
(Coordinator)



Dr. K.R. Singh

(HOD, C.Tech. Dept.)

Signature of External Examiner:



Name: Dr. M. A. Tayal

Date of Examination:

**CERTIFICATE OF APPROVAL**

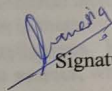
Certified that the project report entitled "Two Tier Authentication for Electoral System" has been successfully completed by Shrutika Bhiwapurkar, Ojashree Sudame, Naman Jain, Pratiksha Dhandar and Pranit Kamble under the guidance of Prof. Nilima Jichkar recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, **Yeshwantrao Chavan College of Engineering**(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



Signature

**Nilima Jichkar**

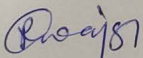
**(Guide)**



Signature

**Shankar Chourasia**

**(Co-guide, Persistent Systems Ltd.)**

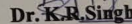


Signature

**R.D. Wajgi**

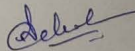
**(Coordinator)**

Signature

  
**Dr. K.R. Singh**

**(HOD, C.Tech. Dept.)**

Signature of External Examiner




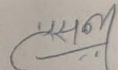
Name: **Mrs. A.V. Dehanekar**

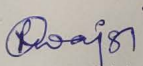
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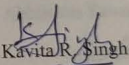
CERTIFICATE OF APPROVAL


Certified that the project report entitled "IoT-based Sound Level Monitoring in Healthcare Environment" has been successfully completed by Abhilasha Sawnerkar, Kalyani Kawale, Minaxi Wadgure, Purva Patil, Vaishnavi Kulkarni under the guidance of Dr. Kavita R. Singh and Mr. Prasanna Deshpande in recognition to the partial fulfillment for the award of the degree of Computer Technology, Yeshwantrao Chavan College of Engineering, Nagpur (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

  
Dr. Kavita R. Singh  
(Guide)

  
Er. Prasanna Deshpande  
(Co-guide)

  
Er. R.D. Wajgi  
(Co-ordinator)

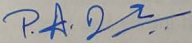
  
Dr. Kavita R. Singh  
(HOD, C. Tech., Dept.)

  
Signature of External Examiner:  
Name: Dr. L. Malik  
Date of Examination: 23/4/18

CERTIFICATE OF APPROVAL

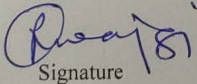
Certified that the project report entitled "*Multidimensional Data analysis to support Decision Making*" has been successfully completed by **Avani Chawla**, **Gargi Naseri** and **Shruti Bhagwat** under the guidance of **Prof. Prarthana Deshkar** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**.

Signature



**Mrs. Prarthana Deshkar**

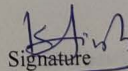
(Guide)



Signature

**Mrs. R. D. Wajgi**

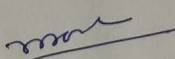
(Coordinator)



Signature

**Dr. K. R. Singh**

(HOD, C.Tech. Dept.)



Signature of External Examiner

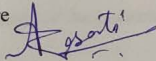
Name: **Dr. S.S. Aote**

Date of Examination: **24/04/2018**

CERTIFICATE OF APPROVAL

Certified that the project report entitled "SMART ACCIDENT MONITORING" has been successfully completed by MRUNMAYI TULANKAR, PARUL KUMBHALKAR, SAYALI LAWANKAR, SHIVANI ALLEWAR, SUSHMITA JIBHAKATE under the guidance of Prof. Ranjita Asati in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

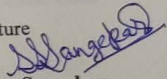
Signature



**Prof. Ranjita Asati**

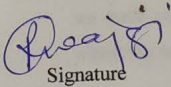
(Guide)

Signature



**Prof. Sharayu Sangekar**

(Co-guide)

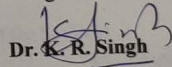


Signature

**Mrs. R. D. Wajgi**

(Coordinator)

Signature



**Dr. K. R. Singh**

(HOD, C.Tech.Dept.)

Signature of External Examiner

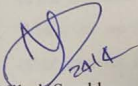
Name Dr S.S. Aote


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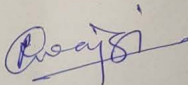


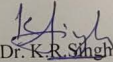
CERTIFICATE OF APPROVAL

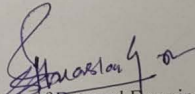
Certified that the project report entitled "SMART GARBAGE ALERT SYSTEM" has been successfully completed by AISHWARYA KORE , PRAGATI GAHUKAR, ANIKET CHAHARE, BALAJI GANGAWANE, PRATIK UGHADE under the guidance of MR. NILESH SAMBHE in recognition to the partial fulfillment for the award of the degree of Computer Technology, Yeshwantrao Chavan College of Engineering, Nagpur (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

  
Mr. Nilesh Sambhe  
(Guide)

  
Ms. Nilofer S. Khan  
(Co-Guide)

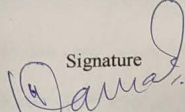
  
Er. R.D. Wajgi  
(Co-ordinator)

  
Dr. K.R. Singh  
(HOD, C.Tech. Dept.)

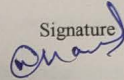
  
Signature of External Examiner  
Name R.G. Shrivastava  
Date of Examination: 24/4/18

CERTIFICATE OF APPROVAL

Certified that the project report entitled "T&P AIOS (All In One Solution)" has been successfully completed by Anuradha Kokate, Roshni Ghorude, Aditya Zodpe and Wishvesh Ujawane under the guidance of **Prof. Lalit Damahe and co-guidance Prof. Kalyani Karule** in recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Computer Technology, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**

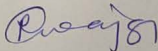
Signature  


**Assist. Prof. Lalit Damahe**  
**Dept of CT, YCCE, Nagpur (MH)**  
**(Guide)**

Signature  


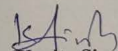
**Assist. Prof. Kalyani Karule**  
**Dept of CT, YCCE, Nagpur (MH)**  
**(Co-guide)**

Signature




**Assist. Prof. Rakhi Wajgi**  
**Dept of CT, YCCE, Nagpur (MH)**  
**(Coordinator)**

Signature



**Dr. Kavita Singh**  
**Dept of CT, YCCE, Nagpur (MH)**  
**(HOD)**

  
Signature of External Examiner:

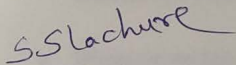
Name:

Date of Examination:

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Digital Gramsabha" has been successfully completed by **Chaitanya Nighot, Hitesh Derkar, Manish Rahangdale, Saurabh Udapure and Tanishq Mishra** under the guidance of **Prof. Sagar S. Lachure** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**

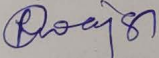
Signature



**Prof. Sagar S. Lachure**

(Guide)

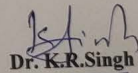
Signature



**Prof. R.D. Wajgi**

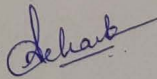
(Coordinator)

Signature

  
**Dr. K.R. Singh**

(HOD, C.Tech. Dept.)

Signature of External Examiner:



Name: **Mrs. A.V. Dehankar**

Date of Examination: **23/04/18**

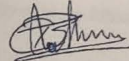
CERTIFICATE OF APPROVAL

Certified that the project report entitled "Voice Based Email System" has been successfully completed by Apoorva Kale, Ashwini Jenekar, Romi Taskar, Shraddha Kapse and Shruti Menon under the guidance of Mr. Nikhil Mangrulkar in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, Yeshwantrao Chavan College of Engineering, Nagpur (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)



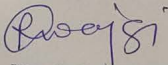
Mr. Nikhil Mangrulkar

(Guide)



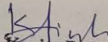
Mr. Tushar Bhakre

(Co-Guide)



Mrs. R. D. Wajgi

(Co-ordinator)

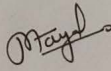


Dr. Kavita R. Singh

(HOD, C. Tech., Dept.)

Signature of External Examiner

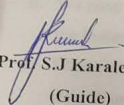
Name: Dr. M. A. Tayal

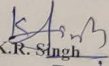


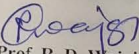
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
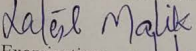
CERTIFICATE OF APPROVAL

Certifies that the project entitled "*Data deduplication(De-dup)*" has been successfully completed by Sravya Kondapi, Sunita Jaiswal ,Trupti Cholkar under the guidance of Prof. S.J Karale in recognition to the partial fulfillment for the award of degree of Bachelor of Engineering in Computer Technology, Yeshwantrao Chavan College of Engineering (An autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University) .

  
Prof. S.J Karale  
(Guide)

  
Dr. K.R. Singh  
(HOD, Dept. of Computer Technology)

  
Prof. R. D. Wajgi  
(Coordinator)

  
Signature of External Examiner:  
Name:   
Date of Examination: 23/4/18

CERTIFICATE OF APPROVAL

Certified that the project report entitled "SMART OBJECT TRACKING DEVICE" has been successfully completed by MRUNAL THOOLKAR, POOJA AKOTKAR, SHIWANI SINHA under the guidance of Mr. Sagar Lachure in recognition to the partial fulfillment for the award of the degree of Computer Technology, Yeshwantrao Chavan College of Engineering, Nagpur (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

S S Lachure

Mr. Sagar Lachure

(Guide)

R.D. Wajgi

Er. R.D. Wajgi

(Co-ordinator)

K.R. Singh

Dr. K.R. Singh

(HOD, C.Tech. Dept.)

R.G. Shrivastava

Signature of External Examiner:

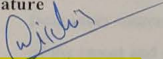
Name: R.G. Shrivastava

Date of Examination: 24/11/18

## CERTIFICATE OF APPROVAL

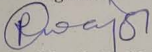
Certified that the project report entitled "Securing Computer Folders Using Bluetooth Paired Encryption" has been successfully completed by Abhishek Modak, Rajesh Wadhe, Harshad Pawankar, Amey Pawar under the guidance of Mr. Nikhil Mangrulkar in recognition to the partial fulfillment for the award of the degree of Computer Technology, Yeshwantrao Chavan College of Engineering, Nagpur (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).

Signature



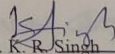
Mr. Nikhil Mangrulkar  
(Guide)

Signature



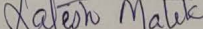
Mrs. R. D. Wajgi  
(Co-ordinator)

Signature



Dr. K. R. Singh  
(HOD, C.Tech. Dept.)

Signature of External Examiner

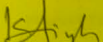
Name: 

Date of Examination:

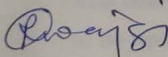
23/4/16

CERTIFICATE OF APPROVAL

Certified that the project report entitled "Automatic recapitulation of text document" has been successfully completed by Aditi Konge, Manali Sarkar, Rashmi Hatwar, Vrushali Jain under the guidance of Dr. Kavita Singh in recognition to the partial fulfillment for the award of the degree of Computer Technology, **Yeshwantrao Chavan College of Engineering, Nagpur** (An Autonomous Institution Affiliated to *Rashtrasant Tukdoji Maharaj Nagpur University*)

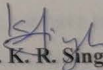
  
Dr. Kavita Singh

(Guide)

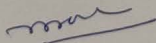


Prof. R. D. Wajji

(Co-ordinator)

  
Dr. K. R. Singh

(HOD, C.Tech. Dept.)



Signature of External Examiner:

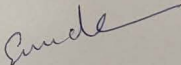
Name: Dr. S. S. Aote

Date of Examination: 24/04/18



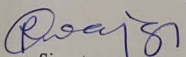
CERTIFICATE OF APPROVAL

Certified that the project report entitled "Trucker :Mobile enabled technology to solve the problems of transportation domain" has been successfully completed by Darshan Musale, Elvin Baghele, Manish Gundawar, and Sonam Thote under the guidance of Mrs. Shweta A. Gode in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Computer Technology, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**

  
Signature


**Mrs. Shweta A. Gode**

(Guide)

  
Signature

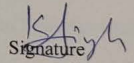
**Mrs. R. D. Wajgi**

(Coordinator)

  
Signature of External Examiner

Name **Dr. Aninash Agrawal**

Date of Examination: **23/4/2018**

  
Signature

**Dr. K. R. Singh**

(HOD, C. Tech. Dept.)

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "An Intelligent Automated Streetlight Controller and Lively Emission Control System" has been successfully completed by Shreya Telharkar, Vaidehi Alkari, Nikhil Pathak, Tanay Katkamwar under the guidance of **Prof. Smita Kapse** in recognition to the partial fulfillment for the award of the degree of Computer Technology, **Yeshwantrao Chavan College of Engineering,**

**Nagpur** (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).

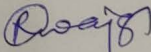
Signature



Mrs. Smita Kapse

(Guide)

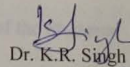
Signature



Mrs. R. D. Wajji

(Co-ordinator)


Signature



Dr. K.R. Singh

(HOD, C.Tech.

Dept.)



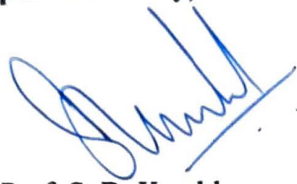
Signature of External Examiner

Name:

Date of Examination:

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Fractal Video Compression Using Block Matching Motion Estimation" has been successfully completed by Ashwini Ingole under the guidance of **Prof. S. D. Kamble** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



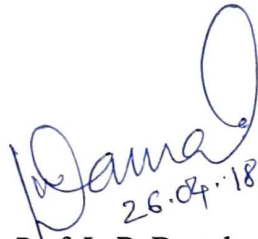
Prof. S. D. Kamble

**Guide**



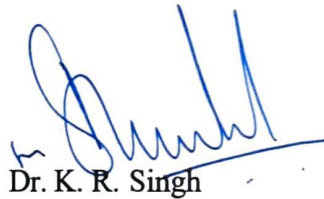
Chetan Shelukar

(Smart Data Enterprises Ltd.)  
**Software Engineer**



Prof. L. B. Damahe

**PG Coordinator**



Dr. K. R. Singh

**HOD, CT**



Signature of External Examiner

Name: **Dr. S. S. Aote**

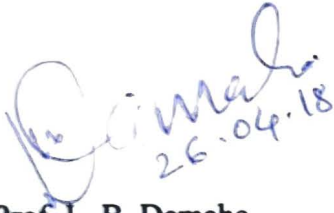
Date of Examination: **27/04/18**

## CERTIFICATE OF APPROVAL

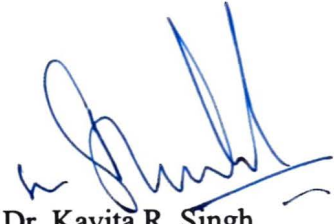
Certified that the project report entitled "**Moving Object Detection And Tracking From Video**" has been successfully completed by **Rupali B. Hatwar** under the guidance of **Prof. S. D. Kamble** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



Prof. S. D. Kamble  
(Guide)



Prof. L. B. Damahe  
(PG Coordinator)



Dr. Kavita R. Singh  
(HOD, CT Dept.)



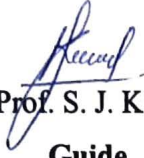
Signature of External Examiner

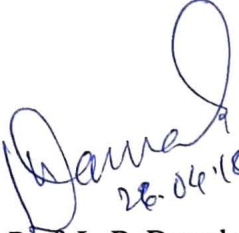
Name: *Dr. S.S. Aole*


Date of Examination: *27/04/18*


## CERTIFICATE OF APPROVAL

Certified that the project report entitled “Document Summarization Using Hierarchical Clustering” has been successfully completed by Smita Girish Khamankar under the guidance of Prof. S.J. Karale in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

  
26/04/18  
Prof. S. J. Karale  
Guide

  
26-04-18  
Prof. L. B. Damahe  
PG Coordinator

  
Dr. K. R. Singh  
HOD, CT

  
Signature of External Examiner

Name:

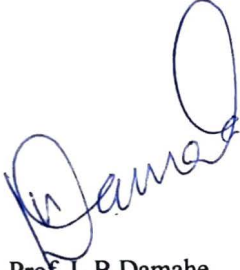
Date of Examination: 27/04/18

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Improving Lifetime of Network Using Energy And Density Control Cluster Algorithm**” has been successfully completed by **Shraddha Zade** under the guidance of **Prof. Nilesh Sambhe** co-guidance of **Mr. Manish Singh** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, **Yeshwantrao Chavan College of Engineering( An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



Prof. Nilesh Sambhe  
(Guide)



Prof. L.B. Damahe  
(PG Coordinator)



Dr. Kavita R. Singh  
(HOD, CT Dept.)



Signature of External Examiner

Name: **D. S. Adane**

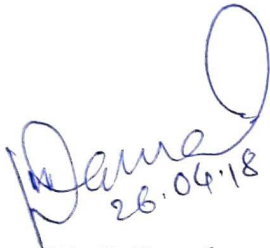
Date of Examination: **27.04.18**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "**Classification of Sample containing Gene Expressions into Diseased and Normal Class**" has been successfully completed by **Gauri D. Bhanegaonkar** under the guidance of **Prof. Rakhi D. Wajgi** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



Prof. Rakhi D. Wajgi  
(Guide)



Prof. L. B. Damahe  
(PG Coordinator)



Dr. Kavita R. Singh  
(HOD, CT Dept.)



Signature of External Examiner

Name: Dr. A. R. Mahajan

Date of Examination: 27-4-18

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "English-Marathi transliteration by using SVM technique" has been successfully completed by Mayuree Dnyandeo Patil under the guidance of **Er. Gauri M. Dhopavkar** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

*GMD*

Er. Gauri M. Dhopavkar

Guide

*L. B. Damahe*  
26.04.18

Prof. L. B. Damahe

PG Coordinator

*K. R. Singh*

Dr. K. R. Singh

HOD, CT

*[Signature]*

Signature of External Examiner

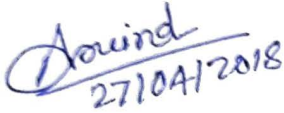
Name:

Date of Examination: 27/04/2018



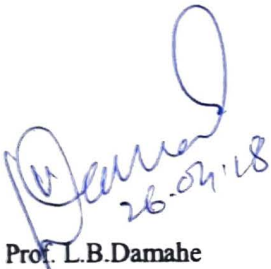
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Secure data aggregation and effective key generation for end-to-end confidentiality in wireless sensor network" has been successfully completed by **Shraddha Deshmukh** under the guidance of **Prof.A.R.Bhagat Patil** and co-guided by **Mr.Harshad Nakade** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



Prof.A.R.Bhagat Patil  
(Guide)

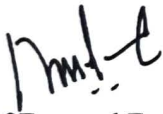
Mr.Harsha Nakade  
(Co-guide)



Prof. L.B.Damahe  
(PG Coordinator)



Dr. Kavita R.Singh  
(HOD, CT Dept.)



Signature of External Examiner

Name: **D. S. Adane**

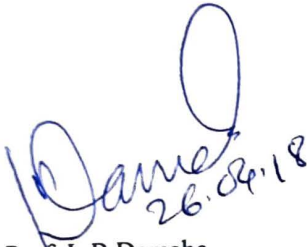
Date of Examination: **27.04.18.**

## CERTIFICATE OF APPROVAL


Certified that the project report entitled "PREDICTING DROPOUTS AND ANALYZING PLACEMENT PERFORMANCE OF ENGINEERING STUDENTS" has been successfully completed by Aboli Kohale under the guidance of Prof. Prarthana Deshkar in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, Yeshwantrao Chavan College of Engineering( An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



Prof. Prarthana Deshkar  
(Guide)



26.08.18  
Prof. L.B.Damahe  
(PG Coordinator)



Dr. Kavita R.Singh  
(HOD, CT Dept.)



Signature of External Examiner

Name: Dr. C.A. DHORE

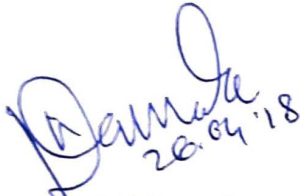
Date of Examination: 27 Apr, 2018

## CERTIFICATE OF APPROVAL

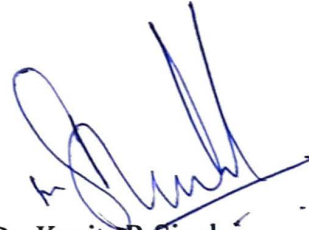
Certified that the project report entitled “**Performance analysis of Product Recommendation System Based on User Interest, Location and Social Circle**” has been successfully completed by **Pooja Kakde** under the guidance of **Prof. T.R.Ravi** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, **Yeshwantrao Chavan College of Engineering( An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



Prof. T.R.Ravi  
(Guide)



Prof. L.B.Damahe  
(PG Coordinator)



Dr. Kavita R. Singh  
(HOD, CT Dept.)



Signature of External Examiner

Name:

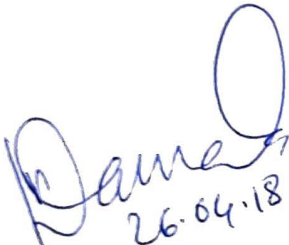
Date of Examination:

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "**Detection of anomalous cluster in discrete Database by using similarity measure for text processing**" has been successfully completed by **Bhawana Gawande** under the guidance of **Prof. Nilima Jichkar** recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**

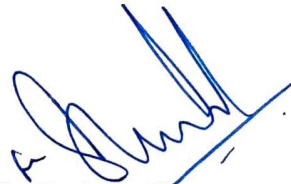


Prof. Nilima Jichkar  
(Guide)



26.04.18

Prof. L. B. Damahe  
(PG Coordinator)



Dr. Kavita R. Singh  
(HOD, CT Dept.)



Signature of External Examiner

Name: **DR. CA DHOPE**

Date of Examination: **27/4/2018**

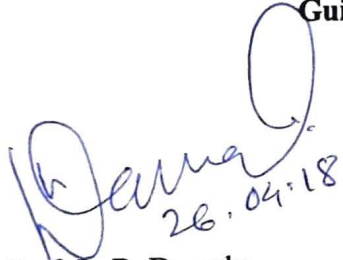
## CERTIFICATE OF APPROVAL

Certified that the project report entitled “English-Marathi transliteration by using SVM technique” has been successfully completed by Mayuree Dnyandeo Patil under the guidance of **Er. Gauri M. Dhopavkar** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)



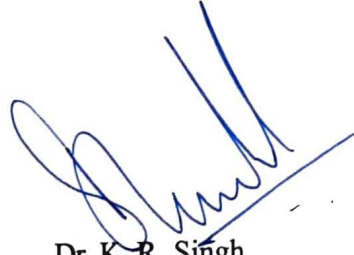
Er. Gauri M. Dhopavkar

Guide



Prof. L. B. Damahe

PG Coordinator



Dr. K. R. Singh

HOD, CT



Signature of External Examiner

Name:

Date of Examination: 27/04/2018

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Intelligent Recommendation System for Higher Education**” has been successfully completed by **Nikita Sawarkar** under the guidance of **Dr.M.M.Raghuwanshi** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Mechanical Engineering, **Yeshwantrao Chavan College of Engineering( An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



Dr.M.M.Raghuwanshi

(Guide)



Prof.L.B.Damahe  
(PG Coordinator)




Dr.K.R.Singh  
(HOD, CT Dept.)

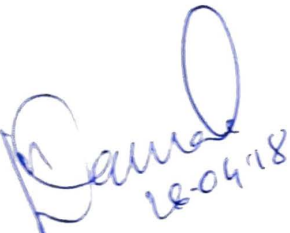



Signature of External Examiner  
Name **Dr. C.A. DHOSE**  
Date of Examination: **27 Apr. 2018**


## CERTIFICATE OF APPROVAL

Certified that the project report entitled "**Semantic Analysis of App Review for Fraud Detection Using Fuzzy Logic**" has been successfully completed by **Neha M. Puram** under the guidance of **Dr. K. R. Singh** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering. **Yeshwantrao Chavan College of Engineering( An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**

  
Dr. K. R. Singh  
(Guide)

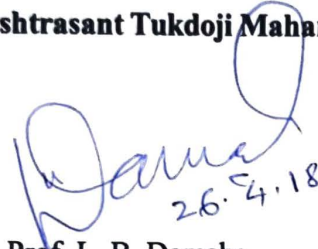
  
Prof. L.B. Damahe  
(PG Coordinator)

  
Dr. Kavita R. Singh  
(HOD, CT Dept.)

  
Signature of External Examiner  
Name: **DY. C.A. DHOSE**  
Date of Examination: **27 Apr. 2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "An Image Retrieval Approach for Product Recognition" has been successfully completed by Divya M. Kashilani under the guidance of **Prof. L.B. Damahe** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Computer Science and Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



26.04.18

Prof. L. B. Damahe

**Guide**



26.04.18

Prof. L. B. Damahe

**PG Coordinator**



Dr. K. R. Singh

**HOD, CT**



Signature of External Examiner

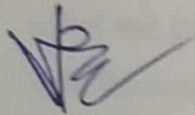
Name: *Dr. S.S. Apte*

Date of Examination: *27.04.18*

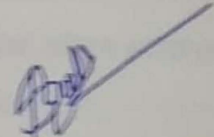


## CERTIFICATE OF APPROVAL

Certified that the project report entitled "OPTIMIZATION OF WATER DISTRIBUTION NETWORK" has been successfully completed by Prasad Sadan, Pravin Bansod, Pritesh Watkar, Ritesh Umap, Sameer Gurmule, Shantanu Shende, under the guidance of Dr.R.R.Dighade and Er.S.T.Rathod in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)



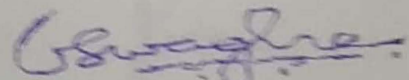
Dr. R.R. Dighade  
(Guide)




Er. S.T. Rathod  
(Co-guide)  
Jr. Engineer civil, NIT, Nagpur



Dr. S.R. Khandeshwar  
(HOD, CE Dept.)



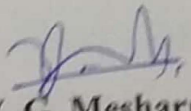
Dr. U.P. Waghe  
(Principal)




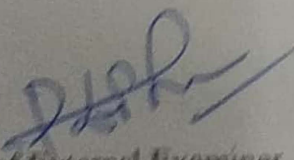
Signature of External Examiner:  
Name: DY. S. J. NIRAM  
Date of Examination: 20/04/18

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Impact of Metro rail in Nagpur" has been successfully completed by Amreen R. Qureshi, Rucha G. Nimje, Harmeet Singh Viridi, Shravika P. Naoghare, Prayash A. Maloo, Shriya D. Jambhulkar, under the guidance of **Dr. V. G. Meshram** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

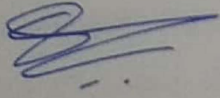
  
**Dr. V. G. Mesharm**  
**(Guide)**

  
(HOD, CE Dept.)

  
Signature of External Examiner  
Name **Dr. P. D. Bhatnagar**  
Date of Examination **26/11/22**

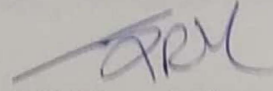
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "STUDY AND TREATMENT OF WASTE WATER GENERATED FROM AUTOMOBILE SERVICE STATIONS" has been successfully completed by VRISHABH JAMGADE, LIKESH MOREY, SHUBHAM AGRAWAL, SHIREYASH NIMBALKAR, PALASH SHETE, PRASHANT YESANKAR under the guidance of **PROF. SANKET G. KALAMKAR** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated Rashtrasant Tukdoji Maharaj Nagpur University).



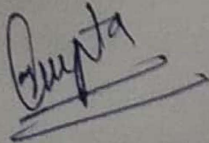
**Prof. S.G. Kalamkar**

(Guide)



Dr.S.R.Khandeshwar

(HOD,Civil Department)



Signature of External Examiner

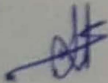
Name: **Prof. T.B. Gupta, RCO EM**

Date of Examination: **21/04/18**

## CERTIFICATE OF APPROVAL

It is certified that the project report entitled "Sustainable Use of Stone Slurry in Cement Concrete" has been successfully completed by Shreyas Mulkalwar, Shashank Somwanshi, Samruddhi Pawar, Sumedh Dange, Subodh Bhosale, Saurabh Chhadi, Gaurang Raut under the guidance of **Ms. SNEHAL K. KAMBLE** in recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Civil Engineering, **Yeshwantrao Chavan College of Engineering** (An Autonomous Institution Affiliated to **Rashtrasant Tukdoji Maharaj Nagpur University**).

Signature

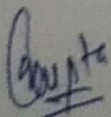


Prof. Ms. Snehal. K.Kamble

**(Guide)**

Signature

Dr.S.R.Khandeshwar  
(HOD, CE Department)



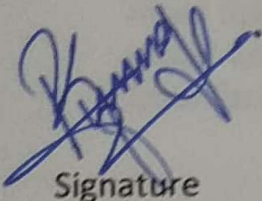
Signature of External Examiner:

Examiner Name: Prof. T. B. Gupta, RCOEM.

Date of Examination: 21/4/18

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "EFFECT OF PARTIAL REPLACEMENT OF CEMENT WITH ALUMINIUM WASTE ON MECHANICAL PROPERTIES OF CONCRETE" has been successfully completed by Krutika wankhade, Shamli golait, Akshay bobade, Amogh Dange, Aman Hedau, Pranoth Warghane under the guidance of Prof.P.K.HINGE in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



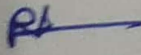
Signature

**Prof.P.K.Hinge**  
(Guide)



Signature

**Dr. S. R. Khandeshwar**  
(HOD, Civil Engg. Dept.)

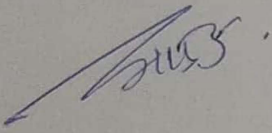
Signature of External Examiner 

Name **DR. R. N. KHADGE**

Date of Examination: **20/04/18**

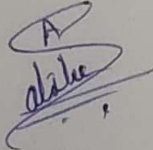
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "ENVIRONMENTAL IMPACT ASSESSEMENT (EIA) OF NAGPUR METRO RAIL PROJECT" has been successfully completed by Aditya Ajantiwale, Alisha Sahare, Mohnit Ningurkar, Neha Chhapparghare, Nehal Belwale, Saurabh Kale. under the guidance of Prof. R.M.Bhagat in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Mechanical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)



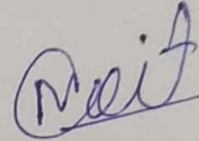
Aditya Ajantiwale

(Signature)



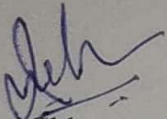
Alisha Sahare

(Signature)



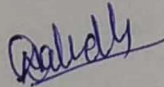
Mohnit Ningurkar

(Signature)



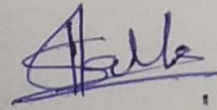
Neha Chhapparghare

(Signature)



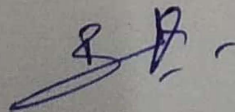
Nehal Belwale

(Signature)



Saurabh Kale

(Signature)

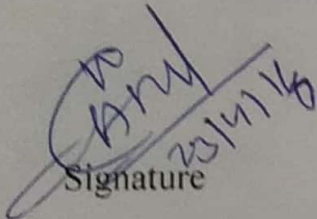


Prof R. M. Bhagat

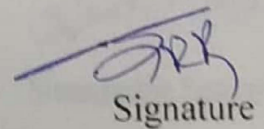
(Guide)

## CERTIFICATE OF APPROVAL

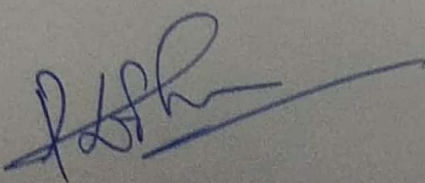
Certified that the project report entitled "AN INVESTIGATION ON STRENGTH AND DURABILITY PROPERTIES OF DIFFERENT BACTERIAL CONCRETE WITH CONTROLLED CONCRETE" has been successfully completed by Ashwin Jibhkate, Vrushabh Saharkar, Prashant Tapre, Shubham Lichade, Shrirang Siras, Saiyyaf Ail Shah under the guidance of Prof.A.S.Kurzekar in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering, Yeshwantrao Chavan College Of Engineering (An Autonomous Institution Affiliated To Rashtrasant Tukdoji Maharaj Nagpur University)

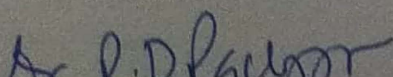
  
Signature

Prof. A.S. Kurzekar  
(Guide)

  
Signature

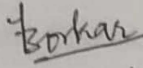
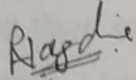
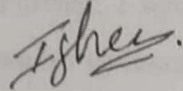
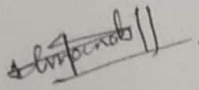
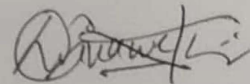
Dr. S.R. Khandeshwar  
(H.O.D)  
(C.E.Dept.)

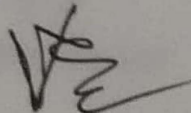
  
Signature of External Examiner:


Name: 

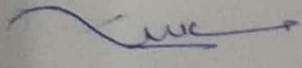
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Analysis Of Water Distribution Networks" has been successfully completed by Jeetisha Borkar, Rakshanda Nagdive, Ishan Akant, Padmanabh Jadhao, Rugwed Ninawekar under the guidance of **Dr. R. R. Dighade** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**

Name	Signature
1. Jeetisha Borkar	
2. Rakshanda Nagdive	
3. Ishan Akant	
4. Padmanabh Jadhao	
5. Rugwed Ninawekar	

  
Dr. R. R. Dighade  
(Guide)

  
Dr. S. R. Khandeshwar  
(HOD, CE Dept.)

Signature of External Examiner: 

Name:

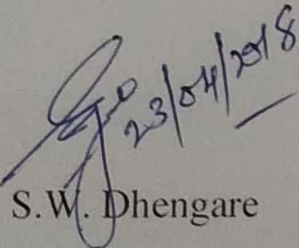
Dr. S. J. NIKAM

Date of Examination: 20/04/2018

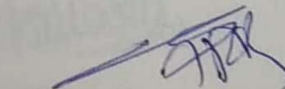


## CERTIFICATE OF APPROVAL

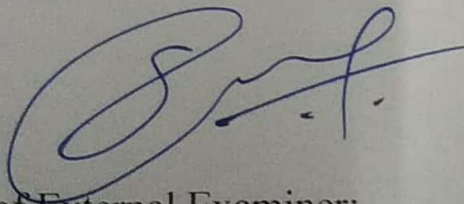
Certified that the project report entitled "FINENESS EFFECT OF SUGARCANE BAGASSE ASH, RICE HUSK ASH & FLY ASH ON COMPRESSIVE STRENGTH OF CONCRETE" has been successfully completed by Abhishek V. Kolhe, Ashish P. Jaiswal, Harshal K. Ambadkar, Nehal R. Shende, Nikhil J. Turkar, Nikhil S. Nighot under the guidance of Professor S. W. Dhengare in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering. Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated To Rashtrahant Tukdoji Maharaj Nagpur University).

  
23/04/2018

Prof. S.W. Dhengare  
(Guide)



Dr. S.R. Khandeshwar  
(HOD, CE Dept.)




Signature of External Examiner:-


Name:- SANDEEP. R. GAIKWAD

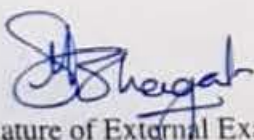
Date of examination:- 23/04/2018

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "CAPACITY ESTIMATION OF URBAN ROADS UNDER HETEROGENEOUS TRAFFIC CONDITIONS" has been successfully completed by AtulBopche, Nikita Kanhekar, Parimal Wankar, Shubham Chetty , Simran Jaiswal, Sudhir Yadav, under the guidance of Prof S.M.Waghmare in recognition to the partial fulfillment for the award of the degree of Bachelor of engineering in Civil Engineering, YeshwantraoChavan College of Engineering(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

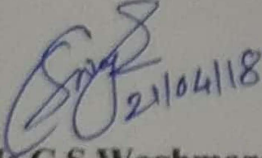
  
Signature  
Prof.S.M.Waghmare  
(Guide)


  
Signature  
Dr.S.R.Khandeshwar  
(H.O.D)  
(C.E. Dept)

  
Signature of External Examiner:  
Name: Dr. M-S Bhagat  
Date of Examination:

## CERTIFICATE OF APPROVAL

Certified that the project report entitled Of "LABORATORY SCALE STUDY ON TREATMENT GREYWATER USING FILTRATION PROCESS" has been successfully completed by SUMIT HETE, GAYATRI BHURKUDE, SHUBHAM RAMTEKE, HIMANSHU PATHAK, TANVI THAK under the guidance of PROF. MS.C.S.WAGHMARE in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

  
Prof Ms.C.S.Waghmare  
(Project Guide)

  
Dr. S.R. Khandeshwar  
(HoD, CE Department)

Signature of External:

Name of External:

Date of Examination:

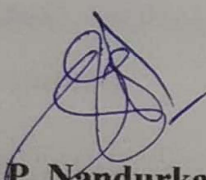


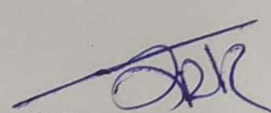
P.B. Kulkarni

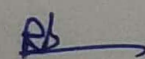
21/04/18

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Economical Housing Solutions" has been successfully completed by Prajakt Dhawale, Tanay Niwant , Saurabh Dhamdar, Amit Thenge, Chirag Pede, Abhishek Ambagade under the guidance of **Prof. B. P. Nandurkar** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**

  
**Prof B.P. Nandurkar**  
Project Guide

  
**Dr. S.R. Khandeshwar**  
HoD, CE Department

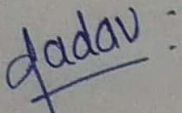
Signature of External: 

Name of External: **DR. R. N. KHARDE**

Date of Examination: **20/04/18**

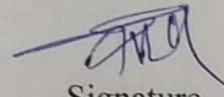
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "A COMPARATIVE STUDY OF BIS AND ACI METHOD OF CONCRETE MIX DESIGN" has been successfully completed by SAURABH MATE, VIKAS DANDALE, SAGAR KHARATE, ROHANSING DHANAWAT, PRATIK MENDULE, ROHIT CHOURASIYA under the guidance of Prof. A.A. YADAV in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).



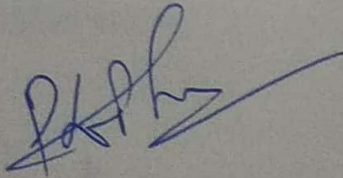
Signature

Prof. A.A. Yadav  
(Guide)



Signature

Dr. S.R. Khandeshwar  
(H.O.D. C.E. Dept.)



Signature of External Examiner:

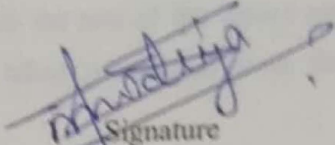
Name: Dr. S. D. Khandeshwar


28/7/14


Date of Examination:

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "IMPACT OF WASTE MATERIALS ON CONCRETE" has been successfully completed by Prajakta Parkale Meghana Dongre Shubham Wanjari Samiksha Shende Nutan Sawarkar Pooja Ankatwar Pooja Dudure under the guidance of Prof.S.M.Amrodiya in recognition to the partial fulfillment for the award of the degree of Master of Technology in Mechanical Engineering, Yeshwantrao Chavan College of Engineering( An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

  
Signature  
Prof.S.M.Amrodiya  
(Guide)

  
Signature  
Dr. S.R.Khandeshwar  
(HOD, CE Dept.)

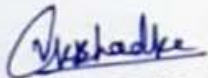
  
Signature of External Examiner

Name DRAN. KHAPPE

Date of Examination: 22/04/18

## CERTIFICATE OF APPROVAL

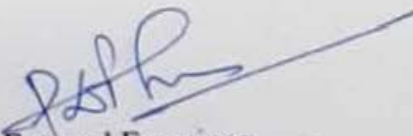
It is certified that the project report entitled "To Study and Design the Pervious Concrete" has been successfully completed by Ankit Chaudhari, Ritesh Gulpude, Nayan Bhotmage, Abhishek Jagtap, Amit Rahangdale, Pravin Waghmare under the guidance of Prof. Mrs. V.N.Mendhe in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).



Prof. Mrs. V. N. Mendhe  
(Guide)



Dr. S.R. Khandeshwar  
(HOD, CE Dept)



Signature of External Examiner

Examiner Name: Dr. P.D. Pachon

Date of Examination:

28/11/18

## CERTIFICATE OF APPROVAL

Certified that the project entitled LABORATORY METHOD FOR DETERMINE BEARING CAPACITY OF SOIL has been successfully completed by Amol B. Bhalerao, Hitesh A. Mahajan, Omprakash A. Tambolkar, Pawan O. Pawar, Sudam J. Chavan, Suraj S. Dongare Under The Guidance Of **Pro. J. M. Raut** in recognition to partial fulfilment for the award of the degree of Bachelor of Technology in Civil Engineering, Yeshwantrao chavan college of Engineering (An Autonomous Institution Affiliated To Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur)

DATE: 23/04/2018



Signature

(Pro. J. M. Raut)



Signature

(HOD Dr. S. R. Khandeshwar)

  
Signature of External Examiner:-

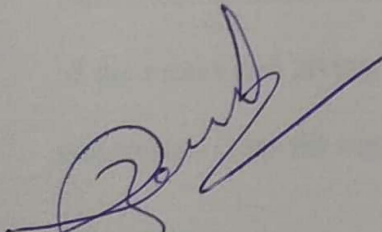
Name:- **DR. SRINIVASAN V**

Date of Examination:- 23/04/2018



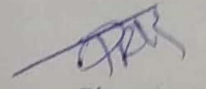
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "ANALYSIS OF BEHAVIOUR OF PILE RAFT FOUNDATION" has been successfully completed by ADARSH INGLE, AKASH MENDHE, ANKUSH KHONDE, ASHUTOSH CHAVHAN, KAUSTUBH FANDI, RAHUL SORMARE under the guidance of Pro. J. M. RAUT in recognition to the partial fulfillment for the award of the degree of Master of Technology in Mechanical Engineering, Yeshwantrao Chavan College of Engineering. (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



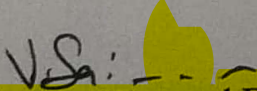
Signature

Prof. J. M. Raut  
(Project Guide)



Signature

Dr. S. R. Khandeshwar  
(HOD, CE Dept.)

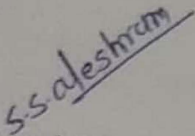
V.Sa:   
Signature of External Examiner

Name DR. SRINIVASAN V

Date of Examination: 23/04/2018

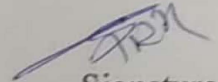
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "The Efficient And Economical Mobile Dormitory" has been successfully completed by Akash Tekam, Aniket Changale, Krishna Khake, Kunal Gajbhiye, Nehal Janganwar under the guidance of Prof S.S. Meshram in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

  
Signature

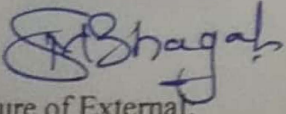
Prof S.S. Meshram

Project Guide

  
Signature

Dr. S.R. Khandeshwar

HoD, CE Department

  
Signature of External.

Name of External: Dr. Mrs. Bhagat

Date of Examination: 21/04/2018

## CERTIFICATE OF APPROVAL

It is Certified that the project report entitled "GREEN BUILDING" has been successfully completed by Lukeshkumar Palewar, Saurabh Bang, Amey Satpute, Nikhil Bhagat, Sonal Bheley under the guidance of **Prof. H. R. Nikhade** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering. **Yeshwantrao Chavan College of Engineering** (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).



Signature

Prof. H. R. Nikhade  
(Guide)



Signature

Dr. S. R. Khandeshwar  
(HOD, CE Dept. )



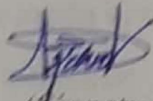
Signature of External Examiner

Examiner Name: **Dr. M. S. Bhagat**

Date of Examination: **21-04-2018**

## CERTIFICATE OF APPROVAL

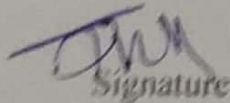
Certified that the project report entitled "DEVELOPMENT OF SUSTAINABLE BRICK USING TEXTILE EFFLUENT TREATMENT PLANT SLUDGE" has been successfully completed by PARIMAL JENEKAR, SWAPNIL BELEKAR, KALYANI BORKAR, SHRADDHA RAJGURE, VIRAL CHAVHAN, MADHURI KISWE, SHRIYA KHANZODE under the guidance of Prof. D. G. AGRAWAL in recognition to the partial fulfillment for the award of the degree of Master of Technology in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



(Signature)

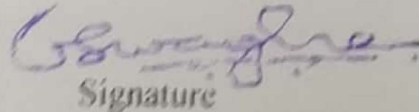
Prof. D. G. AGRAWAL

(Guide)



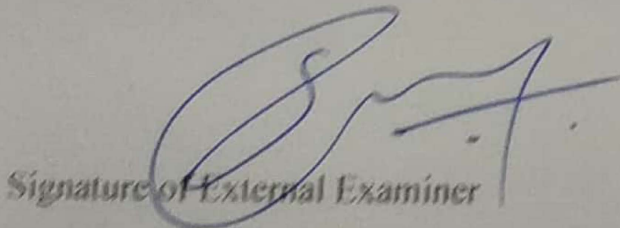
Prof. Dr. Khandeshwar

(HOD, CE Dept.)



Dr. U. P. Waghe

(Principal)



Signature of External Examiner

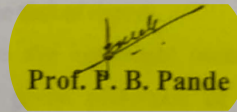
Name: SANDEEP R. HAIKWAD

Date of Examination: 23/04/2018

## Certificate of Approval

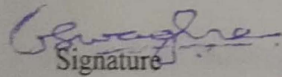
Certified that the project report entitled "DETERMINATION OF SUCTION AND SHEAR STRENGTH OF UNSATURATED SOIL", has been successfully completed by the students of final year under the guidance of Prof. P.B.Pande in recognition to the partial fulfillment for the award of the degree of Bachelor of Civil Engineering, Yeshwantrao Chavan College of Engineering, Nagpur.

Signature



Prof. P. B. Pande

(Project Guide)



Signature

Dr.U.P. Waghe

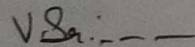
(Principal)



Signature

Prof. Dr. S.R. Khandeshwar

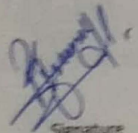
(Head, Department of Civil Engineering)



Signature of External Examiner

### CERTIFICATE OF APPROVAL

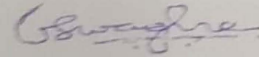
Certified that the project report entitled "EFFECT OF PARTIAL REPLACEMENT OF CEMENT WITH GLASS POWDER ON MECHANICAL PROPERTIES OF CONCRETE" has been successfully completed by ARPIT VELDI ,AKASH KALRA ,BALRAJ LOHE SHRESHTH CHAM ,KETAN THAKRE under the guidance of Prof.P.K.HINGE in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)




Signature  
Prof.P.K.Hinge  
(Guide)



Signature  
Dr. S. R. Khandeshwar  
(HOD, Civil Engg. Dept.)



Signature  
Dr. U.P.Waghe  
(Principal)

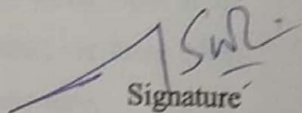
Signature of External Examiner 

Name Dr. P. N. KHARDE


Date of Examination: 20/12/18

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "USE OF AGRICULTURAL WASTE AS PARTIAL REPLACEMENT TO FLY ASH FOR BRICKS" has been successfully completed by Sakshi Harde, Aparna Lanjewar, Gaurav Bhatwadekar, Javed Khan, Pooja Bitpalliwar, Pramod Dhakne, Shubham Devkar under the guidance of **DR. S.V. AMBEKAR** in recognition to the partial fulfilment for the award of the degree of Bachelor Of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

  
Signature

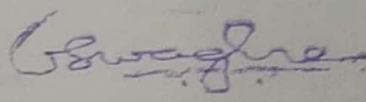
**Dr. S.V. Ambekar**  
(Project Guide)

  
Signature

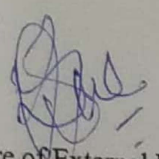
**Dr S.R. Khandeshwar**  
(HOD)

Head

Department of Civil Engineering  
Y. C. College of Engineering  
NAGPUR-441 110

  
Signature

**Dr. U.P. Waghe**  
(Principal)

  
Signature of External Examiner:

Name:

Date of Examination

## CERTIFICATE OF APPROVAL

Certified that the project report "STUDY OF SCHEDULING OF IRRIGATION WATER AND MAINTENANCE OF CANALS" has been successfully completed by Ankita Hurmade, Megha Ghule, Pinki Galbale, Saraswati Gourikar, Sharayu Holey, Shubhani Kadu under the guidance of **Dr.A.L.Dandge** in recognition to the fulfillment for the award of the degree of bachelor of technology in Civil Engineering. Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



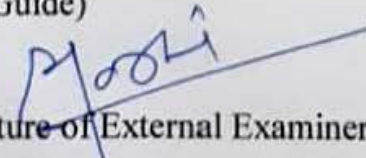
Dr.A.L.Dandge

(Guide)



Dr.S.R Khandeshwar

(HOD, C.E Dept)



Signature of External Examiner:

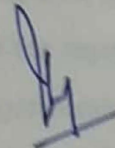
Name: Dr. S. V. Joshi

Date of Examination: 20.04.2018

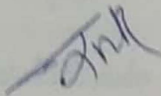


## CERTIFICATE OF APPROVAL

Certified that the project report entitled "SECANT PILE WALL BY UTILIZING THE NON-BIODEGRADABLE WASTE" has been successfully completed by ANUSHREE BAKDE, SHUBHAM DATE, PRATIK GHODMARE, SAYALI BORKUTE, SUMAIR SIDDIQUI, UJWAL FARKADE under the guidance of Prof. PALLAVI S. CHAKOLE in recognition to the partial fulfillment for the award of the degree of bachelor of technology in civil engineering .Yeshwantrao Chavan College Of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



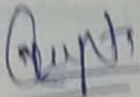
Ms. Pallavi S. Chakole  
(Guide)



Dr. S. R. Khandeshwar  
(HOD, CE Dept.)



Prof. Dr. U. P. Waghe  
(Principle)



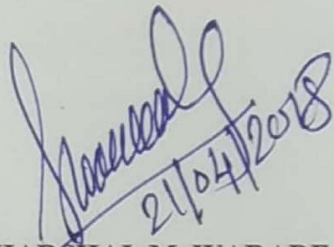
Signature of External Examiner:

Name: Prof. D. B. Gupta, RCOEM

Date of Examination: 01/04/18

## CERTIFICATE OF APPROVAL

Certified that the project report entitled '**DEVELOPMENT AND PERFORMANCE OF ANAEROBIC REACTOR FROM ORGANIC WASTE UNDER MESOPHILIC TEMPERATURE RANGE**' has been successfully completed by MRUNAL WANJARI, VAIBHAV KULKARNI, NIKITA MESHAM, ROSHANI VAIDYA, DIVYANI MARKAM, ANURAG PURANIK, NUTAN PANCHABUDDHE under the guidance of **Prof. HARSHAL M. WARADE** in recognition to the partial fulfillment for the award of the degree of Bachelor of Technology in Civil Engineering, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*)

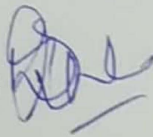


Prof. HARSHAL M. WARADE  
(Guide)



Dr. S.R. KHANDESHWAR  
(HOD, Civil Dept.)

Sign of External Examiner:

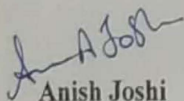


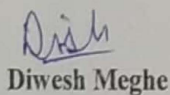
Name: P.B. Kulkarni

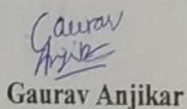
Date of Examination: 21/04/18

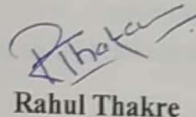
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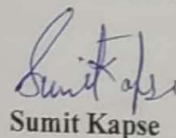
This is to certify that the project report entitled "STUDY OF EXISTING WATER SUPPLY SYSTEM AT YCCE AND SUGGESTION FOR ITS IMPROVEMENT" has been successfully completed under the guidance of **PROF. D.R.RAUT** (of C.E.Dept.) & **PROF.Y.S. KALE**(of E.T.C. Dept) in recognition to the partial fulfillment for the award of the degree of Bachelors of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University,Nagpur)

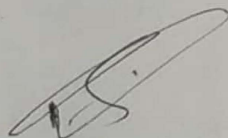
  
Anish Joshi

  
Diwesh Meghe

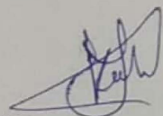
  
Gaurav Anjekar

  
Rahul Thakre

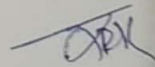
  
Sumit Kapse



PROF. D.R.RAUT  
(Guide, CE Dept)



PROF.Y.S. KALE  
(Co-Guide, ETC Dept)

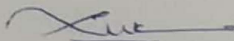


DR.S.R.KHANDESHWAR  
(HOD, CE Dept.)

Signature of External Examiner:

Name:

Date of Examination:



Dr S. J NIKAM

20/04/2018

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Analysis And Design of Underground Water Tank**”, has been successfully completed by the students **Lalit Ghiya, Nachiket Khasare, Nayan Asati, Shubham Bagul, Tushar Nagphase, Udit Chourasia, Yogesh Bramhe** of final year under the guidance of **Dr. S.P. Raut** in recognition to the partial fulfillment for the award of the degree of Bachelor of Civil Engineering, **Yeshwantrao Chavan College of Engineering, Nagpur.**

Lalit Ghiya

Nachiket Khasare

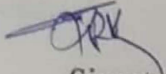
Nayan Asati

Shubham Bagul

Tushar Nagphase

Udit Chourasia

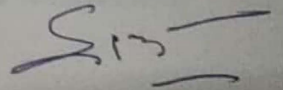
Yogesh Bramhe



Signature

**Prof. Dr. S. R. Khandeshwar**

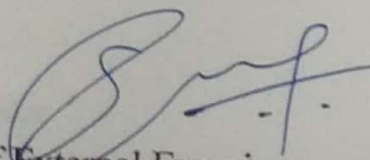
**(Head, Department of Civil  
Engineering)**



Signature

**Dr. S. P. Raut**

**(Guide)**



Signature of External Examiner:

Name: **SANDEEP. R. GAIKWAD**

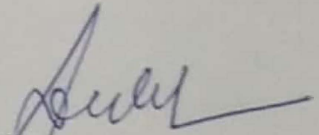
Date of Examination: **23/04/2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "STUDY AND APPLICATION OF MAHARERA ACT", has been successfully completed by Kushal Nalkande, Pratik Pawar, Rohan Rananaware, Swapnil Deshbhratar, Tajeshwar Gajbhiye, under the guidance of Prof. R.S. Deotale in recognition to the partial fulfillment for the award of the degree of Bachelor of Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).



**Dr. S. R. Khandeshwar**  
(Head of Civil Engg. Dept.)



**Prof. R. S. Deotale**  
(Project Guide)

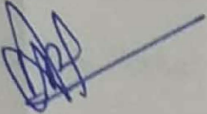
Name of External Examinee:

*240071*  
*26/4/18*

Date of Examination:

## CERTIFICATE OF APPROVAL

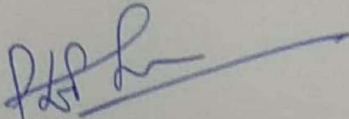
Certified that the project report entitled, "NON-DESTRUCTIVE TESTING OF CONCRETE WITH REFERENCE TO CONDITION ASSESSMENT OF REINFORCED CEMENT CONCRETE ROADS AND BUILDINGS – CASE STUDY", has been successfully completed by AISHWARYA B. DHABALE, KOYAL K. GANVIR, ROHINI S. BORKAR, AQEEB N. MOHAMMED, KSHITIJ Y. BHAI SARE and SIDDHARTH A. KHOBRA GADE under the guidance of DR. A. V. PATIL in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



Dr. A. V. Patil  
(Project Guide)



Dr. S. R. Khandeshwar  
(HOD, CE Department)



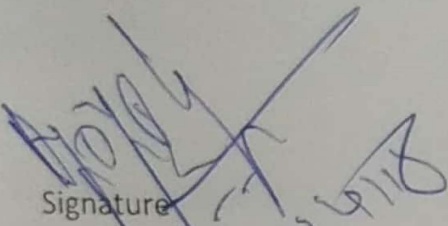
Signature of External Examiner

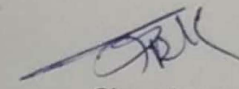
Name: Dr. P. D. Pachyore

Date of Examination: 23/4/18

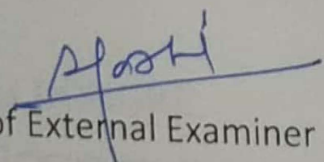
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "DESIGN OF INTERLINKING OF RIVER IN AMRAVATI YAVATMAL REGION" has been successfully completed by AMOL SANAP, YOGESH LOHAKARE, BHUSHAN JAYPURKAR, SHUBHAM DONGRE, HARSHAL KEDAR, SHANTANU DHOTE, SHUBHAM BHARRE under the guidance of **Dr. A.R. Gajbhiye** in recognition to partial fulfillment for the award of degree of Bachelor of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An autonomous institution affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).

  
Signature  
Dr. A.R. Gajbhiye  
(Guide)

  
Signature  
Dr. Shantanu R. Khandeshwar  
(HOD of Civil Engineering)

**Signature**  
Dr. M.S. Bhagat  
(Co-guide)

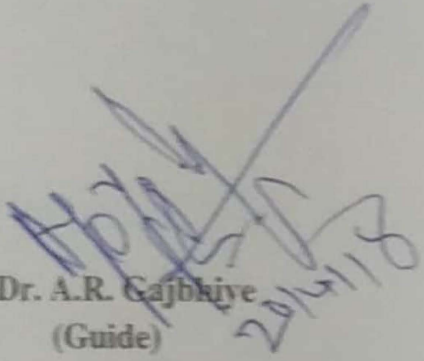
  
Signature of External Examiner


Name: Dr. S.V. Joshi

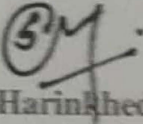
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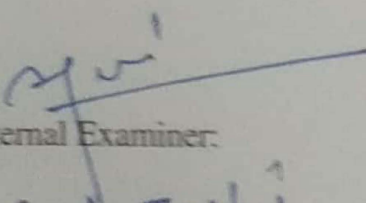
## CERTIFICATE OF APPROVAL

It is hereby certified that the project report entitled "DESIGN OF WATER TREATMENT PLANT FOR HINGNA TALUKA" has been successfully completed by Akshay Kadu, Nishikant Patil, Saurabh Dekate, Ravishankar Shinde, Rajdeep Rajhans, Kunal Hande under the guidance of **Dr. A.R. Gajbhiye** and Co-guidance of Prof. S.N. Harinkhede in recognition to partial fulfillment for the award of degree of Bachelor of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An autonomous institution affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).

  
Dr. A.R. Gajbhiye  
(Guide)

  
Dr. Shantanu R. Khandeshwar  
(Head of Department of Civil Engineering)

  
Mr. S.N. Harinkhede  
(Co-guide)

  
Signature of External Examiner:

Name: Dr. S.V. Joshi

Date of Examination:

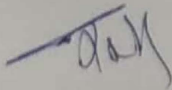


## CERTIFICATE

Certified that the project report entitled "PARTIAL REPLACEMENT OF BITUMEN WITH WASTE PLASTIC AND CRUMB RUBBER" has been successfully completed and submitted by

	REG.NO.	ROLL.NO.
Mr. AJINKYA A. DAWALE	14010608	28
Mr. AKASH M. SONWALKAR	15030056	30
Mr. SARANGDHAR A. MOTE	15030315	54
Mr. SHUBHAM R. GIRI	15030054	59
Mr. TEJAS V. NETKE	14010581	66

under the guidance of DR.S.R.KHANDESHWAR in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)



Signature

**Dr. S. R. Khandeshwar**

(GUIDE)

(HOD, CE Dept.)



Signature

Dr. U .P. Waghe

(Principal)

V. Sa. - - -

Signature of External Examiner :

Name : DR. SRINIVASAN V

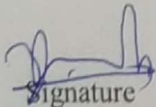
Date of Examination: 23/4/18

# Certificate

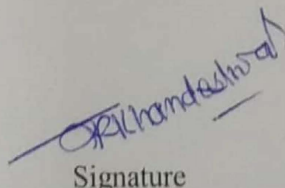
Certified that the project report entitled "Experimental investigation on use of granulated blast furnace slag as fine aggregate in cement mortar" has been successfully completed by Ashish N. Karwatkar under the guidance of Prof. B.P. Nandurkar in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



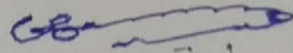
Signature  
Prof. B.P. Nandurkar  
(Guide)



Signature  
Prof. V. G. Meshram  
(Coordinator)

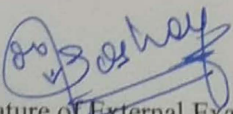


Signature  
Dr. S. R. Khandeshwar  
(HOD, CE Dept.)



Signature  
Dr. U. P. Waghe  
(Principal)

**PRINCIPAL**  
Yeshwantrao Chavan  
College of Engineering  
Wanadongri, Hingna Road,  
Nagpur - 441 110



Signature of External Examiner

Name B. V. Bahoria

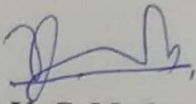
Date of Examination: 28/10/17

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "SEISMIC ANALYSIS OF UNSYMMETRICAL STRUCTURE BY BASE ISOLATION TECNIQUE" has been successfully completed by Shruti A. Gadekar under the guidance of Prof. S. S. Meshram, Professor, Civil Engineering Department in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

S.S. Meshram

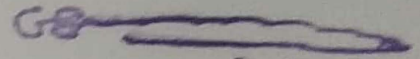
Prof. S.S. Meshram  
(Guide)



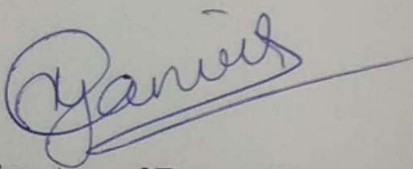
Prof. V. G. Meshram  
(Coordinator)



Dr. S.R. Khandeshwar  
(HOD, CE Dept)



Dr. U.P. Waghe  
(Principal)



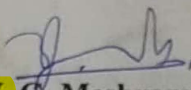
Signature of External Examiner

Name- Veena A. Ganies

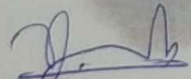
Date of Examination- 27/04/2018


## CERTIFICATE OF APPROVAL

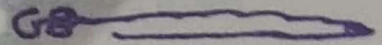
Certified that the project report entitled "STUDY OF SEISMIC BEHAVIOUR OF CHEVRON BRACED HIGH RISE STEEL STRUCTURE" has been successfully completed by PAVAN D. FUNDE under the guidance of Dr. V. G. MESHRAM, Professor, Civil Engineering Department in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).

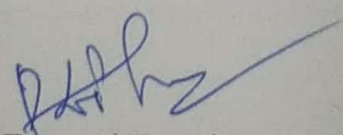
  
Dr. V. G. Meshram

(Guide)

  
Dr. V. G. Meshram  
(Co-ordinator)

  
Dr. S. R. Khandeshwar  
(HOD, CE Dept.)

  
Dr. U. P. Waghe  
(Principal)

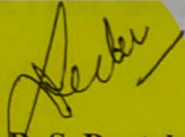
  
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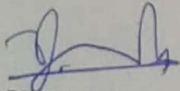
Name : Dr P D Pachpor

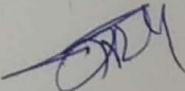
Date of Examination:  
26/11/18

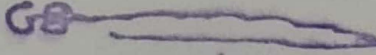
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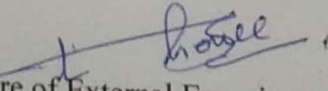
Certified that the project report entitled "PARTIAL REPLACEMENT OF NATURAL SAND BY ARTIFICIAL SAND AND GEOPOLYMER SAND IN LOW GRADE CONCRETE (M20)" has been successfully completed by Ms. SNEHA BORKAR under the guidance of Prof. R. S. DEOTALE in recognition to the partial fulfilment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

  
Prof. R. S. Deotale  
(Guide)

  
Prof. V. G. Meshram  
(Coordinator)

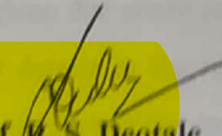
  
Dr. S. R. Khandeshwar  
(HOD, CE Dept.)

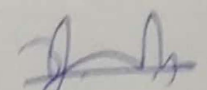
  
Dr. U. P. Waghe  
(Principal)


  
Signature of External Examiner:  
Name: Dr. Lushar G. Shende  
Date of Examination: 27/07/2018.

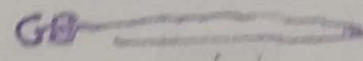
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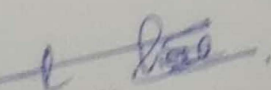
Certified that the project report entitled "Partial Replacement of Natural Sand by Artificial Sand and Geopolymer Sand in High Grade Concrete (M40)" has been successfully completed by Mr. ANUJ SHENDRE under the guidance of Prof. R. S. DEOTALE in recognition to the partial fulfilment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

  
Prof. R. S. Deotale  
(Guide)

  
Prof. V. G. Meshram  
(Coordinator)

  
Dr. S.R. Khandeshwar  
(HOD, CE Dept.)

  
Dr. U. P. Waghe  
(Principal)

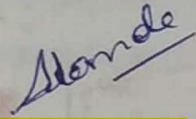
  
Signature of External Examiner:

Name: Dr. Ashok G. Shende

Date of Examination: 29/04/2018.

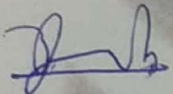
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "CRITICAL STUDIES ON THE DEVELOPMENT OF FORCES UNDER SEISMIC LOADING DUE TO HORIZONTAL AND VERTICAL IRREGULARITIES IN STRUCTURES" has been successfully completed by SAVAN SADASHIV PATORKAR under the guidance of Dr. **A. M. PANDE**, Associate Professor, Civil Engineering Department in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).

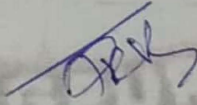


**Dr. A. M. PANDE**

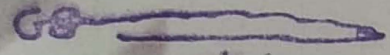
(Guide)



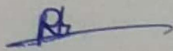
Dr. V. G. Meshram  
(Co-ordinator)



Dr. S. R. Khandeshwar  
(HOD, CE Dept.)



Dr. U. P. Waghe  
(Principal)



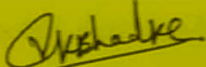
Signature of External Examiner

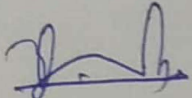
Name: DR. AN. H. ADPE

Date of Examination: 26/09/18

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "To Study The Behaviour Of Rcc Framed Structure Under Blast Loading" has been successfully completed by Disha S. Kukekar under the guidance of Prof. Vaishali Mendhe in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering, Nagpur. (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University).

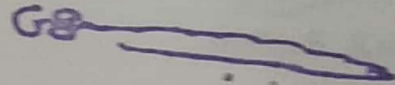
  
Prof. Vaishali Mendhe  
(Guide)



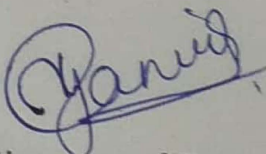
Dr. V.G. Meshram  
(Coordinator)



Dr. S.R. Khandeshwar  
(HOD, CE Dept.)



Dr. U. P. Waghe  
(Principal)



Signature of External Examiner

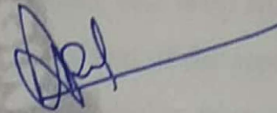
Name: Veena A. Ganvir

Date of Examination:



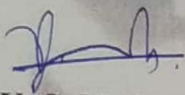
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "COMPARATIVE STUDY OF ROOFING SYSTEMS FOR LARGE SPAN STRUCTURES WITH RESPECT TO CONVENTIONAL, FLAT SLAB, FOLDED PLATE SYSTEM & HYPERBOLIC PARABOLOID SHELL ROOF" has been successfully completed by PARMESH P. SURNAR under the guidance of **Dr. A.V. PATIL**, Professor, Civil Engineering Department in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).



**Dr. A.V. PATIL**

(Guide)



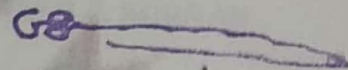
**Dr. V. G. Meshram**

(Co-ordinator)



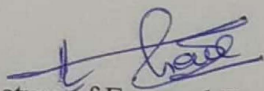
**Dr. S.R. Khandeshwar**

(HOD, CE Dept.)



**Dr. U. P. Waghe**

(Principal)



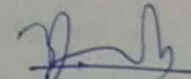
Signature of External Examiner

Name: **Dr. Eshwar G. Shinde**

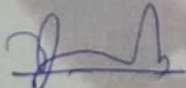
Date of Examination: **29/04/2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "COMPARATIVE STUDY OF WOODEN, R.C.C AND STEEL FRAMED STRUCTURE UNDER SIESMIC LOADING" has been successfully completed by MOHD TAUSEEF under the guidance of **Dr. V.G.MESHRAM**, Associate Professor, Civil Engineering Department in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**.



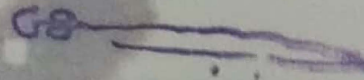
**Dr. V.G.MESHRAM**  
(Guide)



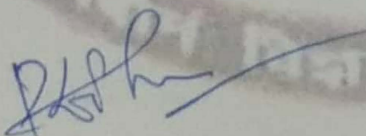
**Dr. V. G. Meshram**  
(Co-ordinator)



**Dr. S.R. Khandeshwar**  
(HOD, CE Dept.)



**Dr. U. P. Waghe**  
(Principal)



Signature of External Examiner

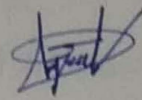
Name : **Dr. P. D. Pachpor**

Date of Examination:

**26/11/18**

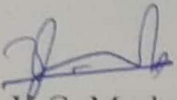
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Progressive Collapse Analysis Of Composite Structure" has been successfully completed by Abhishek S. Gulhane under the guidance of Prof. Dhiraj Agrawal in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering, Nagpur. (An Autonomous Institution Affiliated to Rashtrasantukadoji Maharaj Nagpur University).

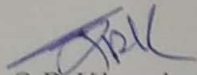


Prof. Dhiraj Agrawal

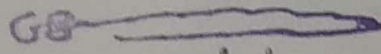
(Guide)



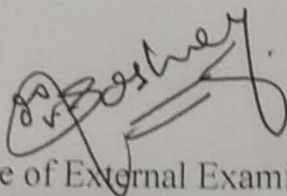
Dr. V.G. Meshram  
(Coordinator)



Dr. S.R. Khandeshwar  
(HOD, CE Dept.)



Dr. U. P. Waghe  
(Principal)



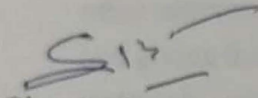
Signature of External Examiner

Name: Dr. B.V. Bahadur

Date of Examination: 26/04/18

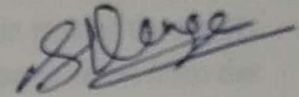
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Analysis and Design of Composite Hospital Building Subjected To Seismic Forces By Using National Disaster Management Authority of India Guidelines." has been successfully completed by MR. SHARDULKUMAR A, WANKHEDE under the guidance of **Dr. S. P. RAUT** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated To Rashtrasant Tukdoji Maharaj Nagpur University)

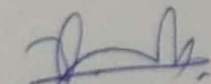


Signature

**Dr. S. P. Raut**  
(Guide)



Signature  
**Er. S. V. Denge**  
(Co-Guide)



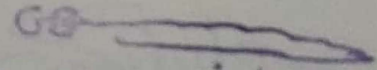
Signature

**Dr. V.G. Meshram**  
(Coordinator)

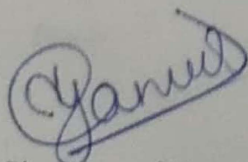


Signature

**Dr. S.R. Khandeshwar**  
(HOD, CE Dept.)



Signature  
**Dr. U.P. Waghe**  
(Principal)



Signature of External Examiner

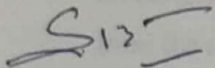
Name

Date of Examination:

DECLARATION

**CERTIFICATE OF APPROVAL**

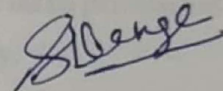
Certified that the project report entitled "Analysis and Design of RCC Hospital Building Subjected to Seismic Forces by Using National Disaster Management Authority of India Guidelines." has been successfully completed by MISS. MINAL R. AKHARE under the guidance of **Dr.S.P.RAUT and** Er. S. V. DENGE in recognition to the partial fulfillment for the award of the degree of Master of Technology in Civil Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated To Rashtrasant Tukdoji Maharaj Nagpur University)



Signature

**Dr. S. P. Raut**

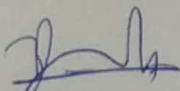
**(Guide)**



Signature

**Er. S. V. Denge**

**(Co-Guide)**



Signature

**Dr. V. G. Meshram**

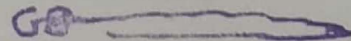
**(Coordinator)**



Signature

**Dr. S. R. Khandeshwar**

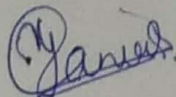
**(HOD, CE Dept.)**



Signature

**Dr. U. P. Waghe**

**(Principal)**



Signature of External Examiner

Name

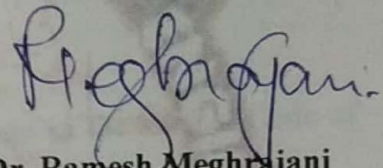
Date of Examination:

## CERTIFICATE OF APPROVAL

This is to certify that the project report entitled "MODELLING OF PRE ENGINEERED BUILDING" has been successfully completed by MITHUN DAMODAR GAWADE under the guidance of Dr. U.P.Waghe, Professor, Civil Engineering Department and co-guide Dr. Ramesh Meghrajani in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).



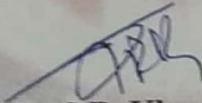
Dr. U.P.Waghe  
(Guide)



Dr. Ramesh Meghrajani  
(Co-Guide)



Dr. V. G. Meshram  
(Co-ordinator)



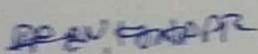
Dr. S.R. Khandeshwar  
(HOD, CE Dept.)



Dr. U. P. Waghe  
(Principal)



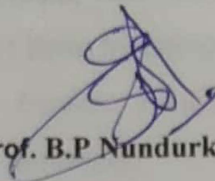
Signature of External Examiner

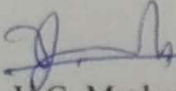
Name : 

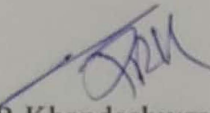
Date of Examination: 25/04/14

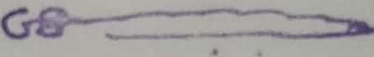
## CERTIFICATE OF APPROVAL

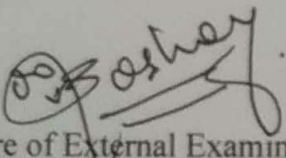
Certified that the project report entitled "Critical Study on Bond Strength of Traditional Mortar And Mortar Containing Fly Ash And Rice Husk Ash With Masonry" has been successfully completed by SAMIT SARKAR under the guidance of Prof. B.P Nundurkar in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering, Nagpur. (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University).

  
Prof. B.P Nundurkar  
(Guide)

  
Dr. V.G. Meshram  
(Coordinator)

  
Dr. S.R. Khandeshwar  
(HOD, CE Dept.)

  
Dr. U. P. Waghe  
(Principal)

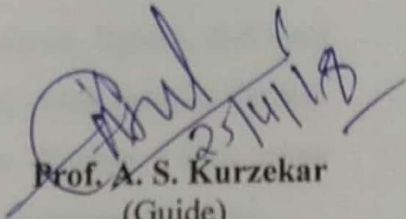
  
Signature of External Examiner

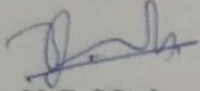
Name: Dr. B. V. Bahera

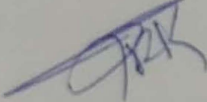
Date of Examination: 26/04/18.

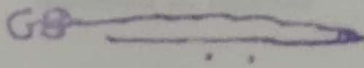
## CERTIFICATE OF APPROVAL

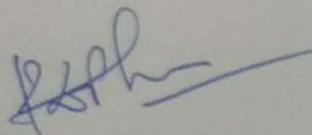
Certified that the project report entitled "TO INVESTIGATE THE OPTIMIZATION OF PILE FOUNDATION SYSTEM IN HIGH RISE BUILDING" has been successfully completed by **Bhushan D. Itankar** under the guidance of **Prof. A. S. Kurzekar** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering, Nagpur. (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University).

  
Prof. A. S. Kurzekar  
(Guide)

  
Dr. V.G. Meshram  
(Coordinator)

  
Dr. S. R. Khandeshwar  
(HOD, CE Dept.)

  
Dr. U. P. Waghe  
(Principal)

  
Signature of External Examiner  
Name: **Dr. P. D. Pachore**  
Date of Examination:  
**26/4/18**




## CERTIFICATE OF APPROVAL

Certified that the project report entitled TO STUDY THE VARIOUS COMPOSTING METHODS AND TO DEVELOP THE RAPID METHOD OF COMPOSTING has been successfully completed by RASIKA R. WASNIK under the guidance of Dr. S. R. KHANDESHWAR in recognition to the partial fulfillment for the award of the degree of Master of Technology in Environmental Engineering, Yeshwantrao Chavan College of Engineering, Nagpur. (An Autonomous Institution Affiliated to Rashtrasantukadoji Maharaj Nagpur University).




**Dr. S.R. Khandeshwar**

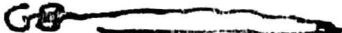
(Guide)



Dr. S.V. Ambekar  
(Coordinator)



Dr. S.R. Khandeshwar  
(HOD, CE Dept.)



Dr. U. P. Waghe  
(Principal)

Signature of External Examiner

Name: Prof. P. B. Kulkarni

Date of Examination: 27/04/2018

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Greywater treatment by application of hybrid electrocoagulation" has been successfully completed by **Shrutika D. Bhute** under the guidance of **Prof. Khalid S. Ansari** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Environmental Engineering, **Yeshwantrao Chavan College of Engineering, Nagpur. (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University).**



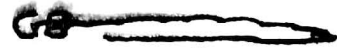
Prof. Khalid S. Ansari  
(Guide)



Dr. S. V. Ambekar  
(Coordinator)



Dr. S.R. Khandeshwar  
(HOD, CE Dept.)



Dr. U. P. Wagle  
(Principal)

Signature of External Examiner

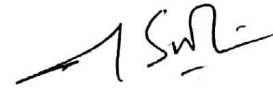


Name: Prof. P.B. Kulkarni

Date of Examination: 27/4/18

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "The Study of effect of various parameters on optimum coagulant dose" has been successfully completed by Tejaswini Y. Niwal under the guidance of **Dr. S. V. Ambekar** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, Yeshwantrao Chavan College of Engineering, Nagpur. (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University).



**Dr. S. V. Ambekar**

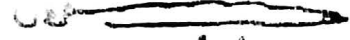
(Guide)



**Dr. S. V. Ambekar**  
(Co-ordinator)



**Dr. S.R. Khandeshwar**  
(HOD, CE Dept.)



**Dr. U. P. Waghe**  
(Principal)

Signature of External Examiner



Name: Prof. P. B. Kulkarni

Date of Examination: 27/4/2018

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Performance Analysis Of Drawer Compacted Sand Filter**” has been successfully completed by **Prajakta R. Pazare** under the guidance of **Prof. Ms. Charuta S. Waghmare** recognition to the partial fulfillment for the award of the degree of Master of Technology in Environmental Engineering, **Yeshwantrao Chavan College of Engineering, Nagpur. (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University).**



**Prof. Ms. Charuta S. Waghmare**  
(Guide)



**Dr. S. V. Ambekar**  
(Coordinator)



**Dr. S.R. Khandeshwar**  
(HOD, CE Dept.)



**Dr. U. P. Waghe**  
(Principal)

Signature of External Examiner



Name: Prof. P. B. Kulkarni


Date of Examination: 27/04/2018

## CERTIFICATE OF APPROVAL


Certified that the project report entitled "Assessment Of Biogas Production From Digestion & Co-Digestion Of Organic Matter Using Anaerobic Reactor" has been successfully completed by **Kalyani R. Kathane** under the guidance of **Prof. Harshal Warade** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Structural Engineering, **Yeshwantrao Chavan College of Engineering, Nagpur.** (An Autonomous Institution Affiliated to *Rashtrasant Tukadoji Maharaj Nagpur University*).



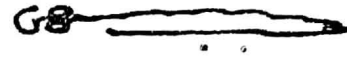
**Prof. Harshal Warade**  
(Guide)



**Dr. S. V. Ambekar**  
(Coordinator)



**Dr. S.R. Khandeshwar**  
(HOD, CE Dept.)



**Dr. U. P. Waghe**  
(Principal)

Signature of External Examiner 

Name: **Prof. P. B. Kulkarni**

Date of Examination: **27/04/2018**

Yeshwantrao Chavan College of Engineering, Nagpur

Department of Information Technology

Session: 2017-18



## Certificate

This is to certify that Mr./Ms. Apurva Meshram, Monika Patil, Nikita Dange, Rachna Sariyam has completed a **Mini Project** course titled "**Detection of Ductal Carcinoma using Histopathology Images**" towards the partial fulfillment of requirements for the B.E. sixth semester of Information Technology.

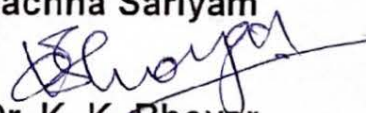
Submitted by

Apurva Meshram


Monika Patil


Nikita Dange

Rachna Sariyam

  
Dr. K. K. Bhoyar

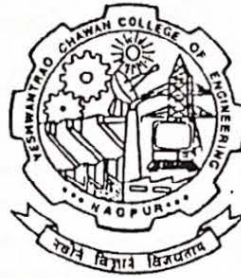
Project Guide

  
Mr. B. U. Bawankar  
Project Co-ordinator(IT)

  
Dr. U. H. Gawande  
HOD (IT)

Head, Deptt. of Information Tech.,  
YCCE, Nagpur - 441110

Yeshwantrao Chavan College of Engineering, Nagpur  
Department of Information Technology  
Session: 2017-18



## Certificate

This is to certify that Ms. Kalyani Gaidhane, Sakshi Lad, Pooja Nakhale, Vaishnavi Chavan has completed a **Mini Project** course titled "**Performance of Parallel Algorithms Using OpenMP**" towards the partial fulfillment of requirements for the B.E. sixth semester of Information Technology.

Submitted by

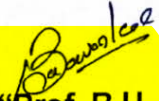
**Sakshi Lad**


**Pooja Nakhale**

**Kalyani Gaidhane**

**Vaishnavi Chavan**

  
**Mr. B. U. Bawankar**  
Project Co-ordinator(IT)

  
**"Prof. B.U. Bawankar"**  
Project Guide

  
**Dr.U.H.Gawande**  
HOD (IT)

**Head, Deptt. of Information Tech.,  
YCCE, Nagpur - 441110**

Yeshwantrao Chavan College of Engineering, Nagpur

Department of Information Technology

Session: 2017-18



## Certificate

This is to certify that Ms. Pragati Dadhe, Ms. Shraddha Pimparkar Mr. Charudatta Nikhade, Mr. Hitesh Shende has completed a **Mini Project** course titled "**Smart Dustbin System**" towards the partial fulfillment of requirements for the B.E. sixth semester of Information Technology.

Submitted by

**Shraddha Pimparkar**  
**Pragati Dadhe**  
**Charudatta Nikhade**  
**Hitesh Shende**



**Mr. B. U. Bawankar**  
Project Coordinator(IT)

**Dr. U.H.Gawande**  
HOD (IT)

Head, Deptt. of Information Tech.,  
YCCE, Nagpur - 441110



DEPARTMENT OF ELECTRONICS ENGINEERING


Reimbursement of Project expenses


2017-2018

Sr. No.	Name of Project	Name of Guide	Amount ( Rs. )	DPR
1	Institutional Bin	Prof.P.P.Palsodkar	7575	801
2	Generation &Electrical energy using renewable energy	Dr.R.D.Thakre	5614	805
3	Driverless Train Automation & security system (PG)	Dr.P.T.Karule/keote	12506	806
4	Jarvis:Humanoid Robot	Dr.S.V,Rathkantiwar	4518	807
5	Automated Torque wrench RF module (PG)	Prof.M.S.Pawar	7786	808
6	Implimentation Of Smart Healthcare System (PG)	Dr.S.V,Rathkantiwar	2204	
TOTAL			40203	

For PG  
Sanction Rs.40000  
Reimbursement Rs.  
Sanction Total Rs.130000  
Reimbursement Rs.54177

For UG  
Sanction Rs.90000  
Reimbursement Rs.

  
Dr. U.P. Waghe  
Principal, YCCE

  
HOD  
Department of Electronics Engineering  
YCCE Nagpur

**FRACTAL IMAGE COMPRESSION USING TRAPEZOID  
BLOCK TYPE DISCRETE COSINE TRANSFORM  
EXPANSION METHOD**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Master of Technology in Electronics Engineering**

*By*

**Suparna Maji**

*Under the guidance of*

**Mrs. R.S. Balpande**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University,  
Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "FRACTAL IMAGE COMPRESSION USING TRAPEZOID BLOCK TYPE DISCRETE COSINE TRANSFORM EXPANSION METHOD" has been successfully completed by SUPARNA MAJI under the guidance of **Mrs. R.S. Balpande** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Electronics Engineering, **Yeshwantrao Chavan College of Engineering** (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*)



Signature

**Mrs. R. S. Balpande**  
(Guide)




Signature

**Dr. U.S. Ghodeswar**  
Coordinator, M.Tech(EE),  
M.Tech(VLSI Design)



Signature

**Dr. A.S. Khobragade**  
(HoD, EE)



Signature of External Examiner  
Name

Date of Examination

27/4/18

# Verilog Implementation of Advanced Encryption Standard Algorithm for Encryption and Decryption

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in Electronics Engineering**

*by*

**Mohammad Aakif Kausar Shaikh Umar Kausar**

*Under the guidance of*

**Mrs. S.R. Nitnaware**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

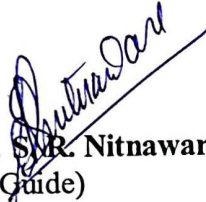
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*


**NAGPUR – 441 110**


**2017 -2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “Verilog Implementation of Advanced Encryption Standard Algorithm for Encryption and Decryption” has been successfully completed by Mr. Mohammad Aakif Kausar Shaikh Umar Kausar under the guidance of Mrs. S. R. Nitnaware of in recognition to the partial fulfillment for the award of the degree of Master of Technology in Electronics Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.

  
Mrs. S. R. Nitnaware  
(Guide)

  
Dr. U. S. Ghodeswar  
(Co-ordinator), M.Tech (EE)

  
Dr. A. S. Khobragade  
(HOD, EE Dept.)

Signature of External Examiner:

Name:

Date of Examination:

# Object Tracking Using Mean Shift Method

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasantukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

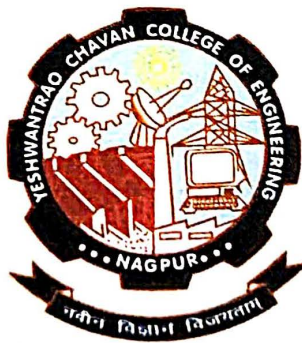
**Master of Technology in Electronics Engineering**

*by*

**Minal T. Kharbikar**

*Under the guidance of*

**Prof.A.V.Gokhale**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

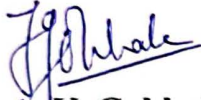
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous institution affiliated to Rashtrasantukadoji Maharaj Nagpur university, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "OBJECT TRACKING USING MEAN SHIFT METHOD" has been successfully completed by MINAL T. KHARBIKAR under the guidance of **Prof. A. V. GOKHALE** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Electronics Engineering, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



**Prof. A. V. Gokhale**  
(Guide)



**Dr. U.S. Ghodeswar**  
Coordinator, M.Tech(EE)



**Dr. A.S. Khobragade**  
(HoD, EE)

Signature of External Examiner:

Name:

Date of Examination:

27/9/14

# Driverless Train Automation and Security System

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in Electronics Engineering**

*by*

**Ketankumar Ramdeenram Jaiswal**

*Under the guidance of*

**Dr.P.T.Karule**

**&**

**Mrs.R.S.Keote**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017 -2018**



## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Driverless Train Automation and Security System**” has been successfully completed by **Mr. Ketankumar Ramdeenram Jaiswal** under the guidance of **Dr.P.T.Karule and Mrs.R.S.Keote** of in recognition to the partial fulfillment for the award of the degree of Master of Technology in Electronics Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**, Nagpur.



**Dr.P.T.Karule**  
(Guide)



**Mrs.R.S.Keote**  
(Co-guide)



**Dr. U. S. Ghodeswar**

(Co-ordinator), M.Tech (EE)



**Dr. A. S. Khobragade**

(HOD, EE Dept.)



Signature of External Examiner:

Name:

Date of Examination:

# **Implications and Improvement of Bulk Data Dissemination in Wireless Sensor Networks**

*This project report is submitted to*  
**Yashwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in Electronics Engineering**

*by*

**Shaila Kalam**

*Under the guidance of*

**Prof. S.Y.Ambatkar**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

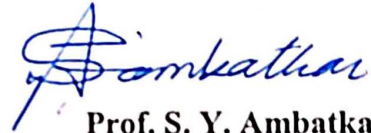
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “Implications and Improvement of Bulk Data Dissemination in Wireless Sensor Networks” has been successfully completed by Ms. Shaila Kalam under the guidance of Prof. S.Y. Ambatkar of in recognition to the partial fulfillment for the award of the degree of Master of Technology in Electronics Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



Prof. S. Y. Ambatkar  
(Guide)



Dr. U. S. Ghodeswar  
(Coordinator)



Dr. A. S. Khobragade  
(HOD, EE Dept.)



Signature of External Examiner:

Name: Dr. S. S. Dade

Date of Examination: 27/4/2018

# **Microstrip Antenna for Aeroplane Shape Defected Ground Structure for WLAN Applications**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur  
University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Master of Technology in Electronics Engineering**

*By*

**Kalyani D. Diware**

*Under the guidance of*

**Ajay B. Thatere**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's


**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University,  
Nagpur)*

**NAGPUR – 441 110**


**2017-2018**

## CERTIFICATE OF APPROVAL


Certified that the project report entitled “Microstrip Antenna for Aeroplane Shape Defected Ground Structure for WLAN Applications” has been successfully completed by Kalyani D. Diware under the guidance of **Ajay B Thatere** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Electronics Engineering, **Yeshwantrao Chavan College of Engineering**(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)




Signature  
**Ajay B. Thatere**  
(Guide)



Signature  
**Dr. U.S. Ghodeswar**  
Coordinator, M.Tech(EE),  
M.Tech(VLSI Design)



Signature  
**Dr. A.S. Khobragade**  
(HoD, EE)



Signature of External Examiner  
Name **Dr. S.S. Dule**  
Date of Examination: **27/4/2018**

# PARAMETER OPTIMIZATION OF WIRELESS SENSOR NETWORK USING ROUTING TECHNIQUE

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in Electronics Engineering**

*by*

**Sweety N. Pande**

*Under the guidance of*

**Dr. Rajesh D. Thakare**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "PARAMETER OPTIMIZATION OF WIRELESS SENSOR NETWORK USING ROUTING TECHNIQUE" has been successfully completed by SWEETY N. PANDE under the guidance of **DR RAJESH D. THAKARE** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Electronics Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)



**DR RAJESH D. THAKARE**  
(Guide)



**Dr. U.S. Ghodeswar**  
Coordinator, M.Tech (EE)



**Dr. A.S. Khobragade**  
(HoD, EE)



Signature of External Examiner

Name : Dr. G. M. Asutkar

Date of Examination: 27/04/18

# IMPLEMENTATION OF SMART HEALTH CARE SYSTEM

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement  
For the award of the degree*

*Of*

**Master of Technology in Electronics Engineering**

*By*

**Vaishali D. Dhonge**

*Under the guidance of*

**Dr S.V. Rathkanthiwar**



**DEPARTMENT OF ELECTRONICS ENGINEERING**  
Nagar Yuwak Shikshan Sanstha's  
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University,*  
Nagpur)  
**NAGPUR – 441 110**  
**2017-2018**



## CERTIFICATE OF APPROVAL

Certified that the project report entitled “IMPLEMENTATION OF SMART HEALTH CARE SYSTEM ” has been successfully completed by VAISHALI D. DHONGE under the guidance of **Dr. S.V.RATHKANTHIWAR** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Electronics Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)



Signature

**Dr. S. V. Rathkantiwar**  
(Guide)



Signature

**Dr. U. S. Ghodeswar**  
Coordinator, M.Tech(EE)



Signature

**Dr. A. S. Khobragade**  
(HoD,EE)



Signature of External Examiner

Name : Dr. G. M. Asykhani

Date of Examination: 27/04/18

# **An Improved and Secure Data Hiding Technique Using Spiking Neural Network over Encrypted Domain**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in Electronics Engineering**

*by*

**Sajal Shambhudayal Tamrakar**

*Under the guidance of*

**Prof. V.D. Alagdeve**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017 -2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “An Improved and Secure Data Hiding Technique using Spiking Neural Network over Encrypted Domain” has been successfully completed by Ms. Sajal Shambhudayal Tamrakar under the guidance of **Prof. V.D. Alagdeve** of in recognition to the partial fulfillment for the award of the degree of Master of Technology in Electronics Engineering, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



**Prof. V.D. Alagdeve**  
(Guide)



**Dr. U.S. Ghodeswar**  
(Co-ordinator), M.Tech (EE)



**Dr. A.S. Khobragade**  
(HOD, EE Dept.)



Signature of External Examiner:

Name: *Dr. S.S. Doale*  
Date of Examination: *27/4/2018*

# **DESIGN AND IMPLEMENTATION OF DOUBLE DATA RATE CONTROLLER**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Master of Technology in VLSI DESIGN**

*By*

**KAPIL KAILASH MENDHE**

*Under the guidance of*

**Prof. Somulu Gugulothu**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

**Nagar Yuwak Shikshan Santha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

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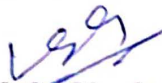
## CERTIFICATE OF APPROVAL

Certified that the project report entitled “Design and Implementation of Double Data Rate Controller” has been successfully completed by Mr. Kapil Kailash Mendhe under the guidance of **Prof. Somulu Gugulotu** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*)



Prof. Somulu Gugulotu

(Guide)



Dr. U. S. Ghodeswar

(Coordinator)



Dr. A. S. Khobragade

(HOD, EE Dept.)

Signature of External Examiner:

Name: *N. P. Narichede*

Date of Examination: *28/11/18*

# DESIGN PERFORMANCE OPTIMIZE VITERBI DECODER FOR TRELIS CODE MODULATION

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI DESIGN**

*by*

**Aparna G. Lakhote**

*Under the guidance of*

**Dr. P. K. Dakhole**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “Design performance optimize Viterbi decoder for trellis code modulation” has been successfully completed by Ms. Aparna G. Lakhote under the guidance of Dr. P. K. Dakhole in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



**Dr. P. K. Dakhole**


(Guide)

Date: 26/04/2018



**Mrs. U. S. Ghodeswar**

(Coordinator)



**Dr. A. S. Khobragade**

(HOD, EE Dept.)



Signature of External Examiner:

Name: N. P. Narechede  
Date of Examination: 20/4/18

# DESIGN OF REVERSIBLE CIRCUITS AND TESTABILITY

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI DESIGN**

*by*

**Prajakta Virendra Landge**

*Under the guidance of*

**Dr. A. S. Khobragade**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*


**NAGPUR – 441 110**


**2017-2018**




## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Design of Reversible Circuits And Testability" has been successfully completed by Ms. Prajakta Virendra Landge under the guidance of Dr.A. S. Khobragade in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.

  
Dr. A. S. Khobragade  
(Guide)

  
Mrs. U. S. Ghodeswar  
(Coordinator)

  
Dr. A. S. Khobragade  
(HOD, EE Dept.)

  
Signature of External Examiner:

Name: S. R. Pampur  
Date of Examination: 26/4/18

# Design of Real-Valued Canonic FFT

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI Design**

*by*

**Swikruti S.Bode**

*Under the guidance of*

**Mrs. Pradnya P. Zode**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Design of Real-Valued Canonic FFT**” has been successfully completed by **Miss. Swikruti s. Bode** under the guidance of **Prof. Pradnya P. Zode** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**, Nagpur.



Signature  
**Prof. Pradnya P. Zode**  
(Guide)



Signature  
**Dr. U.S. Ghodeswar**  
Coordinator, M.Tech (EE),  
M.Tech (VLSI Design)



Signature  
**Dr. A.S. Khobragade**  
(HoD, EE)



Signature of External Examiner:

Name: *N. P. Narichede*

Date of Examination: *26/4/18*

# DESIGN OF CARRY SKIP ADDER USING CONCATENATION AND INCREMENTATION SCHEME

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI DESIGN**

*by*

**Puja Ramesh Khunte**

*Under the guidance of*

**Mrs. Monica Kalbande**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441 110**

**2017-2018**

i

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “Design of Carry Skip Adder using Concatenation and Incrementation Scheme” has been successfully completed by Miss. Puja Ramesh Khunte under the guidance of Mrs. Monica Kalbande in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



**Mrs. Monica Kalbande**

(Guide)



**Dr. U. S. Ghodeswar**

(Coordinator)



**Dr. A. S. Khobragade**

(HOD, EE Dept.)



Signature of External Examiner:

Name: Dr. S. B. Pokre

Date of Examination: 26-4-2018

# Implementation of Hybrid Oscillator Arbiter PUF

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI Design**

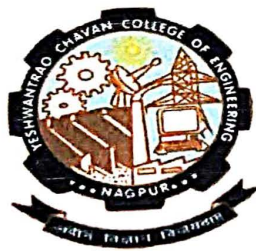
*by*

**Abhilash R. Pohekar**

*Under the guidance of*

**Dr. A. V. Bapat**

**Prachi Palsodkar**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar YuwakShikshanSanstha's


**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Implementation of Hybrid Oscillator Arbiter PUF" has been successfully completed by Mr. Abhilash R. Pohekar under the guidance of Dr. A. V. Bapat and Prachi Palsodkar of in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



Dr. A. V. Bapat

(Guide)




Prachi Palsodkar

(Guide)



Dr. U.S. Ghodeswar

(Co-ordinator)



Dr. A.S. Khobragade

(HOD, EE Dept.)



Signature of External Examiner:

Name: Dr. S.B. Pokhale

Date of Examination: 26/04/2018

# Design of Low Power Topologically Compressed Flip-Flop

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI Design**

*by*

**Prajakta D. Khiratkar**

*Under the guidance of*

**Dr. U. S. Ghodeswar**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**



## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Design of Low Power Topologically Compressed Flip-Flop" has been successfully completed by Ms. Prajкта D. Khiratkar under the guidance of **Dr. U. Ghodeswar** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



**Dr. U. S. Ghodeswar**

(Guide)



**Dr. U. S. Ghodeswar**

(Co-ordinator)



**Dr. A. S. Khobragade**

(HoD, EE Dept.)



Signature of External Examiner:

Name: S. L. PANDEY  
Date of Examination: 26/04/19

# VERILOG IMPLEMENTATION OF DUAL MODE FLOATING POINT DIVIDER USING RESTORING TECHNIQUE

*This project report is submitted to*  
Yeshwantrao Chavan College of Engineering  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

*In partial fulfillment of the requirement*  
*For the award of the degree*

*Of*

**Master of Technology in VLSI Design**

*By*

**Shaikh Salman Faraz**

*Under the guidance of*

**Dr. Y. A. Suryawanshi**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

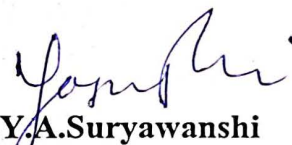
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)  
**NAGPUR – 441 110**


**2017-2018**


i


## CERTIFICATE OF APPROVAL

Certified that the project report entitled "VERILOG IMPLEMENTATION OF DUAL MODE FLOATING POINT DIVIDER USING RESTORING TECHNIQUE" has been successfully completed by SHAIKH SALMAN FARAZ under the guidance of **Dr.Y.A.SURYAWANSHI** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering(*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*)

  
Dr.Y.A.Suryawanshi  
(Guide)

  
Dr.U.S.Ghodeswar  
Coordinator,M.Tech(EE),  
M.Tech(VLSI Design)

  
Dr.A.S.Khobragade  
(HoD,EE)

  
Signature of External Examiner  
Name *S. R. Pandey*  
Date of Examination: *26/4/18*

# DESIGN OF BINARY64 DIVIDER WITH REDUNDANT NUMBER SYSTEMS

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur  
University)*

*In partial fulfillment of the requirement  
For the award of the degree  
Of*

**Master of Technology in VLSI Design**

*By*

**Shamsunnisa Khan**

*Under the guidance of*

**Mrs. T. G. Panse**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University,  
Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Design of Binary64 Divider with Redundant Number Systems**” has been successfully completed by **Shamsunnisa Khan** under the guidance of **Mrs. T. G. Panse** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, **Yeshwantrao Chavan College of Engineering**(*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*)



Signature  
**Mrs. T. G. Panse**  
(Guide)



Signature  
**Dr. U.S. Ghodeswar**  
Coordinator, M.Tech(EE),  
M.Tech(VLSI Design)



Signature  
**Dr. A.S. Khobragade**  
(HoD, EE)



Signature of External Examiner

Name **D. S. B. Solde**  
Date of Examination: **26/4/18**

# 32-Bit Carry Select Adder Using Binary To Excess-1 Converter

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI DESIGN**

*by*

**Suwarna B. Dhiwar**

*Under the guidance of*

**Prof. A. P. Malode**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “32-Bit Carry Select Adder Using Binary To Excess-1 Converter” has been successfully completed by Miss. Suvarna B. Dhiwar under the guidance of **Prof. A. P. Malode** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



Signature  
Prof. A. P. Malode

(Guide)



Signature  
Dr. U. S. Ghodeswar  
Coordinator, M.Tech(EE),  
M.Tech (VLSI Design)



Signature  
Dr. A. S. Khobragade  
(HoD, EE)



Signature of External Examiner:

Name: Dr. S. B. Pokhe  
Date of Examination: 26/04/2018

# LOGICAL REVERSIBILITY IN PROGRAMMABLE LOGIC ARRAY

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI DESIGN**

*by*

**Priyanka Suresh Dhoté**

*Under the guidance of*

**Dr. P. M. Palsodkar**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**



## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Logical Reversibility In Programmable Logic Array" has been successfully completed by Miss. Priyanka Suresh Dhote under the guidance of **Dr. P. M. Palsodkar** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



**Dr. P. M. Palsodkar**

(Guide)



**Dr U. S. Ghodeshwar**

(Coordinator)



**Dr. Atish Khobragade**

(HOD, EE Dept.)

Signature of External Examiner:

Name:

Date of Examination:

# **Self Detection & Correction Fault Tolerant Adder and Multiplier**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Master of Technology in VLSI DESIGN**

*By*

**Rupali J. Giri**

*Under the guidance of*

**Dr. P.P. Palsodkar**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

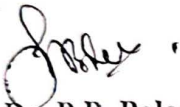
**NAGPUR – 441 110**

**2017-2018**

**i**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Self Detection & Correction Fault Tolerant Adder and Multiplier" has been successfully completed by Ms. Rupali J.Giri under the guidance of **Dr. P.P. Palsodkar** of in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



Dr. P.P. Palsodkar

(Guide)



Dr. U. S. Ghodeswar

(Coordinator, M.Tech)



Dr. A.S. Khobragade

(HOD, EE Dept.)

  
Signature of External Examiner:

Name: H.P. Harchade

Date of Examination: 26/4/18

# Design of Adder using Quaternary Look up Table with Voltage-mode Standard CMOS Circuit

*This project report is submitted to*  
**YeshwantraoChavan College of Engineering**

*(An Autonomous Institution Affiliated to RashtrasantukadojiMaharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI Design**

*by*

**Amruta S. Jadhav**

*Under the guidance of*

**Mrs. Y.A.Gaidhani**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar YuwakShikshanSanstha's

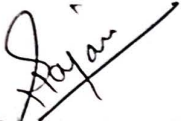
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to RashtrasantukadojiMaharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Design of Adder Using Quaternary Look up Table with Voltage-mode Standard CMOS Circuit" has been successfully completed by Miss. Amruta S. Jadhav under the guidance of Mrs. Y.A.Gaidhani of in recognition to the partial fulfillment for the award of the degree of Master of Technology in Electronics Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



Mrs. Y.A.Gaidhani

(Guide)



Dr. U. S. Ghodeswar  
Co-coordinator,  
M.Tech (VLSI Design)



Dr. A. S. Khobragade  
(HOD, EE Dept.)



Signature of External Examiner:

Name: Dr. Arvind Moreankar

Date of Examination: 26.4.18

# Implementation of Hybrid Oscillator Arbiter PUF

*This project report is submitted to*  
Yeshwantrao Chavan College of Engineering  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI Design**

*by*

**Abhilash R. Pohekar**

*Under the guidance of*

**Dr. A. V. Bapat**  
**Prachi Palsodkar**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar YuwakShikshanSanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Implementation of Hybrid Oscillator Arbiter PUF" has been successfully completed by Mr. Abhilash R. Pohekar under the guidance of Dr. A. V. Bapat and Prachi Palsodkar of in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



Dr. A. V. Bapat

(Guide)



Prachi Palsodkar

(Guide)



Dr. U.S. Ghodeswar

(Co-ordinator)



Dr. A.S. Khobragade

(HOD, EE Dept.)



Signature of External Examiner:

Name: Dr. S. B. Jorkar

Date of Examination: 26/04/2018

# **An Area Efficient Binary Field Multiplication Based on Toeplitz Matrix-Vector Product**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement  
For the award of the degree*

*Of*

**Master of Technology in VLSI Design**

*By*

**Ashvini P. Gaidhane**

*Under the guidance of*

**Prof. Pravin Zode**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441 110**

**2017-2018**



## CERTIFICATE OF APPROVAL

Certified that the project report entitled "An Area Efficient Binary Field Multiplication Based on Toeplitz Matrix-Vector Product" has been successfully completed by Ms. Ashvini P. Gaidhane under the guidance of **Prof. Pravin Zode** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



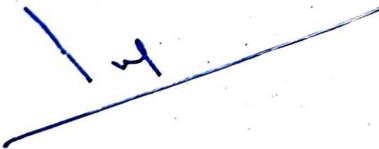
Signature  
**Prof. Pravin Zode**  
(Guide)



Signature  
**Dr. U. S. Ghodeswar**  
(Coordinator)  
M. Tech. (VLSI Design)



Signature  
**Dr. A. S. Khobragade**  
(HOD, EE Dept.)



Signature of External Examiner:

Name:

Date of Examination: 26/04/2018.

# Efficient FPGA Implementation of LDPC Decoder using High Level Methodology for Wireless Application

*This project report is submitted to*  
Yeshwantrao Chavan College of Engineering

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI DESIGN**

*by*

**Apeksha D. Yadav**

*Under the guidance of*

**Mr. S.M.Kakde**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Efficient FPGA Implementation of LDPC Decoder using High Level Methodology for Wireless Application" has been successfully completed by Apeksha D Yadav under the guidance of **S. M. Kakde** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



Signature

Mr. S. M. Kakde

(Guide)



Signature

Dr. U.S. Ghodeswar  
Coordinator, MTech (EE),  
MTech (VLSI Design)



Signature

Dr. A. S. Khobragade  
(HoD, EE Dept.)



Signature of External Examiner:

Name: Dr. Amol Moranekar  
Date of Examination: 26-4-2018

# DESIGN OF REVERSIBLE CIRCUITS AND TESTABILITY

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI DESIGN**

*by*

**Prajakta Virendra Landge**

*Under the guidance of*

**Dr. A. S. Khobragade**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's


**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*


**NAGPUR – 441 110**


**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Design of Reversible Circuits And Testability**” has been successfully completed by **Ms. Prajakta Virendra Landge** under the guidance of **Dr.A. S. Khobragade** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**, Nagpur.

  
**Dr. A. S. Khobragade**  
(Guide)

  
**Mrs. U. S. Ghodeswar**  
(Coordinator)

  
**Dr. A. S. Khobragade**  
(HOD, EE Dept.)

  
Signature of External Examiner:

Name: **S. R. PANDY**  
Date of Examination: **26/4/18**

# Design of Real-Valued Canonic FFT

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Master of Technology in VLSI Design**

*by*

**Swikruti S.Bode**

*Under the guidance of*

**Mrs. Pradnya P. Zode**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Design of Real-Valued Canonic FFT**” has been successfully completed by **Miss. Swikruti s. Bode** under the guidance of **Prof. Pradnya P. Zode** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**, Nagpur.



Signature  
**Prof. Pradnya P. Zode**  
(Guide)



Signature  
**Dr. U.S. Ghodeswar**  
Coordinator, M.Tech(EE),  
M.Tech(VLSI Design)



Signature  
**Dr. A.S. Khobragade**  
(HoD, EE)



Signature of External Examiner:

Name: *Mr. P. Nantchede*  
Date of Examination: *26/4/18*

# Design of Full Adder using Memristor based Logic Gate

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement for the award of the degree*

*Of*

**Master of Technology in VLSI Design**

*By*

**Shweta G. Taiwade**

*Under the guidance of*

**Prof. R.S. Keote**



**DEPARTMENT OF ELECTRONICS ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**



## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Design of Full Adder using Memristor based Logic Gate**” has been successfully completed by **Ms. Shweta G. Taiwade** under the guidance of **Prof. R. S. Keote** in recognition to the partial fulfillment for the award of the degree of Master of Technology in VLSI Design from **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



**Mrs. Rashmi S. Keote**  
(Guide)



Signature  
**Mrs. U. S. Ghodeswar**  
(Coordinator)



Signature  
**Dr. A. S. Khobragade**  
(HOD, EE Dept.)



Signature of External Examiner:  
Name **N. P. Nanchede**  
Date of Examination: **26/11/18**

# **Design and Fabrication of Automatic Pipe Cutting Machine**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering, Nagpur**

*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfilment of the requirement*

*for the award of the degree*

*Of*

**Bachelor of Engineering in Mechanical Engineering**

*By*

**Aditya Deshmukh**

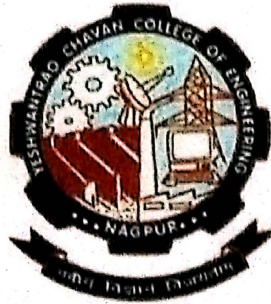
**Ajinkya Krupal**

**Rajat Tiple**

**Saksham Pal**

*Under the guidance of*

**Prof. S.S. AKANT**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING, NAGPUR**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

**NAGPUR-441110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Design and Fabrication of Automatic Pipe Cutting Machine" has been successfully completed by

Aditya Deshmukh

Ajinkya Krupal

Rajat Tiple

Saksham Pal,

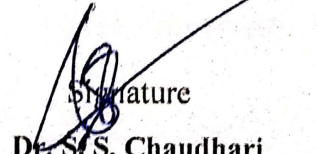
under the guidance of Prof. S. S. Akant in recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Mechanical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



Signature

**Prof. S.S. Akant**

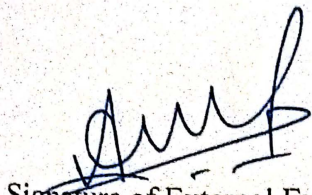
**(Guide)**



Signature

**Dr. S.S. Chaudhari**

**(HOD, Mechanical Dept.)**



Signature of External Examiner

Name: **Dr. A.M. Andhare**

Date of Examination: **24/04/18**

# **ANALYSIS OF SOLAR POWERED ELECTRIC VEHICLE**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement For the award of the degree*

*Of*

**Bachelor of Engineering in Mechanical Engineering**

*By*

**Ishant Tidke  
Shubham Kargaonkar  
Omkar Gadkari**

**Saket Deshpande  
Rajat More**

*Under the guidance of*

**Prof. R. G. Bodkhe**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University,  
Nagpur)*

**NAGPUR – 441 110  
2017-2018**

**EXPERIMENTAL INVESTIGATIONS OF COMPUTERIZED MULTI-FUEL  
ENGINE USING ETHANOL BLENDS ON SI ENGINE PERFORMANCE AND  
EMISSION AT VARIABLE COMPRESSION RATIO (VCR)**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur  
University)*

*In partial fulfillment of the requirement  
For the award of the degree*

*Of*

**Bachelor of Engineering in Mechanical Engineering**

*By*

BACHIPHALE AJAY DHONDIRAM

BOBADE HARSHAD DEORAO

DEEPAK KUMAR

NAGRALE SUDHIR SONIRAM

*Under the guidance of*

**PROF. R. G. BODKHE**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441110**

**2017-2018**

# **DESIGN AND FABRICATION OF BIOCRUDE EXTRACTION MACHINE FROM PLASTIC WASTE**

**This project is submitted to  
Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institute Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In Partial fulfilment of the requirement  
For the award of the degree  
Of*

**Bachelor of Engineering in  
Mechanical Engineering**

*By*

**Nikhil Azza**

**Nikhil Alladwar**

**Yash Nagpurkar**

**Shadab Khan**

*Under the Guidance of*

**Dr. S.S. Chaudhari**



**DEPARTMENT OF MECHANICAL ENGINEERING  
Nagar Yuwak Shikshan Sanstha's**

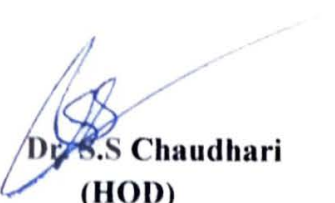
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**  
*(An Autonomous institution affiliated to Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur)*  
**NAGPUR – 441110**  
**2017 – 2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "DESIGN AND FABRICATION OF BIOCRUDE EXTRACTION MACHINE FROM PLASTIC WASTE" has been successfully completed by NIKHIL AZZA under the guidance of **DR. S.S. CHAUDHARI** in recognition to the partial fulfilment for the award of the degree of Master of Technology in Mechanical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**




**Dr. S.S Chaudhari**  
(Project Guide)



**Dr. S.S Chaudhari**  
(HOD)

**Dr. U.P Waghe**  
(Principal)

Signature of External Examiner:  
Name:  
Date of Examination:



**Dr. C.N. Salhale**  
23. 4. 18

**EXPERIMENTAL INVESTIGATION OF SOLAR PANEL  
(BACKSIDE) PASSIVE COOLING TECHNIQUE BY THE  
USE OF PHASE CHANGE MATERIAL (LIQUID TO  
VAPOUR) FOR IMPROVING ITS CONVERSION  
EFFICIENCY**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering Nagpur**

*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Bachelor of Engineering in**

**Mechanical Engineering**

*By*

**AISHWARYA THOMBARE**

**DEVENDRA FALODE**

**PRIYANKA BHOYAR**

**MAYURESH NAHATKAR**

**SHUBHAM AMALKAR**

*Under the guidance of*

**PROF. V. M. KORDE**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**



## CERTIFICATE OF APPROVAL

Certified that the project report entitled "EXPERIMENTAL INVESTIGATION OF SOLAR PANEL (BACKSIDE) PASSIVE COOLING TECHNIQUE BY THE USE OF PHASE CHANGE MATERIAL (LIQUID TO VAPOUR) FOR IMPROVING ITS CONVERSION EFFICIENCY" has been successfully completed by AISHWARYA THOMBARE, PRIYANKA BHOYAR, DEVANDRA FALODE, MAYURESH NAHATKAR, SHUBHAM AMALKAR under the guidance of **PROF. V. M. KORDE** in recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Mechanical, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



Signature

Prof. V. M. Korde  
(Guide)



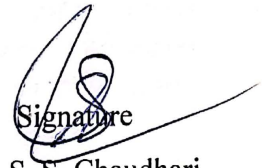
Signature

Prof. N. J. Giradkar  
(Co Guide)



Signature

Prof. N. J. Giradkar  
(Co-ordinator)



Signature

Dr. S. S. Chaudhari  
(HOD, ME Dept.)



Signature of External Examiner

Name:- S. A. Patil

Date of Examination:- 24.4.18

Good work.

(ii)

**STATISTICAL INTERPRETATION OF NEURAL  
NETWORK MODEL BASED ON VARIOUS  
OPTIMIZATION ALGORITHM**

*This project report is submitted to*  
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur, University)*

*In partial fulfillment of the requirement*  
*For the award of the degree of*  
**Bachelor of Engineering in the field of  
MECHANICAL ENGINEERING**

By

**CHETAN LUTHRA  
KARTIK PANDIT**

**SHASHANK CINTHRAY  
SURYANSHA CHANDRAKAR**

*Under the guidance of*

**Prof. D.N.KASHYAP**

*And Co-guidance of*

**Dr. J.P. Giri**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sansthan's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441110**

**2017-2018**

## CERTIFICATE OF APPROVAL

This is to certify that the project entitled "STATISTICAL INTERPRETATION OF NEURAL NETWORK MODEL BASED ON VARIOUS OPTIMIZATION ALGORITHM" has been successfully completed by CHETAN LUTHRA, KARTIK PANDIT, SHASHANK CINTHRAY, SURYANSH CHANDRAKAR under the guidance of Prof. D.N.KASHY AP in recognition to the partial fulfilment for the award of the degree of Master of Technology in Mechanical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).



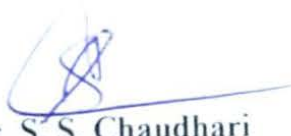
Prof. D.N.Kashyap  
(Guide)



Dr. J.P.Giri  
(Co-Guide)



Prof. N. J. Giradkar  
(Co-ordinator)



Dr. S. S. Chaudhari  
(HOD, ME Dept.)

Dr. U. P. Waghe  
(Principal)



Signature of External Examiner:

Name: Prof. G.M. Dhote

Date of Examination: 24/04/2018

# **DESIGN AND FABRICATION OF WATER LIFTING MECHANISM USING HYDRAULIC RAM PUMP.**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*  
*In partial fulfillment of the requirement*  
*For the award of the degree*

*Of*

**Bachelor of Engineering in  
Mechanical Engineering**

*By*

**Suyash Pandey  
Amey Halge**

**Ashutosh Sontakke  
Murtaza karanjawala**

*Under the guidance of*

**Dr.S.S.Chaudhari**



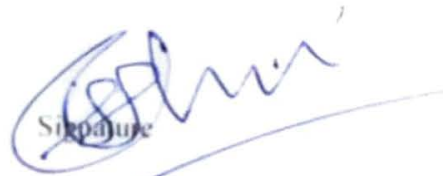
**DEPARTMENT OF MECHANICAL ENGINEERING**  
Nagar Yuwak Shikshan Sanstha's  
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur  
University, Nagpur)  
**NAGPUR – 441 110**  
**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "Design and fabrication of water lifting mechanism using hydraulic ram pump" has been successfully completed by Suyash Pandey, Ashutosh Sontakke, Amey Halge, Murtaza Karanjawala under the guidance of Dr S S Chaudhari in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Mechanical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

Signature

Dr. U. P. Waghe  
(Principal)



Signature

Dr. S. S. Chaudhari  
(Guide and HOD)

Signature of External Examiner

Name Dr. C.N. SAKHALE

Date of Examination 23.4.18



**DESIGN AND FABRICATION OF AN EXPERIMENTAL  
SETUP TO CALCULATE THERMAL CONDUCTIVITY  
OF LIQUIDS**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*  
*In partial fulfillment of the requirement*  
*For the award of the degree*

*Of*  
**Bachelor of Engineering in Mechanical engineering**

*by*  
**Akshay Suryawanshi**  
**Pratik Chakradhare**  
**Pranav Patil**  
**Rushabh Ramtekkar**  
**Yash Ingewar**

*Under the guidance of*  
**Prof. N. J. Giradkar**

*Co-guide*

**Prof. V. M. Korde**



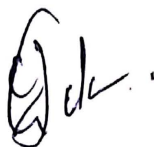
**DEPARTMENT OF MECHANICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukdoji Maharaj Nagpur  
University, Nagpur)*  
**NAGPUR – 441110 ,**  
**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "DESIGN AND FABRICATION OF AN EXPERIMENTAL SETUP TO CALCULATE THERMAL CONDUCTIVITY OF LIQUIDS" has been successfully completed by AKSHAY SURYAWANSHI , PRANAV PATIL , PRATIK CHAKRADHARE , RUSHABH RAMTEKKAR , YASH INGEWAR under the guidance of **PROF. N.J.GIRADKAR** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Mechanical Engineering, Yeshwantrao Chavan College of Engineering( *An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University*)



Signature

Prof. N.J. GIRADKAR  
(Guide)



Signature

Prof. V.M. KORDE  
Co-Guide



Signature

Prof. S.S. CHAUDHARI  
(HOD, ME Dept.)



Signature of External Examiner:

Name: S.A. Patil

Date of Examination: 24.4.18

# **DESIGN AND FABRICATION OF BRIQUETTING MACHINE USING AGRO WASTE**

*This project report is submitted to*

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING**

*By*

**ANJALI NAGPURE**

**ABHISHEK DESHMUKH**

**MAYANK LENDE**

**PIYUSH SAKHARE**

**VISHWESH DEODHAR**

*Under the guidance of*

**Dr. S.S. CHAUDHARI**



**DEPARTMENT OF MECHANICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441110**

**2017-2018**





## CERTIFICATE OF APPROVAL

Certified that the project report entitled **“DESIGN AND FABRICATION OF BRIQUETTING MACHINE USING AGRO WASTE”** has been successfully completed by **Anjali K. Nagpure, Abhishek K. Deshmukh, Mayank A. Lende, Piyush B. Sakhare, Vishwesh A. Deodhar** under the guidance of **Dr.S.S. CHAUDHARI** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Mechanical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**

  
**Dr. S. S. Chaudhari**  
(Guide)

  
**Prof. N. J. Giradkar**  
(Coordinator)

  
**Dr. S. S. Chaudhari**  
(HOD, ME)

Signature of External Examiner 

Name **Dr. C. N. SAKHALE**

Date of Examination: **23-04-18**.

# DESIGN AND FABRICATION OF BATTERY OPERATED PORTABLE FORKLIFT USED FOR INDUSTRIAL WAREHOUSES

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur  
University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Bachelor of Engineering in  
Mechanical Engineering**

*By*

**Poonam Tijare**

**Pratiksha karmilkar**

**Pavan Chavan**

**Roshan Dhote**

**Suraj Chhanwal**

*Under the guidance of*

**Prof. Dr.S.S.Chaudhari**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**DESIGN AND FABRICATION OF BATTERY OPERATED PORTABLE FORKLIFT USED FOR INDUSTRIAL WAREHOUSES** ” has been successfully completed by **Poonam Tijare, Pratiksha Karmilkar, Pavan Chavan, Roshan Dhote, Suraj Chhanwal** under the guidance of **Prof. Dr.S.S.Chaudhari** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Mechanical Engineering, , **Yeshwantrao Chavan College of Engineering( An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**


  
Signature

**Prof. N.J.Giradkar  
(Coordinator)**

Signature of External Examiner:

Name:

Date of Examination:

  
Dr. C. N. Sakhale

  
Signature

**Prof. Dr.S.S.Chaudhari  
(Guide)**

  
Signature

**Prof. Dr.S.S.Chaudhari  
(HOD, ME Dept.)**

**EXPERIMENTAL INVESTIGATIONS OF COMPUTERIZED MULTI-FUEL  
ENGINE USING ETHANOL BLENDS ON SI ENGINE PERFORMANCE AND  
EMISSION AT VARIABLE COMPRESSION RATIO (VCR)**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur  
University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Bachelor of Engineering in Mechanical Engineering**

*By*

BACHIPHALE AJAY DHONDIRAM

BOBADE HARSHAD DEORAO

DEEPAK KUMAR

NAGRALE SUDHIR SONIRAM

*Under the guidance of*

**PROF. R. G. BODKHE**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441110**

**2017-2018**

# DESIGN AND DEVELOPMENT OF ENERGY EFFICIENT STOVE

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Bachelor of Engineering in Mechanical  
Engineering**

**By**

**Rahi Vinod Kadu**

**Himanshu Vinod Gurbhele**

**Shubham Raju Akhade**

*Under the guidance of*

**Prof. Dr. S. T. BAGDE**



**DEPARTMENT OF MECHANICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

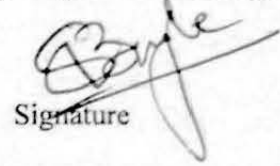
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "DESIGN AND DEVELOPMENT OF ENERGY EFFICIENT STOVE" has been successfully completed by RAHI KADU, HIMANSHU GURBHELE, SHUBHAM AKHADE under the guidance of **Dr. S. T. BAGDE** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Mechanical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**

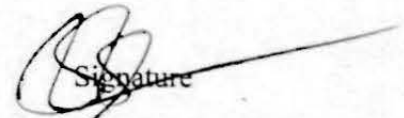


Signature

(Dr S.T. BAGDE)


Signature

**Prof. N. J. Giradkar**  
(Coordinator)



Signature

**Prof. S. S. Chaudhari**  
(HOD, ME Dept.)



Signature of External Examiner:

Name: **Prof. G.M. Dhote**

Date of Examination:

# **DEVELOPEMENT OF SMART COOLER**

*This project report is submitted to*

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An Autonomous Institution Affiliated To Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfilment of the requirements*

*for the award of degree*

*of*

**BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING**

*Submitted by*

**Devanand Galande**

**Aditya Pachghare**

**Chetan Tidgam**

**Shivani Raut**

*Under the guidance of*

**Prof. M.S.TUFAIL**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An Autonomous Institution Affiliated To Rashtrasant Tukdoji Maharaj Nagpur University)*

**NAGPUR- 441110**

**2017-2018**

(i)

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "DEVELOPEMENT OF SMART COOLER" has been successfully completed by DEVANAND GALANDE , ADITYA PACHGHARE ,CHETAN TIDGAM , SHIVANI RAUT under the guidance of Prof. M.S. Tufail in recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Mechanical Engineering. Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



Signature  
Prof. M.S. Tufail  
(Guide)



Signature

Prof. N.J. Giradkar  
(Coordinator)



Signature

Dr. S.S. Chaudhari  
(HOD, ME Dept.)



Signature of External Examiner

Name Dr. Dheeraj S. Deshmukh

Date of Examination



# **DESIGN AND DEVELOPMENT OF AUTOMATIC WHEELCHAIR CUM BED**

**This project report is submitted to**

**Yeshwantrao Chavan College Of Engineering**

**(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur  
University)**

**In partial fulfilment of the requirement  
For the award of the degree  
*Of*  
Bachelor of Engineering in**

**Mechanical Engineering  
*By***

**Rohit S. Ghadyalji  
Mirzashadab M. Beig  
Mustafeez S. Anjum**

**Sanket C. Bochar  
Kratika K. Ravekar**

**Under the guidance of**

**Dr. S.P. Ambade**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuvak Sikshan Sanstha**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**

**NAGPUR -441110**

**2017-2018**

# STORAGE AND RETRIEVAL UNIT FOR 3D AXIS USING RACK AND PINION

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Bachelor of Engineering in Mechanical  
Engineering**

*By*

**Durgadas Pande**

**Arpit Mandale**

**Gaurav Ingle**

**Megha Sakhare**

*Under the guidance of*

**Dr. S.P. Ambade**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuvak Sikshan Sanstha**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**


*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

**NAGPUR 441110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "STORAGE AND RETRIEVAL UNIT FOR 3D AXIS USING RACK AND PINION" has been successfully completed by the students given below under the guidance of **Dr. S.P. AMBADE** in recognition to the partial fulfilment for the award of the degree of Bachelor Of Engineering in Mechanical Engineering, **Yeshwantrao Chavan College Of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**

  
23/04/18

**Dr. S.P. Ambade**

**(Project Guide)**



**Prof N. J. Giradkar**

**(Project Co-ordinator)**



**Dr. S. S. Chaudhari**

**(HOD, ME Dept.)**

**Dr. U. P. Waghe**

**(Principal)**



**(External Examiner)**

Name :- **Dr. Dheeraj S. Deshmukh**

Date of Examination :- **23/04/18**

**DESIGN AND FABRICATIN OF EXPERIMENTAL SETUP FOR  
SHEAR AND FLEXURAL STRENGTH OF BRICK MASONRY**

This project is submitted to  
**Yeshwantrao Chavan College of Engineering**  
(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

In partial fulfilment of the requirement  
For the award of the degree  
Of  
**Bachelor of Engineering in Mechanical Engineering**  
By

**PRAGHYA V. GUPTA**

**DHANSHREE B. HARALE**

**SUCHITA D SHIRALE**

**RASIKA G. SHRIRAO**

**RAJSHRI V. JADHAV**

*Under the guidance of*

**Dr. S.S. KHEDKAR**  
(Assistant Prof. Mechanical Dept.)



**DEPARTMENT OF MECHANICAL ENGINEERING**  
Nagar Yuwak Shikshan Sanstha's  
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University,  
Nagpur)  
**NAGPUR - 441110**  
**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "DESIGN AND FABRICATION OF EXPERIMENTAL SETUP FOR FLEXURAL AND SHEAR BOND STRENGTH OF BRICK MASONRY" has been successfully completed by Praghya V. Gupta , Rasika G. Shirao, Dhanshree B. Harale ,Rajshri V. Jadhav ,Suchita D. Shirale under the guidance of **Dr.S. S. Khedkar** in recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Mechanical Engineering, Yeshwantrao Chavan College of Engineering ( An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University).



**Dr. S.S.Khedkar**

(Guide)



Prof. N.J. Giradkar

(Coordinate)



Dr. S. S. Chaudhari

(HOD, ME Dept.)

Signature of External Examiner:

Name: Dr. C. N. Sakhale

Date of Examination: 23/04/2018

**DESIGN FABRICATION AND PERFORMANCE  
ANALYSIS OF CONCENTRIC TUBE HEAT  
EXCHANGER**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Bachelor of Engineering in Mechanical Engineering**

*By*

**Abhijeet Chichulkar    Ankush Wirmalwar**

**Ankesh Wargantiwar    Darshan Mudliyar**

*Under the guidance of*

**Prof. N.J.GIRADKAR**

**Co-guide**

**Prof. V.M.Korde**



**DEPARTMENT OF MECHANICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University,  
Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

# DESIGN AND DEVELOPMENT OF ERGONOMIC ADJUSTABLE CHAIR FOR MULTIPosition TASKING

This project is submitted to

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfilment of the requirement*

*For the award of degree*

**Of**

**Bachelor of Engineering in**

**Mechanical Engineering**

By

**Yash Khanorkar**

**Vipul Deshmukh**

**Apoorv Balpande**

**Lukesh Nighot**

*Under the guidance of*

**Prof.G.H Waghmare**



**DEPARTMENT OF MECHANICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

**NAGPUR-441110**

**2017-2018**

## CERTIFICATE OF APPROVAL

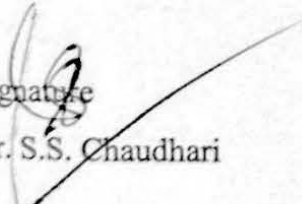
Certified that the project report entitled, 'DESIGN AND DEVELOPEMENT OF ERGONOMIC ADJUSTABLE CHAIR FOR MULTIPosition TASKING' has been successfully completed by YASH KHANORKAR, APOORV BALPANDE, VIPUL DESHMUKH AND LUKESH NIGHOT under the guidance of **PROF. GOPAL H WAGHMARE** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Mechanical, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**.



Signature

**Prof. Gopal H Waghmare**


(Guide)



Signature

Dr. S.S. Chaudhari


(HOD, ME Dept.)



Signature

Prof. N. J. Giradkar

(Project Coordinator)



Signature of External Examiner:

Name: **Milash Awate**

Date of Examination: **23/09/2018**



## CERTIFICATE OF APPROVAL

Certified that the project report entitled "DESIGN AND FABRICATION OF AUTONOMOUS ROBOTIC PORTABLE MECHANISM FOR WEED REMOVAL" has been successfully completed by NIKITA LOKHANDE, PUSHKAR PANDEY, ABHIJEET PALIWAL, SHUBHAM GULHANE under the guidance of **DR. S. S. KHEDKAR** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Mechanical Engineering, **Yeshwantrao Chavan College of Engineering( An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



Signature  
(Dr S.S. KHEDKAR)



Signature  
Prof. N. J. Giradkar  
(Coordinator)




Signature  
Prof. S. S. Chaudhari  
(HOD, ME Dept.)

Signature of External Examiner:

Name:

Date of Examination:



Dr. C. N. Bakhake  
23/04/2018

# DESIGN AND FABRICATION OF EXPERIMENTAL SETUP FOR BUCKLING TEST ON COLUMN

*This project report is submitted to*

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING**

*By*

**Mr. SHERAZ SHAIKH**

**Mr. SWAPNIL KOTRANGE**

**Mr. TIRTHARAJ BABRE**

**Mr. VICKY DEWALIKAR**

**Mr. VIVEK CHAVHAN**

*Under the guidance of*

**Prof. Mr. R.V. ADAKANE**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuvak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

(i)

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "DESIGN AND FABRICATION OF EXPERIMENTAL SETUP FOR BUCKLING TEST ON COLUMN" has been successfully completed by Sheraz Shaikh, Swapnil Kotrange, Tirtharaj Babre, Vicky Dewalikar, Vivek Chavhan under the guidance of Prof. R. V. Adakane in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Mechanical Engineering. Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



Prof. R.V. Adakane

(Guide)




Prof. N.J. Giradkar

(Coordinator)



Dr. S.S. Chaudhari

(HOD, ME Dept.)

Signature of External Examiner 

Name A.S. Nilewar

Date of Examination 23/04/18

(ii)

# “EXPERIMENTAL INVESTIGATION OF PHASE CHANGE MATERIAL COOLING ON PHOTOVOLTAIC PANEL”

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Master of Technology in**

**CAD/CAM**

*By*

**Vaibhav Bhagvan Londhe**

*Under the guidance of*

**Dr. R. B. Chadge**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017 - 2018**

# “EXPERIMENTAL INVESTIGATION OF PHASE CHANGE MATERIAL COOLING ON PHOTOVOLTAIC PANEL”

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Master of Technology in**

**CAD/CAM**

*By*

**Vaibhav Bhagvan Londhe**

*Under the guidance of*

**Guide**

**Dr.R.B.Chadge**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**


**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017 - 2018**

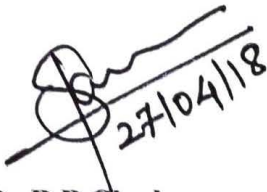
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "EXPERIMENTAL INVESTIGATION OF PHASE CHANGE MATERIAL COOLING ON PHOTOVOLTAIC PANEL" has been successfully completed by VAIBHAV BHAGVAN LONDHE under the guidance of **DR. R.B.CHADGE** in recognition to the partial fulfillment for the award of the degree of Master of Technology in CAD/CAM, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)



**Dr. R.B.Chadge**

(Guide)




**Dr.R.B.Chadge**

(Coordinator)



**Dr. S. S. Chaudhari**

(HOD, ME Dept.)



Signature of External Examiner:

Name:

Date of Examination:

**“PERFORMANCE EVALUATION OF ELECTRO DISCHARGE  
MACHINING FOR VARIOUS COMBINATIONS OF  
WORKPIECE AND ELECTRODE MATERIALS”**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*  
*For the award of the degree*

*Of*

**Master of Technology in CAD/CAM**

*By*

**Harshalkumar R. Mundane**

*Under the guidance of*

**Guide**

**Dr. A. V. Kale**

**Co-Guide**

**Dr. J. P. Giri**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**  
**NAGPUR – 441 110**

**2017-2018**

**“PERFORMANCE EVALUATION OF ELECTRO DISCHARGE  
MACHINING FOR VARIOUS COMBINATIONS OF  
WORKPIECE AND ELECTRODE MATERIALS”**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Master of Technology in CAD/CAM**

*By*

**Harshalkumar R. Mundane**

*Under the guidance of*

**Guide**

**Dr. A. V. Kale**

**Co-Guide**

**Dr. J. P. Giri**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha**

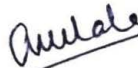
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*  
**NAGPUR – 441 110**

**2017-2018**



## CERTIFICATE OF APPROVAL


Certified that the project report entitled "PERFORMANCE EVALUTION OF ELECTRO DISCHARGE MACHINING FOR VARIOUS COMBINATIONS OF WORKPIECE AND ELECTRODE MATERIALS" has been successfully completed by Harshalkumar R. Mundane under the guidance of **DR. A. V. KALE and DR. J. P. GIRI** in recognition to the partial fulfillment for the award of the degree of Master of Technology in CAD/CAM, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



Signature  
**Dr. A. V. Kale**  
(Guide)



Signature  
**Dr. J. P. Giri**  
(Co-Guide)



Signature  
**Dr. R. B. Chadge**  
(Coordinator)



Signature  
**Dr. S. S. Chaudhari**  
(HOD,ME Dept.)



Signature of External Examiner  
Name  
Date of Examination:

**“OPTIMIZATION OF PERFORMANCE PARAMETERS  
FOR CNC MILLING MACHINE”**

*This project report is submitted to*  
Yeshwantrao Chavan College of Engineering  
(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

*In partial fulfillment of the requirement  
For the award of the degree*

*Of*

**Master of Technology in CAD/CAM**

*By*

**Kunal H. Sharma**

*Under the guidance of*

Guide

**Dr. A. V. Kale**

Co-Guide

**Dr. P.D Kamble**



**DEPARTMENT OF MECHANICAL ENGINEERING**

Nagar Yuwak Shikshan Santha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441110**

**2017 – 2018**

# **“OPTIMIZATION OF PERFORMANCE PARAMETERES FOR CNC MILLING MACHINE”**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Master of Technology in CAD/CAM**

*By*

**Kunal H. Sharma**

*Under the guidance of*

**Guide**

**Dr. A. V. Kale**

**Co-Guide**

**Dr. P.D Kamble**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Santha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

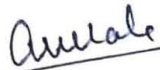
**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441110**

**2017 – 2018**

## CERTIFICATE OF APPROVAL

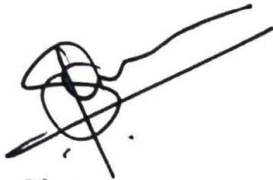
Certified that the project report entitled "OPTIMIZATION OF PERFORMANCE PARAMERTERS FOR CNC MILLING MACHINE" has been successfully completed by KUNAL SHARMA under the guidance of **DR. A. V. KALE & DR. P.D. KAMBLE** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Mechanical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



Signature  
**Dr. A. V. Kale**  
(Guide)



Signature  
**Dr. P.D.Kamble**  
(Co-Guide)



Signature  
**Dr. R. B. Chadge**  
(Coordinator)



Signature  
**Dr. S. S. Chaudhari**  
(HOD, PG Course)



Signature of External Examiner  
Name

Date of Examination:

**“DESIGN AND FABRICATION OF SUGARCANE  
CUTTING MACHINE”**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement for the award of the degree*

*Of*

**Master of Technology in CAD/CAM**

*By*

**TUSHAR S. PATANGE**

*Under the guidance of*

**GUIDE**

**Dr. P. D. KAMBLE**

**CO-GUIDE**

**PROF. D. I. SANGOTRA**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,  
NAGPUR - 441110**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**Session 2017-18**

# “DESIGN AND FABRICATION OF SUGARCANE CUTTING MACHINE”

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*for the award of the degree*

*Of*

**Master of Technology in CAD/CAM**

*By*

**TUSHAR S. PATANGE**

*Under the guidance of*

**GUIDE**

**Dr. P. D. KAMBLE**

**CO-GUIDE**

**PROF. D. I. SANGOTRA**



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,  
NAGPUR - 441110**

**(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University,  
Nagpur)**

**Session 2017-18**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**DESIGN AND FABRICATION OF SUGARCANE CUTTING MACHINE**” has been successfully completed by **TUSHAR SUDHIRRAO PATANGE** under the guidance of **DR. P. D. KAMBLE** and **PROF. D. I. SANGOTRA** in recognition to the partial fulfillment for the award of the degree of Master of Technology in CAD/CAM, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**



**Dr. P. D. Kamble**  
(Guide)



**Prof. D. I. Sangotra**  
(Co-Guide)



**Dr. R. B. Chadge**  
(Coordinator)



**Dr. S. S. Chaudhari**  
(HOD, ME Dept.)



Signature of External Examiner:

Name: **Dr. Nibin Kumar**  
(VNSJ Nagpur)  
Date of Examination: **28/04/18**

**“EFFECT OF WELDING PROCESSES AND WELDING  
SPEED ON ULTRA LOW NICKEL CR-MN ASS;  
MICROSTRUCTURE, MECHANICAL PROPERTIES AND  
SENSITIZATION”**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Master of Technology in CAD/CAM**

*By*

**Atul Vijay Tidke**

*Under the guidance of*

**Dr. S.P. Ambade**



**DEPARTMENT OF MECHANICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**



**“EFFECT OF WELDING PROCESSES AND WELDING  
SPEED ON ULTRA LOW NICKEL CR-MN ASS;  
MICROSTRUCTURE, MECHANICAL PROPERTIES AND  
SENSITIZATION”**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Master of Technology in CAD/CAM**

*By*

**Atul Vijay Tidke**

*Under the guidance of*

**Dr. S.P. Ambade**



**DEPARTMENT OF MECHANICAL ENGINEERING**

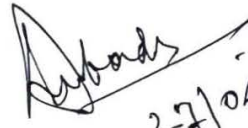
**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*  
**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

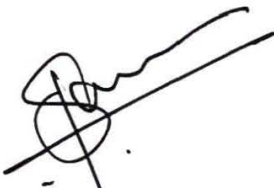
Certified that the project report entitled "EFFECT OF WELDING PROCESSES AND WELDING SPEED ON ULTRA LOW NICKEL CR-MN ASS; MICROSTRUCTURE, MECHANICAL PROPERTIES AND SENSITIZATION" has been successfully completed by ATUL VIJAY TIDKE under the guidance of **DR. S.P. AMBADE** in recognition to the partial fulfillment for the award of the degree of Master of Technology in CAD/CAM, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**



27/04/18

**Dr. S.P. Ambade**

**(Guide)**



**Dr. R.B. Chadge**  
**(Coordinator)**



**Dr. S.S. Chaudhari**  
**(HOD, Mechanical Department)**



Signature of External Examiner

Name **Dr. Nishin Kumar Lantre**  
Date of Examination: **(VNZI Nagpur)**



## Department of Electrical Engineering

### Reimbursement of project bill UG/PG student-17-18

Year	Name of Faculty	Purpose of grant	Funds/ Grants received (INR in lakhs)	COST CENETR
2017-18	Munshi A.P.	Expenses incurred for Student Project on "Variable speed wind Energy Conversion system using permanent Magnet Synchronous Generator" Session 2016-17- Student of Electrical Engg. (Dhanashree Porate) As per Bills Enclosed.	0.17362	Electrical Engg
2017-18	GAWANDE SNEHAL P.	Expenses has incurred for Student Project on "Some Studies on Electric spring for Power quality improvement" Student of M-Tech (Electrical Engg) Session 2016-17 (Student Name : Rutuja Pawar)	0.11226	Electrical Engg
2017-18	SARALA ADHAU	Cheque No.005415 Date-20.12.2017 issued for expenses against House Minor Project Scheem "Assessment of Bio-Gas Production form Canteen Waste" [Plumbing work, cow gung, carting & labour] Dated on 18.12.2017 details attached.	0.035	Electrical Engg
2017-18	Tikle Ashish R	being amount of Provision for Student Project submitted by final year student EL dept. [ Project- Solar Power Air Cooler] [ LOkesh Brahme, Anivash Jadhav, Aksh Ghodmare, Rucha Dixit, Mohit Bhende, Sudhir chavan, Prassanata Bobade]	0.0542	Electrical Engg
2017-18	Moharil R.M	Towards amount provision for student project on, "Harnessing Wave Energy." Session 2017-18 student of Electrical Dept [Sakshi Dotre, Sonali Balki, Swati Lambat, Abhishek Duragkar, Ankush Hiware & Pratik Gajbhiye] [Guide-R M Moharil]	0.13554	Electrical Engg
2017-18	Jain Sachin	Towards amount provision for student project on, "Photovoltaic Based Irrigation Pumping System." Session 2017-18 student of Electrical Dept [Kunal Chopade, Malay Bhagwat, Shantanu Golhane, Nayan Shukla, Samiket Raut & Sakshan Bhure] [Guid R Khonde]	0.04458	Electrical Engg
2017-18	Nagpure R. N.	Towards amount provision for student project on, "Micro-Controller Based Rotary Car Parking Sy." Session 2017-18 student of Electrical Dept [Twinkal, Abhilash, Amey, Bhushan, Nikhil & Sumedh] [Guid R N Nagpure]	0.10972	Electrical Engg



2017-18	Kadwane S. G.	<i>Towards amount provision for student project on, "Design &amp; Development of AC &amp; DC Hybrid System for Residention Application." Session 2017-18 student of Electrical Dept [Aishwarya, Dipali, Mayuri, Mohini, Priyanka &amp; Shivani] [Guid-S Khadwane]</i>	0.06115	Electrical Engg
2017-18	Bagde B. Y.	<i>Towards amount provision for student project on, "PLC Based Automatic Sheet Cutting Machine." Session 2017-18 student of Electrical Dept [Darshan, Ritesh, Sahil, Saurabh, Shubham &amp; Vijay] [Guid-B Y Bagde]</i>	0.09161	Electrical Engg
2017-18	Mohril R. M.	<i>Towards amount provision for student project on, "Experimrntation on Modified convex Lens Based Solar Cooker." Session 2017-18 student of Electrical Dept [Jigyanesa, Karishma, saujanya, Vaishnavi, ] [Guid-R M Moharil]</i>	0.00708	Electrical Engg
2017-18	Joshi Prasad	<i>Towards amount provision for student project on, "Speed Control of Linear Induction Motor." Session 2017-18 student of Electrical Dept [Ankita, Prachi, Sanika, Aniket, Kartik &amp; Shubham] [Guid-P B Joshi]</i>	0.10158	Electrical Engg
2017-18	Meshram P.M.	<i>Towards amount provision for student project on, "Some studies on Power Factor Correction." Session 2017-18 student of Electrical Dept [Savi, Adwait, Hemansu, Palash Pratik &amp; Shreyas] [Guid-P M Meshram]</i>	0.05071	Electrical Engg
2017-18	Gaigowal S R	<i>Towards amount provision for student project on, "Paid Solar Energy System Management." Session 2017-18 student of Electrical Dept [Anurag, Palak, Pranay, Sumant, vivek Harshad &amp; Atharva ] [Guid-S R Gaigowal]</i>	0.0931	Electrical Engg
2017-18	Munshi A.P.	<i>Towards amount provision for student project on, "Solar Genration using concentration Colle." Session 2017-18 student of Electrical Dept [Shaikh, Prashmesh, Amol, Akash &amp; Abhilash] [Guid-A P Munsil]</i>	0.08975	Electrical Engg
2017-18	Kadwane S. G.	<i>Towards amount provision for student project on, "Inrestiqation of Quadictive Canecter Based grid tied Single Phase Inverter." Session 2017-18 student of Electrical Dept [Nitesh Fande] [ Guid-S G Kadwane]</i>	0.09031	Electrical Engg
2017-18	Bagde B. Y.	<i>Towards amount provision for student project on, "Electric Rotary Tiller." Session 2017-18 student of Electrical Dept [Swapnil, Shubham, Ganesh, Govardhan, Gopal &amp; Om] [Guid-B Y Bagde]</i>	0.21033	Electrical Engg



Nagar Yuwak Shikshan Sanstha's  
**Yeshwantrao Chavan College of Engineering**  
An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)  
Hingna Road, Wanadongri, Nagpur - 441 110

2017-18	Pote Xma R.	Towards amount provision for student project on, "Electricity Generation by Piezo-lectric materials." Session 2017-18 student of Electrical Dept [Akash, Sunay, Vaishnavi, Aditya Shubham, Shivray & Aniket] [ Guid- X R Pote]	0.07665	Electrical Engg
2017-18	GAWANDE SNEHAL P.	Towards amount provision for student project on, "Study Of Soler Photovoltaic System For Smart Grid ." Session 2017-18 student of Electrical Dept [Darshika, Puja, Shradha, Sumedha & Prashant, Shivendra] [ Guid- S P Gawande]	0.06476	Electrical Engg
2017-18	Tiwari Shewta I.	Towards amount provision for student project on, "Transmision Line Monratoring & Protection System ." Session 2017-18 student of Electrical Dept [Akash, deepati, Kaustubh, Pranay, Shivani & Shivas] [ Guid- S L Tiwari]	0.11262	Electrical Engg
2017-18	Adhau S. P.	Towards amount provision for student project on, "Bio Gas Plant." Session 2017-18 student of Electrical Dept [Kashmiri, Nish, Pranali, Samiksha, Sampada & Tejaswini] [Guid-S P Adhau]	0.0388	Electrical Engg
2017-18	Patil P.S	Towards amount provision for student project on, "Solar Panel Cleaner ." Session 2017-18 student of Electrical Dept [Nikita, Akshay, Amit, Dipanshu, Mayur & Sagar] [Guid-S P Patil]	0.11737	Electrical Engg
2017-18	GAWANDE SNEHAL P.	Towards amount provision for student project on, "Some Investigations on Constant switching Frequency using Mockfied ." Session 2017-18 student of Electrical Dept [Bhagyashree] [Guid-S P Gawande]	0.03479	Electrical Engg

*S.R. Gaigwal*  
S-R-Gaigwal  
Project Coordinator

*B. Shinde*  
HOD, EL, YCCE

*G. S. Gawande*  
Principal

# WIRELESS WASTE MANAGEMENT AND INSTALLATION OF BIOGAS GENERATION PLANT

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

Kashmiri Zade (EL)      Megha Madavi (EL)      Nisha Doble (EL)  
Pranali Chahande (EL)      Samiksha Yadav (EL)      Sampada Manekar (EL)  
Tejaswini Sawarkar (EL)      Roshani Chahande (ETC)      Minal Taksande (ETC)  
Shubhangi Malewar (ETC)      Prajakta Palandurkar (ETC)

*Under the guidance of*

**Dr. Mrs. S. P. Adhau**

**Dr. Mrs. M. S. Dorle**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441 110**

**2017-2018**

# SOLAR POWERED AIR COOLER

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**AKASH GHODMARE**

**LOKESH BRAMHE**

**PRASANNATA BOBADE**

**AVINASH JADHAV**

**MOHIT BHONDE**

**RUCHA DIXIT**

**SUDHIR CHAVHAN**

*under the guidance of*

**Prof. ASHISH TIKLE**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

**CERTIFICATE OF APPROVAL**

Certified that the project report entitled "SOLAR POWERED AIR COOLER " has been successfully completed by,

**AKASH GHODMARE**

**AVINASH JADHAV**

**LOKESH BRAHME**

**MOHIT BHONDE**

**PRASANNATA BOBADE**

**RUCHA DIXIT**

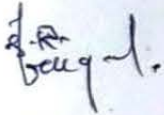
**SUDHIR CHAVHAN**

In recognition to the partial fulfillment for the award of the degree of Bachelor in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.**



**Prof. Ashish Tikle**

(Project Guide)



**Prof. S. R. Gaigowal**

(Project coordinator)




**Dr. R. M. Moharil**

(HOD, EL Dept.)



**Dr. V. P. Waghe**

(Principal)



Signature of External examiner

Name : Jagdish G. Chaudhari.

Date of Examination : 27.04.2018



# HARNESSING WAVE ENERGY

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**Abhishek S Duragkar**

**Ankush J Hiware**

**Pratik S Gajbhiye**

**Sakshi D Dhotre**

**Sonali V Balki**

**Swati G Lambat**

*under the guidance of*

**Dr. R. M. Moharil**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "HARNESSING WAVE ENERGY" has been successfully completed by

**Abhishek S Duragkar**

**Sakshi D Dhotre**

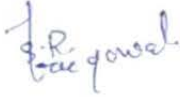
**Ankush J Hiware**

**Sonali V Balki**

**Pratik S Gajbhiye**

**Swati G Lambat**

in recognition of the partial fulfillment for the award of the degree of Bachelor in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.**



**Prof. S. R. Gaigowal**  
**Project Coordinator**



**Dr. R. M. Moharil**  
**Project Guide & HoD, EL**  
**Dept.**



**Dr. U. P. Waghe**  
**Principal**

Signature of External Examiner:

Name: **Jagdish G. Chaudhari**

Date of Examination: **27.04.2018**

# MICROCONTROLLER BASED ROTARY CAR PARKING SYSTEM

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**TWINKAL PARATE**

**ABHILASH MANKAR**

**AMEY WAGHMARE**

**BHUSHAN THATE**

**NIKHIL PUNDE**

**SUMEDH PAJAI**

*under the guidance of*

**Prof. R.N. NAGPURE**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR 441110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Microcontroller based Rotary car parking system**” has been successfully completed by

**Twinkal Parate**

**Abhilash Mankar**

**Amey Waghmare**

**Bhushan Thate**

**Nikhil Punde**

**Sumedh Pajai**

under the guidance of **Prof. R. N. Nagpure** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**Prof. R. N. Nagpure**  
(Project Guide)

**Prof. S. R. Gaigowal**  
(Project Coordinator)

**Dr. R. M. Moharil**  
(HOD, Electrical Dept.)  
Head of Department  
Electrical Engg. Deptt.  
Y.C.C.E., Nagpur

**Dr. U. P. Waghe**  
(Principal, YCCE)

Signature of External Examiner

Name: **Dr. P. Debnik**

Date of Examination: **26/04**

# DESIGN AND DEVELOPMENT OF AC AND DC HYBRID SYSTEM FOR RESIDENTIAL APPLICATIONS

*This project report is submitted to*  
Yeshwantrao Chavan College of Engineering  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*By*

AISHWARYA MESHRAM

MOHINI SONPAROTE

DIPALI PIMPALKAR

PRIYANKA KALE

MAYURI THAKARE

SHIVANI PATEL

*under the guidance of*

**Dr. S. G. Kadwane**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report titled "DESIGN AND DEVELOPMENT OF AC AND DC HYBRID SYSTEM FOR RESIDENTIAL APPLICATIONS" has been successfully completed by

AISHWARYA MESHARAM

DIPALI PIMPALKAR


MAYURI THAKARE

MOHINI SONPAROTE

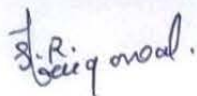
PRIYANKA KALE

SHIVANI PATEL

in recognition to the partial fulfilment for the award of the degree of Master of Technology in Integrated Power System, Electrical Engineering, **Yeshwantrao Chavan College of Engineering** (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University).



Dr. S. G. Kadwane  
(Guide)




Prof. S. R. Gaigowal  
(Project Coordinator)



Dr. R. M. Moharil  
(HOD, EL Dept.)



Dr. U. P. Waghe  
(Principle, YCCE)

Signature of External Examiner :   
Name of Examiner : DR R K Keshti  
Date : 26/4/18

# EXPERIMENTATION ON MODIFIED CONVEX LENS BASED SOLAR COOKER

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*  
*in partial fulfillment of the requirement*  
*for the award of the degree*

*of*  
**Bachelor of Engineering in Electrical Engineering**  
*by*

**Jigyansa Mahakul**  
**Saujanya Band**  
**Vaishnavi Joshi**

**Karishma Chaudhari**  
**Vaishnavi Bhure**  
**Vaishnavi Dangore**

*under the guidance of*

**Dr. R. M. Moharil**



**DEPARTMENT OF ELECTRICAL ENGINEERING**  
Nagar Yuwak Shikshan Sanstha's  
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**  
(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)  
**NAGPUR – 441 110**  
**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "EXPERIMENTATION ON MODIFIED CONVEX LENS BASED SOLAR COOKER" has been successfully completed by

**JIGYANSA MAHAKUL**

**KARISHMA CHAUDHARI**

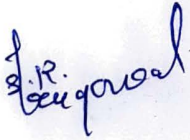
**SAUJANYA BAND**

**VAISHNAVI BHURE**


**VAISHNAVI JOSHI**

**VAISHNAVI DANGORE**

in recognition to the partial fulfillment for the award of the degree of Bachelor in Electrical Engineering, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



**Prof. S. R. Gaigowal**  
**(Project Co-ordinator)**

  
**Dr. R. M. Moharil**  
**(Project Guide, HOD,**  
**EL Dept)**



**Dr. U. P. Waghe**  
**(Principal)**

Signature of External Examiner:

Name: Jagdish G. Chaudhari

Date of Examination: 27-04-2018



# **SPEED CONTROL OF LINEAR INDUCTION MOTOR**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**ANKITA PATIL**

**PRACHI MOREY**

**SANIKA TITRE**

**ANIKET JOSHI**

**KARTIK PURI**

**SHUBHAM BHOYAR**

*under the guidance of*

**Prof. P. B. Joshi**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

This is to certify that the project report entitled "**SPEED CONTROL OF LINEAR INDUCTION MOTOR**" has been successfully completed by

**ANKITA PATIL**

**PRACHI MOREY**

**SANIKA TITRE**

**ANIKET JOSHI**

**KARTIK PURI**

**SHUBHAM BHOYAR**

In recognition to the partial fulfilment for the award of the degree of Bachelor in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.**



Prof. P.S. Shete

(Project Co-Guide)



Prof. P. B. Joshi

(Project Guide)



Prof. S. R. Gaigowal

(Project Co-ordinator)



Prof. R. M. Moharil

(HOD, EL Dept.)



Dr. U. P. Waghe

(Principal)



Signature of External Examiner

Name:-  
Y.S. V. Gaikwad

Date of Examination:-

# **SOME STUDIES ON POWER FACTOR CORRECTION CIRCUITS**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**SAVI S. BULKUNDE**

**ADWAIT A. DESHPANDE**

**HEMANSHU A. BAWANKAR**

**PALASH R. DHORE**

**PRATIK Y. PITTULE**

**SHREYAS S. DIXIT**

*under the guidance of*

**Dr. P. M. MESHRAM**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "SOME STUDIES ON POWER FACTOR CORRECTION CIRCUITS" has been successfully completed by

SAVI S. BULKUNDE

PALASH R. DHORE

ADWAIT A. DESHPANDE

PRATIK Y. PITTULE

HEMANSHU A. BAWANKAR

SHREYAS S. DIXIT

in recognition to the partial fulfillment for the award of the degree of Bachelor in Electrical Engineering, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



Dr. P. M. MESHARAM  
(Project Guide)



Prof. S. R. Gaigowal  
(Project Coordinator)



Dr. R. M. Moharil  
(HOD, EL Dept.)



Dr. U. P. Waghe  
(Principal)



Signature of External Examiner:

Name: Dr. R. K. Kesani

Date of Examination: 26/4/18

# PAID SOLAR ENERGY SYSTEM MANAGEMENT

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**Anurag Tiwaskar**

**Palak Kumar Barik**

**Atharva Duragkar**

**Pranay Zurmure**

**Harshad Sharma**

**Sumant Watekar**

**Vivek Shyamkuwar**

*under the guidance of*

**Prof. S. R. Gaigowal (Guide)**

**Prof. Prashant Meshram (Co-Guide)**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "PAID SOLAR ENERGY SYSTEM MANAGEMENT" has been successfully completed by

ANURAG TIWASKAR

PALAK KUMAR BARIK

ATHARVA DURAGKAR

PRANAY ZURMURE

HARSHAD SHARMA

SUMANT WATEKAR

VIVEK SHYAMKUWAR

under the guidance of Prof. S. R. Gaigowal in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Electrical Engineering, **Yeshwantrao Chavan College of Engineering** (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



**Prof. Prashant Meshram**  
DBACER, Nagpur  
(Project Co-Guide)



**Prof. S. R. Gaigowal**  
(Project Guide and Project Co-ordinator)



**Prof. R. M. Moharil**  
(HOD, EL Dept.)



**Dr. U. P. Waghe**  
(Principal)

Signature of External Examiner:

Name:

Date of Examination:

# **SOLAR PHOTOVOLTAIC GENERATION USING CONCENTRATING COLLECTOR FOR BETTER PERFORMANCE**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering, Nagpur**

*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur  
University)*

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**Abhilash Rangari**

**Amol Bhongle**

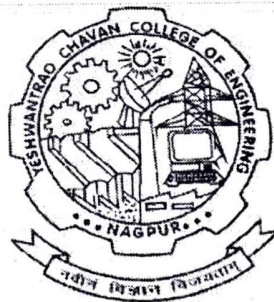
**Akash Dudhe**

**Prathamesh Taywade**

**Shaikh Nayyar**

*under the guidance of*

**Prof. A.P. Munshi**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur**

**University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**

# CERTIFICATE OF APPROVAL

Certified that the project report entitled "SOLAR PHOTOVOLTAIC GENERATION USING CONCENTRATING COLLECTOR FOR BETTER PERFORMANCE" has been successfully completed by

**Abhilash Rangari**

**Amol Bhongle**

**Akash Dudhe**

**Prathamesh Taywade**

**Shaikh Nayyar**

in recognition to the partial fulfillment for the award of the degree of Bachelor in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.**



**Prof. A.P. MUNSHI**  
**(Project Guide)**



**Prof. S. R. Gaigowal**  
**(Project Coordinator)**



**Dr. R. M. Moharil**  
**(HoD, EL Dept.)**  
Head of Department  
Electrical Engg. Deptt.  
Y.C.C.E., Nagpur



**Dr. U.P. Waghe**  
**(Principal)**



Signature of External Examiner:

Name: **B.S. NETANRAO**

Date of Examination: **20/04/2018**



# ELECTRIC ROTARY TILLER

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfilment of the requirement*  
*for the award of the degree*  
*of*  
**Bachelor of Engineering in Electrical Engineering**  
*by*

**ATUL MOKADAM**

**GANESH PANDHWALE**

**GOPAL IDATE**

**GOVARDHAN TATHE**

**OM SHINDE**

**SHUBHAM GULHANE**

**SWAPNIL JANE**

*Under the guidance of*

**Prof. B. Y. BAGDE**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's  
YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

This is to certify that the project report entitled "ELECTRIC ROTARY TILLER" has been successfully completed by

ATUL MOKADAM  
GANESH PANDHWALE  
GOPAL IDATE

GOVARDHAN TATHE  
OM SHINDE  
SHUBHAM GULHANE

SWAPNIL JANE

in recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Electrical Engineering, **Yeshwantrao Chavan College of Engineering** (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur, University)



**Prof. B.Y. Bagde**  
(Project Guide)



**Mr. S. R. Gaigowal**  
(Project Co-Ordinator)



**Dr. R. M. Moharil**  
(HOD Electrical Dept.)



**Dr. U. P. Waghe**  
(Principal)



**Sign of External Examiner:**

**Name:** S. D. ABHYANKAR

**Date of Examination:**

# GENERATION OF ELECTRICAL ENERGY BY PIEZOELECTRIC MATERIAL

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**Aditya R. Chawre**

**Aniket A. Lakhe**

**Shubham R. Golhar**

**Vaishnavi V. Giradkar**

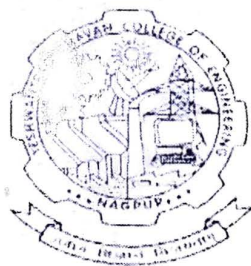
**Akash S. Yerwar**

**Shivray R. Deshpande**

**Sunay V. Tamboli**

*under the guidance of*

**Prof. Mrs. Xma R. Pote**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "GENERATION OF ELECTRICAL ENERGY BY PIEZOELECTRIC MATERIAL" has been successfully completed by

Aditya R. Chawre

Aniket A. Lakhe

Shubham R. Golhar

Vaishnavi V. Giradkar

Akash S. Yerwar

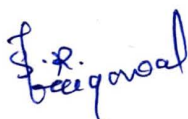
Shivray R. Deshpande

Sunay V. Tamboli

in recognition to the partial fulfillment for the award of the degree of Bachelor in Electrical Engineering, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



Prof. Mrs. Xma R. Pote  
(Project Guide)



Prof. S. R. Gaigowal  
(Project Co-ordinator)



Dr. R. M. Mohril  
(HoD, EL Dept.)



Dr. U. P. Waghe  
Principal



Signature of External Examiner:

Name: Prof. G. N. GOYAL

Date of Examination: 27/04/18

# SOLAR PV ARRAY FED BLDC MOTOR DRIVEN WATER PUMPING SYSTEM

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering, Nagpur**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

*In partial fulfillment of the requirement for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**MADHURI THAKUR**

**PRIYA KOLHEKAR**

**PRIYANKA TATAR**

**SHIPRA PATIL**

**RAVINDRA BOBADE**

**TEJAS MASURKAR**

**VINAY KHADAKE**

*Under the guidance of*

**Dr. S. P. GAWANDE**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**

# TRANSMISSION LINE MONITORING AND PROTECTION SCHEME

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*  
*in partial fulfillment of the requirement*  
*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**Akash K. Khanapurkar**

**Deepali S. Yadav**

**Kaustubh R. Tidke**

**Pranay A. Pande**

**Shivani S. Patil**

**Shivdas R. Itankar**

*under the guidance of*

**Prof. Mrs S. L. Tiwari**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "TRANSMISSION LINE MONITORING AND PROTECTION SCHEME" has been successfully completed by

**Akash K. Khanapurkar**

**Kaustubh R. Tidke**

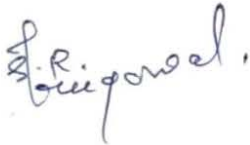
**Shivani S. Patil**

**Deepali S. Yadav**

**Pranay A. Pande**

**Shivdas R. Itankar**

in recognition to the partial fulfilment for the award of the degree of Bachelor in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**



**Prof. S.R. Gaigowal**  
(Project Coordinator)



**Dr. R.M. Moharil**  
(HOD, EL Dept.)



**Prof. S.L. Tiwari**  
(Project Guide)



**Dr. U.P. Waghe**  
(Principal)

Signature of External Examiner:

Name:

**Dr. P. D. Debnar**

Date of Examination:

**26/04**

# SCADA BASED POWER CONTROL SYSTEM

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Bachelor of Engineering in Electrical Engineering**

*By*

**Jyoti Wankhede**

**Malvika Kshirsagar**

**Rashmi Kahadinge**

**Jyoti Thakre**

**Megha Umathe**

**Sharwari Inkane**

*Under the guidance of*

**Prof. T. D. Tembhekar**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**



## CERTIFICATE OF APPROVAL

Certified that the project report entitled "SCADA BASED POWER CONTROL SYSTEM" has been successfully completed by

**Jyoti Wankhede**

**Malvika Kshirsagar**

**Rashmi Kahadinge**

**Jyoti Thakre**

**Megha Umathe**

**Sharwari Inkane**

under the guidance of **Prof. T. D. Tembhekar** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Electrical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)



**Prof. S. R. Bhojar**  
(Co-Guide)



**Prof. T. D. Tembhekar**  
(Project Guide)



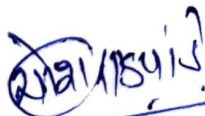
**Prof. S. R. Gaigowal**  
(Coordinator)



**Prof. R. M. Moharil**  
(HOD, Electrical Dept.)



**Prof. U. P. Waghe**  
(Principal, YCCE)  
Yeshwantrao Chavan  
College of Engineering  
Wanadongri, Hingna Road,  
NAGPUR-441110



Signature of External Examiner  
Name: **Y. S. Varad Pande**

Date of Examination:



# FAULT SECTION ESTIMATION USING NEURAL NETWORKS

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering, Nagpur**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfilment of the requirement*

*for the award of the degree*

*of*

**Bachelor Of Engineering in Electrical Engineering**

*By*

**Krutika Saurkar**

**Vaishali Uikey**

**Prajakta Deotare**

**Mamata Baingane**

**Srushti Wankhede**

**Tushar Sontakke**

**Mithun Soyamkar**

*Under the guidance of*

**Prof. S. S. GOKHALE**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-18**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "FAULT SECTION ESTIMATION USING NEURAL NETWORKS" completed by

Krutika Saurkar

Vaishali Uikey

Prajakta Deotare

Mamata Baingane

Srushti Wankhede

Tushar Sontakke

Mithun Soyamkar

In recognition to the partial fulfillment for the award of the degree of Bachelor Of Engineering in Electrical Engineering Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



Prof. S. S. Gokhale

(Project Guide)



Prof. S. R. Gaigowal

(Project Coordinator)



Dr. R. M. Moharil

Head of Department  
Electrical Engg. Deptt.  
Y.C.C.E., Nagpur



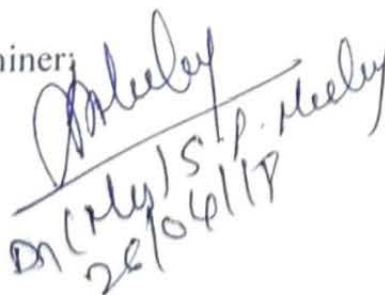
Dr. U. P. Waghe

(Principal)

Signature of External Examiner:

Name:

Date of Examination:



Dr. (Mrs) S. P. Healy  
28/04/17

# **SVC FOR BUS VOLTAGE REGULATION**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*  
*in partial fulfillment of the requirement*  
*for the award of the degree*

*of*  
**Bachelor of Engineering in Electrical Engineering**  
*by*

**Disha D. Mohitkar**

**Kaustubh R. Rajhansa**

**Akshay R. Gotmare**

**Mrunalini A. Katade**

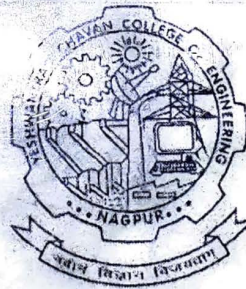
**Aniket A. Shrirang**

**Kapil D. Dandekar**

*under the guidance of*

**Prof. S. R. Gaigowal (Guide)**

**Mr. S. W. Kolte (Co-Guide)**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441 110**

**2017-2018**

# **INSTALLATION OF ZERO SPEED SWITCH AT APRON FEEDER (CHP, CSTPS)**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering, Nagpur**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement for  
the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**Aditya R. Gulhane**

**Akash B. Islawat**

**Akshay S. Godbole**

**Shubham A. Gulhane**

**Shubham S. Tirmallu**

**Vaibhav S. Mahajan**

*Under the guidance of*

**Prof. Atul S. Lihare**

**Co-guide**

**Er. Mahesh Meshram**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**

**CASE STUDY ON THE PROTECTION SCHEME OF ALTERNATOR  
AND TRANSFORMER INSTALLED AT PURTI POWER AND  
SUGAR Ltd. (24.45 MW)**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**Dnyanada G. Shelke**

**Ankita L. Kale**

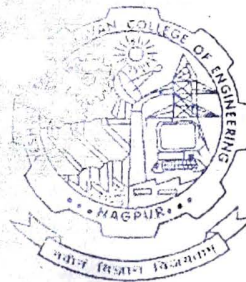
**Shubhangi N. Bante**

**Sameer P. Bharti**

**Tejashree R. Bonde**

**Shubham C. Bhuyarkar**

**Under the guidance of  
Prof. V.R. Deifode**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuvak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**

# PLC BASED AUTOMATIC SHEET CUTTING MACHINE

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfilment of the requirement*

*For the award of the degree*

*Of*

**Bachelor of Engineering in Electrical Engineering**

*By*

**DARSHAN MOTGHARE**

**RITESH THAWKAR**

**SAHIL BODKHE**

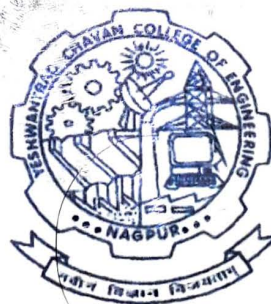
**SAURABH DESHKAR**

**SHUBHAM THOTE**

**VIRAJ AWAGHATE**

*Under the guidance of*

**Prof. B. Y. BAGDE**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

Page 285 of 346

**2017-2018**

# ELECTRICAL ENERGY AUDIT OF ELECTRICAL DEPARTMENT BUILDING AT YCCE

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering, Nagpur**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**POURNIMA SHENDE**

**SAMPADA DESHPANDE**

**GAURAV KOTGIRWAR**

**HARSHAD KHAWSE**

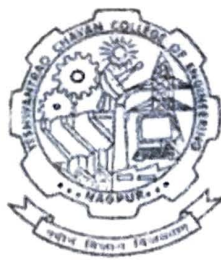
**SANTOSH KUMAR**

**VIRAJ GADGE**

**VISHAL PADGHAN**

*under the guidance of*

**Prof. P. S. SHETE**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**



# UNDERGROUND CABLE FAULT DISTANCE COMMUNICATED USING GSM

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfilment of the requirement*

*For the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**BHAGYASHREE BUDHAWAT**

**PRACHI WANKHADE**

**DAMINI BHARADWAJ**

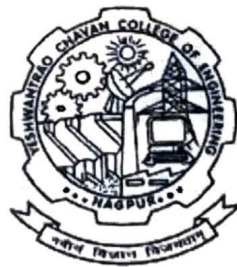
**MANSI JAMBHULE**

**NIKITA DHANDE**

**POOJA YENURKAR**

*under the guidance of*

**Prof. N. T. Sahu**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR-441 110**

**2017-2018**

**i**

## CERTIFICATE OF APPORVAL

Certified that the project entitled “**UNDERGROUND CABLE FAULT DISTANCE COMMUNICATED USING GSM**” has been successfully completed by,

**BHAGYASHREE BUDHAWAT**

**PRACHI WANKHADE**


**DAMINI BHARADWAJ**

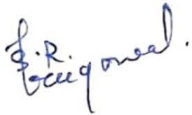
**MANSI JAMBHULE**

**NIKITA DHANDE**

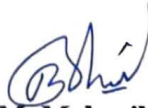
**POOJA YENURKAR**

in recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur).**

  
**Prof. N. T. Sahu**  
(Project Guide)



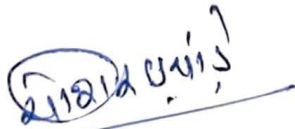
**Prof. S. R. Gaigowal**  
(Project Coordinator)



**Dr. R. M. Moharil**  
(HOD, EL Dept.)

**Dr. U. P. Waghe**

**PRINCIPAL**  
**(Principal, YCCE)**  
Yeshwantrao Chavan  
College of Engineering  
Wanadongri, Hingna Road  
NAGPUR - 441 110



Signature of External Examiner

Name: **Y. S. Varsood Pande**

Date of Examination:



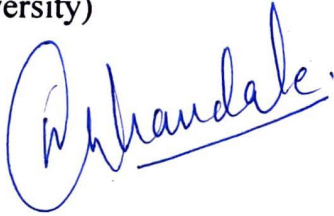
## CERTIFICATE OF APPROVAL

This is to certify that the project report titled "PLC BASED AUTOMATIC SHEET CUTTING MACHINE" has been successfully completed by

**DARSHAN MOTGHARE**  
**RITESH THAWKAR**  
**SAHIL BODKHE**

**SAURABH DESHKAR**  
**SHUBHAM THOTE**  
**VIRAJ AWAGHATE**

in recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Electrical Engineering, **Yeshwantrao Chavan College Of Engineering** (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur, University)



**Mr. P. P. Khandale**  
**Electrical Design Engineer**  
**Mecgale Pneumatics Pvt Ltd.**  
**MIDC, Hingna Nagpur**  
**(CO-GUIDE)**



**Prof. B. Y. Bagde**  
**(Guide)**



**Prof. S. R. Gaigowal**  
**(Project co-ordinator)**



**Dr. R.M. Moharil**  
**(HOD Electrical Dept.)**



**Dr. U.P. Waghe**  
**(Principal)**



**Sign of External Examiner:**

**Name:** Mrs. Shilpa P. Ashankar

**Date of Examination:** 26/04/2018

# INCREASING EFFICIENCY OF SOLAR PANEL BY USING SOLAR PANEL CLEANER

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*  
*in partial fulfillment of the requirement*  
*for the award of the degree*  
*of*  
**Bachelor of Engineering in Electrical Engineering**  
*by*

**Nikita Masurkar**

**Akshaykumar Nale**

**Amit Bhagde**

**Diptanshu Nimje**

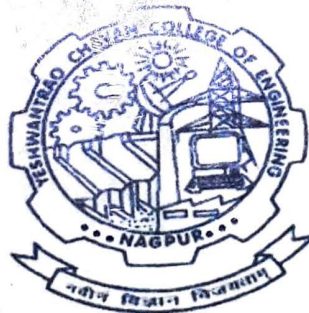
**Mayur Sahare**

**Sagar Satav**

*under the guidance of*

**Prof. P. S. Patil (Guide)**

**Mr. Parag Charthal (Co-Guide)**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

Page 290 of 346

**2017-2018**

# SOOT REMOVAL IN BOILER

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur university)*

*In partial fulfilment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**Anjali Ramteke**

**Ashwini Jangale**

**Neha Mangrulkar**

**Pradhnya Vaidya**

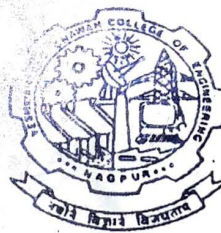
**Snehal Komti**

**Tejswini Bhure**

*under the guidance of*

**Prof Dr. Mrs. S. P. Adhau (guide)**

**Er. A. B. Onkar (co-guide)**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

**NAGPUR – 441 110**

**2017-18**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "CASE STUDY ON THE PROTECTION SCHEME OF ALTERNATOR AND TRANSFORMER INSTALLED AT PURTI POWER AND SUGAR Ltd. (24.45 MW)" has been successfully completed by

**DNYANADA G. SHELKE**

**ANKITA L. KALE**

**SHUBHANGI N. BANTE**

**SAMEER P. BHARTI**

**TEJASHREE R. BONDE**

**SHUBHAM C. BHUYARKAR**

in recognition to the partial fulfillment for the award of the degree of Bachelor of Technology in Electrical Engineering, Yeshwantrao Chavan College of Engineering, Nagpur.



**Prof. V. R. Doifode**

**(Project Guide)**



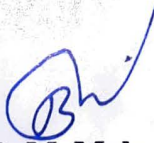
**Mr. Kishor Bankar**

**(Project Co-Guide)**



**Prof. S. R. Gaigowal**

**(Project Coordinator)**



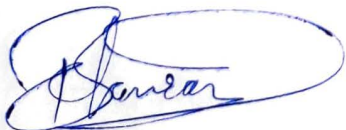
**Dr. R. M. Moharil**

**(HOD, EL Dept.)**



**Dr. U. P. Waghe**

**(Principal, YCCE)**



**Signature of External Examiner :**

**Name : B. S. NETANRAO**

**Date of Examination : 28/04/2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "ELECTRICAL ENERGY AUDIT OF ELECTRICAL DEPARTMENT BUILDING AT YCCE" has been successfully completed by

POURNIMA SHENDE

SAMPADA DESHPANDE

GAURAV KOTGIRWAR

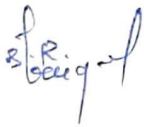
HARSHAD KHAWSE

SANTOSH KUMAR

VIRAJ GADGE

VISHAL PADGHAN

In recognition to the partial fulfillment for the award of the degree of Bachelor in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**



Signature

Prof. S. R. Gaigawal  
(Project Coordinator)



Signature

Dr. R. M. Moharil  
(HOD, EL Dept.)



Prof. P. S. Shete  
(Project Guide)



Signature

Dr. U. P. Waghe  
(Principal)

Signature of External Examiner:

Name: S. D. Abhyankar

Date of examination: 26/04/2018

# **MEMS SENSOR CONTROLLED WHEELCHAIR**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*  
*in partial fulfillment of the requirement*  
*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**Dipa Katkade**

**Ankit Kumbhalkar**

**Sai Prasad Nanda**

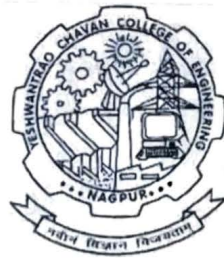
**Seema Gurve**

**Prakash Yadav**

**Tejas Deshmukh**

*under the guidance of*

**Prof. G.C.Gondhalekar**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**



## CERTIFICATE OF APPROVAL

Certified that the project report entitled “MEMS SENSOR CONTROLLED WHEELCHAIR” has been successfully completed by

DIPA KATKADE

SEEMA GURVE

ANKIT KUMBHALKAR

PRAKASH YADAV

SAI PRASAD NANDA

TEJAS DESHMUKH

in recognition to the partial fulfillment for the award of the degree of Bachelor in Electrical Engineering, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



**Prof. G.C. Gondhalekar**

**(Project Guide)**



**Prof. S. R. Gaigowal**  
**(Project Coordinator)**



**Dr. R. M. Moharil**  
**(HOD, EL Dept.)**



**Dr. U. P. Waghe**  
**Principal**



Signature of External Examiner:

Name: **S. N. Katole**

Date of Examination:

# PAID SOLAR ENERGY SYSTEM MANAGEMENT

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**Anurag Tiwaskar**

**Palak Kumar Barik**

**Atharva Duragkar**

**Pranay Zurmure**

**Harshad Sharma**

**Sumant Watekar**

**Vivek Shyamkuwar**

*under the guidance of*

**Prof. S. R. Gaigowal (Guide)**

**Prof. Prashant Meshram (Co-Guide)**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "PAID SOLAR ENERGY SYSTEM MANAGEMENT" has been successfully completed by

ANURAG TIWASKAR

ATHARVA DURAGKAR

HARSHAD SHARMA

PALAK KUMAR BARIK

PRANAY ZURMURE

SUMANT WATEKAR

VIVEK SHYAMKUWAR

under the guidance of Prof. S. R. Gaigowal in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Electrical Engineering, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University*), Nagpur.



**Prof. Prashant Meshram**  
DBACER, Nagpur  
(Project Co-Guide)



**Prof. S. R. Gaigowal**  
(Project Guide and Project Co-ordinator)



**Prof. R. M. Moharil**  
(HOD, EL Dept.)



**Dr. U. P. Waghe**  
(Principal)



Signature of External Examiner:

Name: S. N. Katole

Date of Examination:

# INCREASING EFFICIENCY OF SOLAR ENERGY SYSTEM USING SINGLE AXIS SOLAR TRACKING

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**ASHISHKUMAR WAGHMARE**

**DINESH MESHRAM**

**NILESH DHANDE**

**VIKASH JADHAV**

**VINIT DHONE**

**SHUBHAM ZOD**

*under the guidance of*

**Prof. B. S. SUDAME**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "INCREASING EFFICIENCY OF SOLAR ENERGY SYSTEM USING SINGLE AXIS SOLAR TRACKING" has been successfully completed by

ASHISHKUMAR WAGHMARE

DINESH MESHARAM

NILESH DHANDE

VIKASH JADHAV

VINIT DHONE

SHUBHAM ZOD

in recognition to the partial fulfillment for the award of the degree of Bachelor in Electrical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



Prof. B. S. Sudame  
(Project Guide)



Prof. S.R. Gaigowal  
(Project Coordinator)



Dr. R. M. Moharil  
(HoD, EL Dept.)



Dr. U. P. Waghe  
(Principal)



Signature of External Examiner:

Name: Prof. G. N. GOYAL

Date of Examination: 27/04/18

## CERTIFICATE OF APPROVAL

Certified that the project report titled "SOLAR PV ARRAY FED BLDC MOTOR DRIVE FOR WATER PUMPING APPLICATION" has been successfully completed by

MADHURI S. THAKUR

PRIYA M. KOLHEKAR

PRIYANKA M. TATAR

SHIPRA S. PATIL

RAVINDRA N. BOBADE

TEJAS D. MASURKAR

VINAY D. KHADAKE

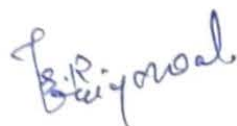
in recognition to the partial fulfillment for the award of the degree of Bachelor in Electrical Engineering, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University*), Nagpur.



Dr. S. P. Gawande  
(Project guide)



Prof. M. A. Waghmare  
(Project co-guide)



Signature  
Prof. S.R. Gaigowal  
(Project Coordinator)



Signature  
Dr. R. M. Moharil  
(HOD, EL Dept.)

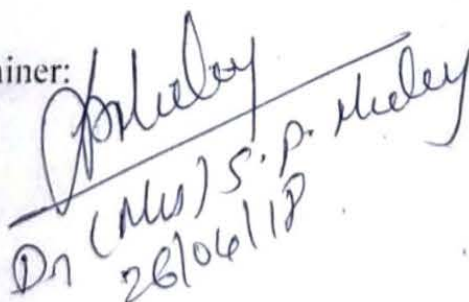


Signature  
Dr. U. P. Waghe  
(Principal)

Signature of External Examiner:

Name :

Date of Examination :



Dr (Mrs) S. P. Meley  
26/06/18

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "AUTOMATIC METER READING SYSTEM USING GSM NETWORK" has been successfully completed by

**POOJA KALE**

**RUTUJA VAIRAGADE**

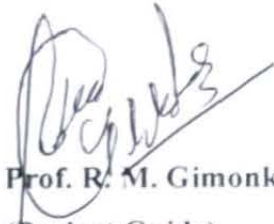
**TOSHITA CHAKE**

**VIVEK TUPSUNDARE**

**HARSH DONGARWAR**

**RUSHIKESH LOKHANDE**

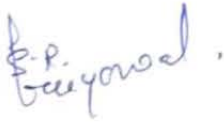
under the guidance of **Prof. R.M.Gimonkar** in recognition to the partial fulfillment for the award of the degree of Bachelor in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.**



**Prof. R. M. Gimonkar**  
(Project Guide)



**Dr. S. Y. Ambatkar**  
(Project Co-Guide)



**Prof. S. R. Gaigowal**  
(Project Coordinator)



**Dr. R. M. Moharil**  
(HOD, EL Dept.)



**Dr. U. P. Waghe**  
Principal

Signature of External Examiner:

Name:

Date of Examination:

# HEALTH MONITORING AND TRACKING OF UNDERGROUND COAL MINE WORKERS

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

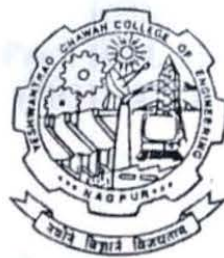
*by*

**ISHAN DESHMUKH  
SHUBHAM KOTAL**

**RAJAT BHATTACHARJEE  
RAKESHKUMAR THEMBURKAR**

*Under the guidance of*

**Prof. A.Y. Fadnis**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*  
**NAGPUR – 441 110**

**2017-2018**

**i**



## CERTIFICATE OF APPROVAL.

Certified that the project report entitled "HEALTH MONITORING AND TRACKING OF UNDERGROUND COAL MINE WORKERS" has been successfully completed by

**ISHAN DESHMUKH**

**RAJAT BHATTACHARJEE**

**SHUBHAM KOTAL**

**RAKRSHIKUMAR TEMBHURKAR**

under the guidance of **PROF. A.Y. FADNIS** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**

*Ayphadnis*

**Prof. A.Y. Fadnis**  
(Guide)

*S.R. Gaigwal*

**Prof. S.R. Gaigawal**  
(Coordinator)

*R.M. Moharil*

**Prof. R.M. Moharil**  
(HOD, EL Dept.)

*U.P. Waghe*

**Dr. U.P. Waghe**  
(Principal)

*[Signature]*  
Signature of External Examiner

Name

*Mr. S.P. Abheyankar*

Date of Examination:

# AUTOMATIC METER READING SYSTEM USING GSM NETWORK

*This project report is submitted to  
Yeshwantrao Chavan College of Engineering  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)  
in partial fulfillment of the requirement  
for the award of the degree*

*of*  
**Bachelor of Engineering in Electrical Engineering**  
*by*

POOJA KALE

RUTUJA VAIRAGADE

TOSHITA CHAKE

HARSH DONGARWAR

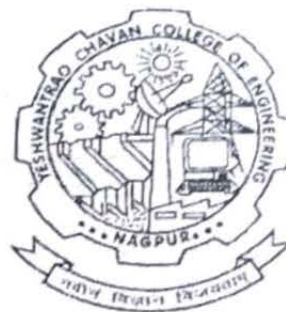
RUSHIKESH LOKHANDE

VIVEK TUPSUNDARE

*under the guidance of*

**Prof. R.M. Gimonkar (Guide)**

**Prof. S.Y. Ambatkar (Co-Guide)**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441 110**

2017-2018

# **GRID CONNECTED ROOFTOP SOLAR POWER GENERATION : A CASE STUDY**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*by*

**Nikhil P. Patle**

**Nitin S. Wandile**

**Pranav P. Fulay**

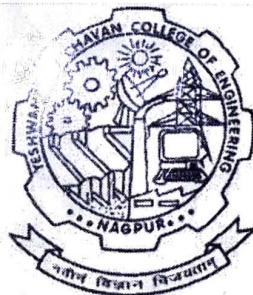
**Mayur K. Meshram**

**Vaibhav D.Sawale**

**Sushmit D. Kothe**

*under the guidance of*

**Mrs. S. B. Rewatkar (Kewte)**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "**GRID CONNECTED ROOFTOP SOLAR POWER GENERATION**" has been successfully completed by

**Nikhil P. Patle**  
**Nitin S. Wandile**  
**Pranav P. Fulay**

**Mayur K. Meshram**  
**Vaibhav D.Sawale**  
**Sushmit D. Kothe**

under the guidance of **PROF. Mrs. S. B. REWATKAR (KEWTE)** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.**



Signature

**Prof. Mrs. S. B. Rewatkar (Kewte)**

**(Project Guide)**



Signature

**Prof. S. R. Gaigowal**  
**(Project Coordinator)**



Signature

**Dr. R. M. Moharil**  
**(HOD , El Dept.)**



Signature

**Dr. U. P. Waghe**  
**(Principal)**



Signature of External

Examiner Name:

Date of examination:

# PHOTOVOLTAIC BASED IRRIGATION PUMPING SYSTEM

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Bachelor of Engineering in Electrical Engineering**

*By*

**SHANTANU GULHANE**

**KUNAL CHOPADE**

**SAMIKET RAUT**

**MALAY BHAGWAT**

**NAYAN SHUKLA**

**SAKSHAM BHURE**

*Under the guidance of*

**Prof. ROHAN KHONDE**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

It is hereby certified that the project report entitled "PHOTOVOLTAIC BASED IRRIGATION PUMPING SYSTEM" has been successfully completed by

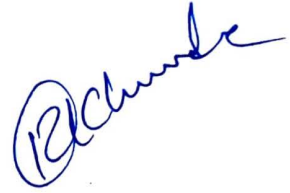
SHANTANU GULHANE  
KUNAL CHOPADE  
SAMIKET RAUT

MALAY BHAGWAT  
NAYAN SHUKLA  
SAKSHAM BHURE

In recognition to the partial fulfilment for the award of the degree of Bachelor in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.**



Prof. Shivpal Verma  
(Project Co-Guide, DBACER)



Prof. R. S. Khonde  
(Project Guide)



Prof. S.R. Gaigowal  
(Project Co-ordinator)



Dr. R.M. Moharil  
(HOD, EL Dept.)

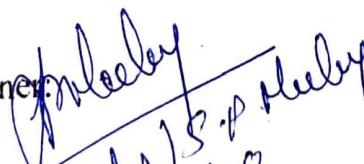


Dr. U.P. Waghe  
(Principal, YCCE)

Signature of External Examiner:

Name:

Date of Examination:

  
Dr. (Mrs) S.P. Healy  
26/04/18

**DETERMINATION OF LOCATION OF WIND TURBINE AT THE  
EDUCATIONAL INSTITUTE**

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering, Nagpur**

*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*in partial fulfilment of the requirement*

*for the award of the degree*

*of*

**Bachelor of Engineering in Electrical Engineering**

*By*

**AJINKYA GADGE**

**FAIZAN KHAN**

**OJAS BHOYAR**

**ANIKET BANPURKAR**

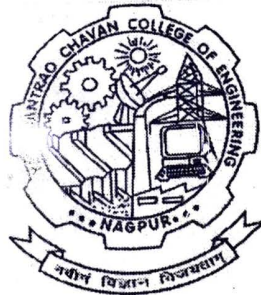
**VIPUL WAGH**

**PIYUSH PATANKAR**

**AKSHAY DARODE**

***under the guidance of***

***Prof. P.B. Joshi***



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

**(An Autonomous Institution Affiliated To Rashtrasant Tukadoji Maharaj Nagpur University)**

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report entitled "**DETERMINATION OF LOCATION OF WIND TURBINE AT THE EDUCATIONAL INSTITUTE**" has been successfully completed by

**AJINKYA GADGE**

**FAIZAN KHAN**

**OJAS BHOYAR**

**ANIKET BANPURKAR**

**VIPUL WAGH**

**PIYUSH PATANKAR**

**AKSHAY DARODE**

In recognition to the partial fulfilment for the award of the degree of Bachelor of Engineering in Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**, Nagpur.



Prof. P. B. Joshi  
(Project Guide)



Prof. S.R. Gaigowal  
(Project Co-ordinator)



Dr. R. M. Moharil  
(HOD, EL Dept.)



Dr. U.P. Waghe  
(Principal)



Signature of External Examiner:

Name:

Date of Examination:



# **RELIABILITY EVALUATION OF MULTISTAGE BOOST CONVERTERS CONNECTED TO PV PANEL**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement  
for the award of the degree  
of*  
**Master of Technology in Integrated Power System**

*by*  
**Amit V. Katore**

*under the guidance of*  
**Prof. Aniket P. Munshi**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

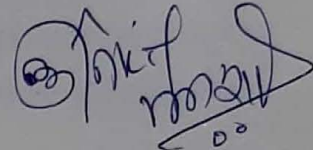
**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

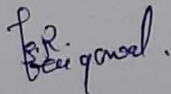
**2017-2018**

## CERTIFICATE OF APPROVAL

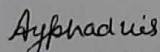
Certified that the project report titled "RELIABILITY EVALUATION OF MULTISTAGE BOOST CONVERTERS CONNECTED TO PV PANELS" has been successfully completed by **Amit V. Katore** under the guidance of **Prof. A. P. Munshi** in recognition to the partial fulfillment for the award of the degree of **Master of Technology in Integrated Power System**, Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**, Nagpur.



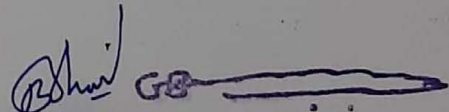
**Prof. Aniket P. Munshi**  
(Project Guide)



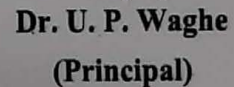
**Prof. S. R. Gaigowal**  
(Project Coordinator)



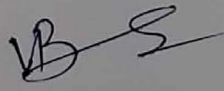
**Mrs. A. Y. Fadnis**  
(M. Tech Coordinator)



**Dr. R. M. Moharil**  
(HOD)



**Dr. U. P. Waghe**  
(Principal)



Signature of External Examiner:

Name:

**V B Borgehal**

Date of Examination:

**28/04/18**

# FAULT SECTION ESTIMATION USING OPTIMIZATION ALGORITHM

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement  
for the award of the degree*

*of*

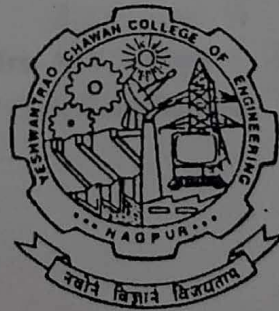
**Master of Technology in Integrated Power System**

*by*

**Pranay V. Ambade**

*under the guidance of*

**Prof. S. S. Gokhale**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

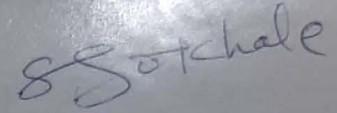
**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

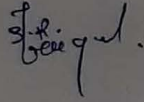
**2017-2018**

## CERTIFICATE OF APPROVAL

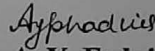
Certified that the project report titled "FAULT SECTION ESTIMATION USING OPTIMIZATION ALGORITHM" has been successfully completed by Pranay V. Ambade under the guidance of Prof. S. S. Gokhale in recognition to the partial fulfillment for the award of the degree of Master of Technology in Integrated Power System, Electrical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



Prof. S. S. Gokhale  
(Project Guide)



Prof. S. R. Gaigowal  
(Project Coordinator)



Mrs. A. Y. Fadnis  
(M. Tech Coordinator)



Dr. R. M. Moharil  
(HOD)



Dr. U. P. Waghe  
(Principal)

Signature of External Examiner:

Name:

Date of Examination:

# SOME INVESTIGATION ON CONSTANT SWITCHING FREQUENCY HYSTERESIS CONTROLLER FOR SMART GRID APPLICATIONS

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Master of Technology in Integrated Power System**

*by*

**Bhagyashree G. Mudaliar**

*under the guidance of*

**Dr. S. P. Gawande**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

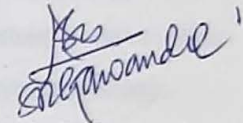
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report titled "SOME INVESTIGATION ON CONSTANT SWITCHING FREQUENCY HYSTERESIS CONTROLLER FOR SMART GRID APPLICATIONS" has been successfully completed by **Bhagyashree G. Mudaliar** under the guidance of **Dr. S. P. Gawande** in recognition to the partial fulfillment for the award of the degree of **Master of Technology in Integrated Power System**, Electrical Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**, Nagpur.



**Dr. S. P. Gawande**  
(Project Guide)



**Prof. S. R. Gaigowal**  
(Project Coordinator)



**Mrs. A. Y. Fadnis**  
(M. Tech Coordinator)



**Dr. R. M. Moharil**  
(HOD)



**Dr. U. P. Waghe**  
(Principal)



Signature of External Examiner:

Name: **28/04/18**

Date of Examination: **VBBorghal**

# DESIGN AND IMPLEMENTATION OF SINGLE- PHASE FOUR-SWITCH RECTIFIER WITH REDUCED CAPACITANCE

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement  
for the award of the degree*

*of*

**Master of Technology in Integrated Power System**

*by*

**Ankita V. Barai**

*under the guidance of*

**Prof. Prasad B. Joshi**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

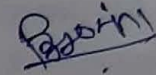
**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

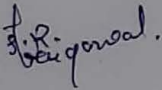
**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report titled "DESIGN AND IMPLEMENTATION OF SINGLE-PHASE FOUR-SWITCH RECTIFIER WITH REDUCED CAPACITANCE" has been successfully completed by Ankita V. Barai under the guidance of Prof. Prasad B. Joshi in recognition to the partial fulfillment for the award of the degree of Master of Technology in Integrated Power System, Electrical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



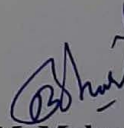
Prof. Prasad B. Joshi  
(Project Guide)



Prof. S. R. Gaigowal  
(Project Coordinator)



Mrs. A. Y. Fadnis  
(M. Tech Coordinator)



Dr. R. M. Moharil  
(HOD)



Dr. U. P. Waghe  
(Principal)

Signature of External Examiner:

Name:

Date of Examination:



**SOME STUDIES ON REACTIVE POWER  
PROCUREMENT IN DEREGULATED POWER SYSTEM**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement  
for the award of the degree  
of*  
**Master of Technology in Integrated Power System**

*by*  
**Akanksha S. Somkuwar**

*under the guidance of*  
**Prof. B. Y. Bagde**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

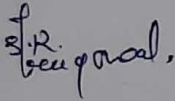
**2017-2018**

## CERTIFICATE OF APPROVAL

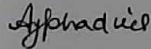
Certified that the project report titled "**SOME STUDIES ON REACTIVE POWER PROCUREMENT IN DEREGULATED POWER SYSTEM**" has been successfully completed by **Akanksha S. Somkuwar** under the guidance of **Prof. B. Y. Bagde** in recognition to the partial fulfillment for the award of the degree of **Master of Technology in Integrated Power System, Electrical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.**




**Prof. B. Y. Bagde**  
(Project Guide)



**Prof. S. R. Gaigowal**  
(Project Coordinator)



**Mrs. A. Y. Fadnis**  
(M. Tech Coordinator)



**Dr. R. M. Moharil**  
(HOD)



**Dr. U. P. Waghe**  
(Principal)

Signature of External

Examiner: Name:

Date of Examination:

**SPEED CONTROL OF TWO PHASE INDUCTION  
MOTOR BY IMPLEMENTATION OF  
APPROXIMATE STATOR FLUX CONTROL  
METHOD**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement  
for the award of the degree  
of*  
**Master of Technology in Integrated Power System**

*by*  
**Visharad Chikate**

*under the guidance of*

**Avantika Y. Fadnis**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report titled "SPEED CONTROL OF TWO PHASE INDUCTION MOTOR BY IMPLEMENTATION OF APPROXIMATE STATOR FLUX CONTROL METHOD" has been successfully completed by Visharad D. Chikate in recognition to the partial fulfillment for the award of the degree of Master of Technology in Integrated Power System, Electrical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University), Nagpur.

*Aybnaduis*

**Prof. A. Y. Fadnis**

**(Guide and M. Tech Coordinator)**

*S. R. Gaigowal*

**Prof. S. R. Gaigowal**  
**(Project Coordinator)**

*R. M. Mohoril*

**DR. R. M. Mohoril**  
**(HOD, EL Dept.)**

*U. P. Waghe*

**Dr. U. P. Waghe**  
**(Principal)**

*[Signature]*  
Signature of External Examiner:

Name:

Date of Examination:

# INVESTIGATION OF QUADRATIC CONVERTER FOR SINGLE PHASE GRID TIED INVERTER

*This project report is submitted to*  
Yeshwantrao Chavan College of Engineering  
(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

*in partial fulfillment of the requirement*  
*for the award of the degree*  
*of*  
Master of Technology in Integrated Power System

*by*  
Nitesh Y. Funde

*under the guidance of*  
**Dr. S. G. Kadwane**



DEPARTMENT OF ELECTRICAL ENGINEERING

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

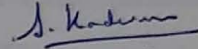
(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)

**NAGPUR – 441 110**

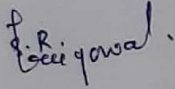
**2017-2018**

## CERTIFICATE OF APPROVAL

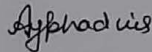
Certified that the project report titled "INVESTIGATION OF QUADRATIC CONVERTER FOR SINGLE PHASE GRID TIED INVERTER" has been successfully completed by Mr. Nitish Y. Funde under the guidance of Dr. S. G. Kadwane in recognition to the partial fulfillment for the award of the degree of Master of Technology in Integrated Power System, Electrical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



Dr. S. G. Kadwane  
(Project Guide)



Prof. S. R. Gaigowal  
(Project Coordinator)



Mrs. A. Y. Fadnis  
(M. Tech Coordinator)



Dr. R. M. Moharil  
(HOD)

Dr. U. P. Waghe  
(Principal)

Signature of External Examiner :

Name :

Date of Examination :

# ENHANCEMENT OF POWER QUALITY ISSUES OF MULTIFUNCTIONAL GRID TIED INVERTER

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*In partial fulfillment of the requirement*

*For the award of the degree*

*Of*

**Master of Technology in Integrated Power System**

*By*

**Vrushali R. Raut**

*Under the guidance of*

**Prof. X.R.Pote**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

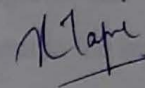
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING,**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University,*  
*Nagpur)*

**NAGPUR – 441 110**

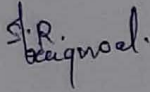
**2017-2018**

## CERTIFICATE OF APPROVAL

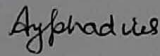
Certified that the project report entitled "ENHANCEMENT OF POWER QUALITY ISSUES OF MULTIFUNCTIONAL GRID TIED INVERTER" has been successfully completed by **VRUSHALI R. RAUT** under the guidance of **Prof. X.R.POTE** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Integrated Power System, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)**



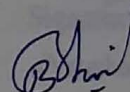
**Prof. X. R. Pote**  
(Project Guide)




**Prof. S. R. Gaigowal**  
(Project Coordinator)



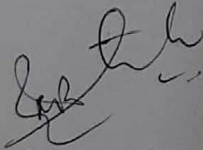
**Mrs. A. Y. Fadnis**  
(M. Tech Coordinator)



**Dr. R. M. Moharil**  
(HOD)



**Dr. U. P. Waghe**  
(Principal)



Signature of External Examiner

Name

Date of Examination:



**DESIGN OF SOLAR PV SYSTEM WITH HIGH  
TRACKING EFFICIENCY AND REDUCED THERMAL  
LOADING**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement  
for the award of the degree  
of*  
**Master of Technology in Integrated Power System**

*by*  
**Juhi P. Gaddam**

*under the guidance of*

**Dr. S. P. Adhau**

*& co-guidance of*

**Dr. M. A. Chaudhari**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

**Nagar Yuwak Shikshan Sanstha's**

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

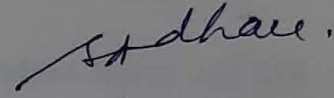
**(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)**

**NAGPUR – 441 110**

**2017-2018**

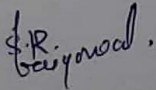
## CERTIFICATE OF APPROVAL

Certified that the project report titled “**DESIGN OF SOLAR PV SYSTEM WITH HIGH TRACKING EFFICIENCY AND REDUCED THERMAL LOADING**” has been successfully completed by **Juhi P. Gaddam** under the guidance of **Dr. S. P. Adhau** in recognition to the partial fulfillment for the award of the degree of **Master of Technology in Integrated Power System, Electrical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.**

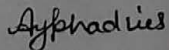


**Dr. S. P. Adhau**  
**(Project Guide)**

**Dr. M. A. Chaudhari**  
**(Co-Guide)**



**Prof. S. R. Gaigowal**  
**(Project Coordinator)**



**Mrs. A. Y. Fadnis**  
**(M. Tech Coordinator)**



**Dr. R. M. Moharil**  
**(HOD)**

**Dr. U. P. Waghe**  
**(Principal)**

Signature of External Examiner:

Name:

Date of Examination:

# TRANSIENT ANALYSIS OF DISTRIBUTED GENERATION AC MICROGRID USING ETAP

*This project report is submitted to*

**Yeshwantrao Chavan College of Engineering**

*(An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*

*for the award of the degree*

*of*

**Master of Technology in Integrated Power System**

*by*

**Piyush Rajendra Kadukar**

*under the guidance of*

**Prof. P. S. Shete**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

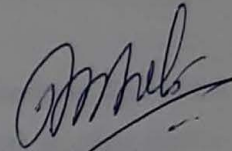
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**NAGPUR – 441 110**

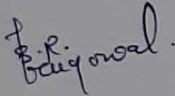
**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report titled "TRANSIENT ANALYSIS OF DISTRIBUTED GENERATION AC MICROGRID USING ETAP" has been successfully completed by PIYUSH RAJENDRA KADUKAR under the guidance of Prof. P. S. Shete in recognition to the partial fulfillment for the award of the degree of Master of Technology in Integrated Power System, Electrical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.



Prof. P. S. Shete  
(Project Guide)



Prof. S. R. Gaigowal  
(Project Coordinator)



Mrs. A. Y. Fadnis  
(M. Tech Coordinator)



Dr. R. M. Moharil  
(HOD)

Dr. U. P. Waghe  
(Principal)

Signature of External Examiner:

Name:

Date of Examination:

**ENERGY MANAGEMENT OF MICROGRID WITH  
RENEWABLE ENERGY SOURCES FOR ESSENTIAL  
AND NON-ESSENTIAL LOADS**

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement  
for the award of the degree  
of*  
**Master of Technology in Integrated Power System**  
*by*

**Tikshit A. Kohale**

*under the guidance of*

**Dr. Ravindra M. Moharil**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

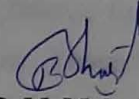
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

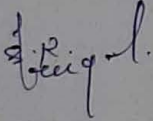
**2017-2018**

## CERTIFICATE OF APPROVAL

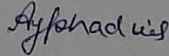
Certified that the project report titled "ENERGY MANAGEMENT OF MICROGRID WITH RENEWABLE ENERGY SOURCES FOR ESSENTIAL AND NON-ESSENTIAL LOADS" has been successfully completed by **Tikshit A. Kohale** under the guidance of **Dr. R. M. Moharil** in recognition to the partial fulfillment for the award of the degree of **Master of Technology in Integrated Power System, Electrical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.**



**Dr. R. M. Moharil**  
**(Project Guide & HOD)**



**Prof. S. R. Gaigowal**  
**(Project Coordinator)**



**Mrs. A. Y. Fadnis**  
**(M. Tech Coordinator)**



**Dr. U. P. Waghe**  
**(Principal)**

Signature of External Examiner:

Name:

Date of Examination:

# POWER FACTOR CORRECTION BASED CUK CONVERTER

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*  
*for the award of the degree*  
*of*  
**Master of Technology in Integrated Power System**  
*by*  
**Shubham S. Nimbekar**

*under the guidance of*

**Atul S. Lilhare**



**DEPARTMENT OF ELECTRICAL ENGINEERING**

Nagar Yuwak Shikshan Sanstha's

**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**

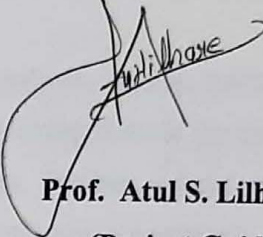
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*

**NAGPUR – 441 110**

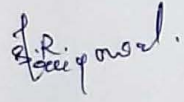
**2017-2018**

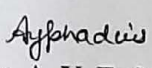
## CERTIFICATE OF APPROVAL

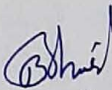
Certified that the project report entitled "POWER FACTOR CORRECTION BASED CUK CONVERTER" has been successfully completed by SHUBHAM S. NIMBEKAR in recognition to the partial fulfillment for the award of the degree of Master of Technology in Integrated Power System, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.





Prof. Atul S. Lihare  
(Project Guide)

  
Prof. S. R. Gaigowal (Project Coordinator)

  
Mrs. A. Y. Fadnis (M. Tech Coordinator)

  
Dr. R. M. Moharil (HOD)

  
Dr. U. P. Waghe (Principal)

  
Signature of External  
Examiner: Name: VB Broghals  
Date of Examination: 28/04/18

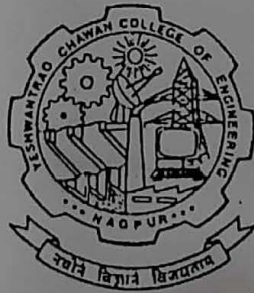


# MULTILEVEL INVERTER FOR PV-STATCOM APPLICATION

*This project report is submitted to*  
**Yeshwantrao Chavan College of Engineering**  
*(An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)*

*in partial fulfillment of the requirement*  
*for the award of the degree*  
*of*  
**Master of Technology in Integrated Power System**  
*by*  
**Nivedita R. Rode**

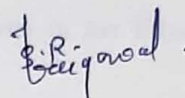
*under the guidance of*  
**Prof. Sandeep R. Gaigowal**



**DEPARTMENT OF ELECTRICAL ENGINEERING**  
Nagar Yuwak Shikshan Sanstha's  
**YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING**  
*(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)*  
**NAGPUR – 441 110**  
**2017-2018**

## CERTIFICATE OF APPROVAL

Certified that the project report titled "MULTILEVEL INVERTER FOR PV-STATCOM APPLICATION" has been successfully completed by Nivedita R. Rode under the guidance of Prof. Sandeep R. Gaigowal in recognition to the partial fulfillment for the award of the degree of Master of Technology in Integrated Power System, Electrical Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University), Nagpur.

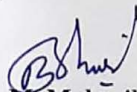


Prof. Sandeep R. Gaigowal

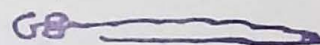
(Project Guide & Coordinator)



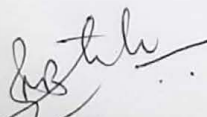
Mrs. A. Y. Fadnis  
(M.Tech Coordinator)



Dr. R. M. Moharil  
(Head of Department)



Dr. U. P. Waghe  
(Principal)



Signature of External Examiner:

Name:

Date of Examination:

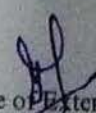
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "ELECTRONIC STETHOSCOPE USING IOT FOR REMOTE AREA APPLICATION" has been successfully completed by NARENDRA S. MULEY, RUCHIKA LANJEWAR, GAURAV NIR, ONKAR RAIPURKAR, KHUSHAL JADHAO under the guidance of PROF. **N.A.PANDE** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Electronics & Telecommunication Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

  
Signature  
(Guide)

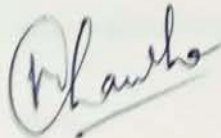
Signature  
(Co Guide if any)

  
Signature  
(HoD, ET Dept.)

  
Signature of External Examiner  
Name:- Y.G.MVL  
Date of Examination:

## CERTIFICATE OF APPROVAL

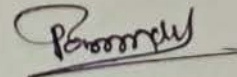
Certified that the project report entitled "Human Machine Interface Based Robotic Arm" has been successfully completed by Aditya S. Muthmare, Ankita P. Rathkanthiwar, Atharva R. Gulhane, Sanjyot S. Kawale, Vrushali V. Lohe, under the guidance of **Dr. M. D. Chauhan** and **Asst. Prof. Mr. R. P. Kamdi** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Electronics and Telecommunication Engineering, **Yeshwantrao Chavan College of Engineering** (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)



Signature

**Dr. M. D. Chauhan**

(Guide)



Signature

**Asst. Prof. Mr. R. P. Kamdi**

(Guide)

  
Signature

**Mr. Shrikant Bhandarkar**  
Electus Technologies Pvt. Ltd.



Signature

**Dr. Mr. M. M. Mushrif**

(HOD, ET Dept.)



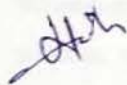
Signature of External Examiner :

Name : Prof. A. A. Charkhawala

Date of Examination : 23/04/2018


## CERTIFICATE OF APPROVAL

Certified that the project report entitled "WIRELESS MESSAGE DISPLAY" has been successfully completed by ASHVIN NAGPURE, SHUBHAM GHONGE, SAGAR MULEY, PRAPHUL JADHAV under the guidance of Dr. N.D.REHPADE in recognition to the partial fulfillment for the award of the degree in Electronics & Telecommunication Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



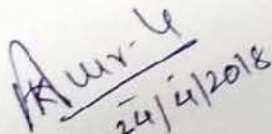
Dr. N. D. REHPADE

(Guide)



Dr. M. M. MUSHRIF

(HOD, ET Dept.)



ANUR-4  
24/4/2018

Dr. ANURADHA. KONDELWAR

(Co-Guide)



Signature of External Examiner

Name

Dr. V. R. BORA

Date of Examination:

24/4/18

CERTIFICATE OF APPROVAL

Certified that the project report entitled "REAL TIME VEHICLE VERLOAD DETECTION AND PREVENTION" has been successfully completed by RAHUL KOTHARI, KAPIL NAGPURE, ATUL PAYGHAN, VILAS GHULE, NEHA MEGHE under the guidance of **Mr. R. P. Deshmukh** in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Electronics & Telecommunication Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

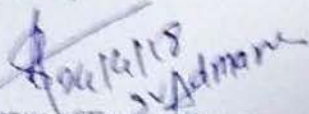
Signature



Mr. R. P. Deshmukh

(Guide)

Signature of External Examiner



Name:-

Date of Examination:



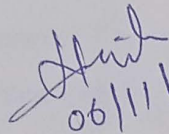
Signature

Mr. M. M. Mushrif

(HoD, ET Dept.)

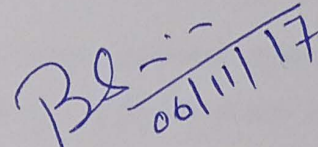
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "LOG ANALYSIS FOR VIRTUAL NETWORK LOAD BALANCING" has been successfully completed AVANTI A. EKRE under the guidance of **Dr. N. D. REHPADE** and Associate Scientist **Dr. S. V. BALAMWAR** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Communication Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)**

  
06/11/2017

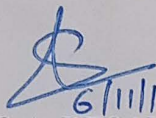
**Dr. N. D. REHPADE**

**Yashwantrao Chavan College of Engineering**  
(Guide)

  
06/11/17

**Dr. S. V. BALAMWAR**

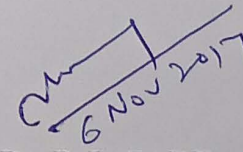
**Associate Scientist (M.R.S.A.C)**  
(Co Guide)

  
6/11/17

**Prof S A. DESAI**

**Yashwantrao Chavan College of Engineering**

(P.G Coordinator)

  
6 Nov 2017

**Dr. P. L. ZADE**

**Yashwantrao Chavan College of Engineering**

(HOD, E&T Department.)

Signature of External Examiner

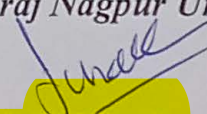
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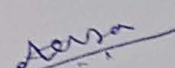
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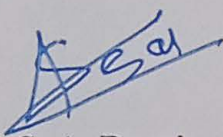


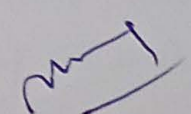
## CERTIFICATE OF APPROVAL


Certified that the project report entitled “Fractal Elliptical Monopole Antenna For Wireless Application” has been successfully completed by Diksha P. Zoting under the guidance of **Prof. S.S. Khade** in recognition to the partial fulfilment for the award of the degree of Master of Technology in Communication Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)

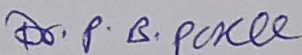
  
**Prof. S. S. Khade**  
(Guide)

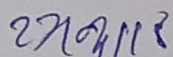
  
Dr. A. D. Belsare  
(Guide)

  
Prof. S. A. Desai  
(PG-Coordinator)

  
Dr. M. M. Mushrif  
(H.O.D ET Department)

  
Signature of External Examiner:

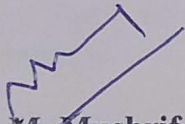
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Date of Examination: 



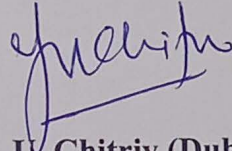
## CERTIFICATE OF APPROVAL

Certified that the project report entitled “**Brain Tumor Type Detection Using Texture Feature In MRI Images**” has been successfully completed by **Komal A. Pisar** under the guidance of **Dr. M. M. Mushrif and Dr. Y. U. Chitriv (Dubey)** in recognition to the partial fulfilment for the award of the degree of Master of Technology in Communication Engineering, Yeshwantrao Chavan College of Engineering (*An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University*)



**Dr. M. M. Mushrif**

(Guide)



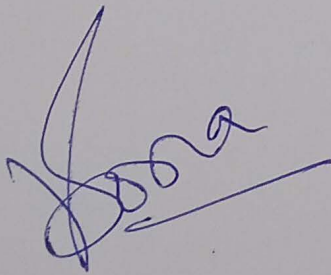
**Dr. Y. U. Chitriv (Dubey)**

(Co-Guide)



**Dr. M. M. Mushrif**

(H.O.D ET Department)



Signature of External Examiner:

Name: **Dr. V. S. Bora**

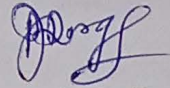
Date of Examination: **27/04/2018.**

## CERTIFICATE OF APPROVAL

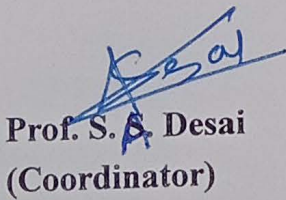
Certified that the project report entitled “**Data Offloading in Heterogeneous Mobile Network**” has been successfully completed by **Krutika G. Mohod**” under the guidance of **Dr. M. D. Chawhan and Prof. P. D. Dorge** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Communication Engineering, **Yeshwantrao Chavan College of Engineering** (*An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University*)



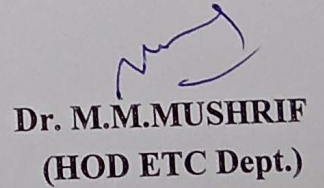
**Dr. M. D. Chawhan**  
(Guide)



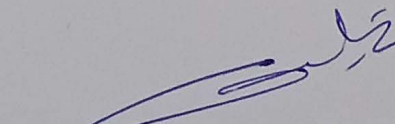
**Prof. P. D. Dorge**  
(Co-Guide)



**Prof. S. S. Desai**  
(Coordinator)



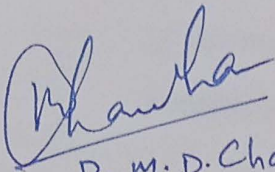
**Dr. M.M.MUSHRIF**  
(HOD ETC Dept.)



Signature of External Examiner **Dr. G.M. Asutkar**  
Name  
Date of Examination: **27/04/18**

## CERTIFICATE OF APPROVAL

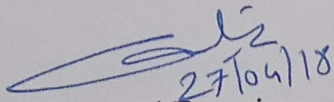
Certified that the project report entitled “**Congestion Control Algorithm For TCP In Wireless Network**” has been successfully completed by **Monika U. Daigavhane** under the guidance of **Dr. M. D. Chawhan** in recognition to the partial fulfillment for the award of the degree of Master of Technology in Communication Engineering, **Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji MaharajNagpur University)**



Dr. M. D. Chawhan.  
Signature  
(Guide)



(HoD, ET Dept.)  
Dr. M. M. Kulkarni



Signature of External Examiner  
Name:- Dr. G. M. Asutkar  
Date of Examination: 27/04/18

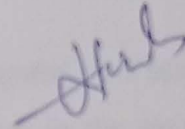
## CERTIFICATE OF APPROVAL

Certified that the project report entitled "RETINAL BLOOD VESSEL SEGMENTATION USING NEURAL NETWORK" has been successfully completed by PRADNYA MANKAR under the guidance of DR. M. M. MUSHRIF and DR. N. D. REHPADE in recognition to the partial fulfillment for the award of the degree of Bachelor of Engineering in Electronics & Telecommunication Engineering, Yeshwantrao Chavan College of Engineering (An Autonomous Institution Affiliated to Rashtrasant Tukdoji Maharaj Nagpur University)



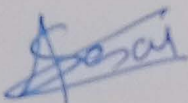
Dr. M. M. Mushrif

(Guide)



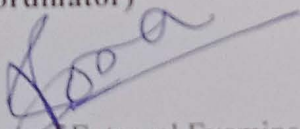
Dr. N. D. Rehpade

(Co Guide)



Prof. S.A. DESAI

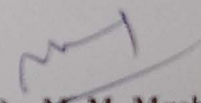
(Coordinator)



Signature of External Examiner

Name:- Dr. V. R. Bosa

Date of Examination: 27/04/18



Dr. M. M. Mushrif

(HOD, ET Dept.)



# Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

Hingna Road, Wanadongri, Nagpur - 441 110

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## Declaration by Head of Institute

I hereby declared that the data, information and support documents attached herewith are genuine and correct to my knowledge.



Dr. U. P. Waghe  
(Principal)

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