



# JCT | College of Engineering and Technology (AUTONOMOUS)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai & Accredited by NAAC 'A' Grade  
Accredited by NBA for Petrochemical, Mechanical, EEE & CSE

Pichanur, Coimbatore - 641105 | [info@jct.ac.in](mailto:info@jct.ac.in) | [www.jct.ac.in](http://www.jct.ac.in) | 0422 2636900



## CRITERION 1

**1.1.1 The institution ensures effective curriculum delivery through a well-planned and documented**

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## *Academic Schedule*

Date: 12.01.2024

# CENTRE FOR ACADEMIC COURSES

ANNA UNIVERSITY: : CHENNAI – 600 025

## ACADEMIC SCHEDULE FOR NON-AUTONOMOUS AFFILIATED COLLEGES

February 2024 – May 2024 (Even Semester)

UG (FT/PT) & PG (FT) Degree Programmes



| Sl. No. | Programme                        | Semester    | Commencement of Classes | Last working day | Commencement of Practical Examinations | Commencement of End Semester Examinations |
|---------|----------------------------------|-------------|-------------------------|------------------|----------------------------------------|-------------------------------------------|
| 1.      | B.E. / B.Tech.(Full-Time)        | VI, VIII    | 01.02.2024              | 03.05.2024**     | 06.05.2024                             | 15.05.2024                                |
| 2.      | B.Arch. (Full-Time)              | VI, VIII, X |                         |                  |                                        |                                           |
| 3.      | B.E. / B.Tech. (Part-Time)       | VI          |                         |                  |                                        |                                           |
| 4.      | M.B.A. (5 years Integrated) (FT) | VI, VIII, X |                         |                  |                                        |                                           |

RE - OPENING DAY FOR THE NEXT SEMESTER: 18.07.2024 (Thursday)

### NOTE:

1. The Theory and Practical Examination schedules will be published in due course (Practical Examinations will be conducted before the theory examinations).
2. If necessary, loss of classes due to various curricular / co-curricular activities of the department / college may be compensated by conducting classes on Saturdays.

\*\* Following Saturdays are declared as working days.

| Sl. No. | Working Days (Saturdays) | Time Table of the Week Day to be Followed |
|---------|--------------------------|-------------------------------------------|
| 1.      | 03.02.2024               | Friday                                    |
| 2.      | 10.02.2024               | Tuesday                                   |
| 3.      | 17.02.2024               | Thursday                                  |
| 4.      | 24.02.2024               | Wednesday                                 |
| 5.      | 02.03.2024               | Monday                                    |
| 6.      | 09.03.2024               | Tuesday                                   |

| Sl. No. | Working Days (Saturdays) | Time Table of the Week Day to be Followed |
|---------|--------------------------|-------------------------------------------|
| 7.      | 16.03.2024               | Wednesday                                 |
| 8.      | 23.03.2024               | Thursday                                  |
| 9.      | 30.03.2024               | Friday                                    |
| 10.     | 06.04.2024               | Monday                                    |
| 11.     | 20.04.2024               | Tuesday                                   |
| 12.     | 27.04.2024               | Wednesday                                 |

*A. Vinayini* 12/01/24  
DIRECTOR i/c  
ACADEMIC COURSES

Date: 13.07.2023



## CENTRE FOR ACADEMIC COURSES

ANNA UNIVERSITY: : CHENNAI – 600 025

### ACADEMIC SCHEDULE FOR NON-AUTONOMOUS AFFILIATED COLLEGES

July 2023 – November 2023 (ODD SEMESTER – Except Semester III)

UG / PG Programmes

| Sl. No. | Programme                  | Semester   | Commencement of Classes | Last working day | Commencement of Practical Examinations | Commencement of End Semester Examinations |
|---------|----------------------------|------------|-------------------------|------------------|----------------------------------------|-------------------------------------------|
| 1.      | B.E. / B.Tech.(Full-Time)  | V, VII     | 27.07.2023              | 17.11.2023       | 20.11.2023                             | 29.11.2023                                |
| 2.      | B.E. / B.Tech.(Part-Time)  | V, VII     |                         |                  |                                        |                                           |
| 3.      | B.Arch.(Full-Time)         | V, VII, IX |                         |                  |                                        |                                           |
| 4.      | M.B.A.(5 years Integrated) | V, VII, IX |                         |                  |                                        |                                           |

RE - OPENING DAY FOR THE NEXT SEMESTER: 22.01.2024 (Monday)

**NOTE:**

1. The Theory and Practical Examination schedules will be published in due course (Practical Examinations will be conducted before the theory examinations).
2. If necessary, loss of classes due to various curricular / co-curricular activities of the department / college may be compensated by conducting classes on Saturdays.

  
13/7/2023  
DIRECTOR  
ACADEMIC COURSES



**CENTRE FOR ACADEMIC COURSES****ANNA UNIVERSITY: : CHENNAI – 600 025****ACADEMIC SCHEDULE FOR NON-AUTONOMOUS AFFILIATED COLLEGES****March 2024 – June 2024 (Even Semester)****UG (FT / PT) & PG (FT / PT) Degree Programmes**

| Sl. No | Programme                              | Semester | Commencement of Classes | Last working day | Commencement of Practical Examinations | Commencement of End Semester Examinations |
|--------|----------------------------------------|----------|-------------------------|------------------|----------------------------------------|-------------------------------------------|
| 1.     | B.E. / B. Tech. / B. Arch. (Full-Time) | II, IV   | 13.03.2024              | 13.06.2024       | 08.07.2024                             | 15.06.2024                                |
| 2.     | B.E. / B. Tech. (Part-Time)            | II, IV   |                         |                  |                                        |                                           |
| 3.     | M.E. / M. Tech. / M. Arch.(FT)         | II, IV   |                         |                  |                                        |                                           |
| 4.     | M.B.A. (Full-Time & Part-Time)         | II, IV   |                         |                  |                                        |                                           |
| 5.     | M.B.A. (5 years Integrated)            | II, IV   |                         |                  |                                        |                                           |
| 6.     | M.C.A. (FT)                            | IV       |                         |                  |                                        |                                           |

**RE-OPENING DAY FOR UG (FT/PT) and M.B.A. (5 years Integrated) NEXT SEMESTER: 18.07.2024 (Thursday)****RE-OPENING DAY FOR M.E. / M. Tech. / M. Arch. / M.B.A.(FT / PT) NEXT SEMESTER : 12.08.2024 (Monday)**

1. Theory and Practical Examination schedules will be published in due course. (Practical Examinations will be conducted before the theory examinations).
2. If necessary, loss of classes due to various curricular / co-curricular activities of the department / college may be compensated by conducting classes on Saturdays.

**\*\* Following Saturdays are declared as working days.**

| Sl. No. | Working Days (Saturdays) | Time Table of the Week Day to be Followed |
|---------|--------------------------|-------------------------------------------|
| 1.      | 16.03.2024               | Friday                                    |
| 2.      | 23.03.2024               | Tuesday                                   |
| 3.      | 30.03.2024               | Thursday                                  |
| 4.      | 06.04.2024               | Wednesday                                 |
| 5.      | 20.04.2024               | Monday                                    |
| 6.      | 27.04.2024               | Tuesday                                   |

| Sl. No. | Working Days (Saturdays) | Time Table of the Week Day to be Followed |
|---------|--------------------------|-------------------------------------------|
| 7.      | 04.05.2024               | Wednesday                                 |
| 8.      | 11.05.2024               | Thursday                                  |
| 9.      | 18.05.2024               | Friday                                    |
| 10.     | 25.05.2024               | Monday                                    |
| 11.     | 01.06.2024               | Tuesday                                   |
| 12.     | 08.06.2024               | Wednesday                                 |

*A. Vinay* 12/01/24  
**DIRECTOR**  
**ACADEMIC COURSES**

Date: 02.09.2023



## CENTRE FOR ACADEMIC COURSES

ANNA UNIVERSITY: : CHENNAI – 600 025

### ACADEMIC SCHEDULE FOR NON-AUTONOMOUS AFFILIATED COLLEGES

**September 2023 – January 2024 (Odd Semester – Semester III)**

UG / PG (FT/PT) Degree Programmes

| Sl. No. | Programme                        | Semester | Commencement of Classes | Last working day | Commencement of Practical Examinations | Commencement of End Semester Examinations |
|---------|----------------------------------|----------|-------------------------|------------------|----------------------------------------|-------------------------------------------|
| 1.      | B.E. / B . Tech. / B. Arch. (FT) | III      | 20.09.2023              | 04.01.2024       | 05.01.2024                             | 22.01.2024                                |
| 2.      | B.E. / B. Tech. (PT)             |          |                         |                  |                                        |                                           |
| 3.      | M.E. / M. Tech. / M. Arch.(FT)   |          |                         |                  |                                        |                                           |
| 4.      | M.B.A. (Full-Time & Part-Time)   |          |                         |                  |                                        |                                           |
| 5.      | M.B.A. (5 Yrs-Integrated)        |          |                         |                  |                                        |                                           |

**RE-OPENING DAY FOR THE NEXT SEMESTER: 13.03.2024 (Wednesday)**

**NOTE:**

1. The Theory and Practical Examination schedules will be published in due course. (Practical Examinations will be conducted before the theory examinations).
2. If necessary, loss of classes due to various curricular / co-curricular activities of the department / college may be compensated by conducting classes on Saturdays.

**\*\* In order to ensure minimum no. of working days, the following Saturdays are declared as working days.**

| Sl. No. | Working Days (Saturdays) | Time Table of the Week Day to be Followed |
|---------|--------------------------|-------------------------------------------|
| 1.      | 30.09.2023               | Thursday                                  |
| 2.      | 14.10.2023               | Monday                                    |

| Sl. No. | Working Days (Saturdays) | Time Table of the Week Day to be Followed |
|---------|--------------------------|-------------------------------------------|
| 3.      | 04.11.2023               | Monday                                    |
| 4.      | 09.12.2023               | Tuesday                                   |

**DIRECTOR  
ACADEMIC COURSES**

*Handwritten signature and date: 02/09/2023*



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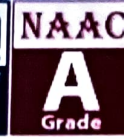


## *Academic Calendar*





# JCT



**COLLEGE OF ENGINEERING AND TECHNOLOGY**

**DEPARTMENT OF ELECTRONICS AND  
COMMUNICATION ENGINEERING**



**ACADEMIC CALENDAR  
ODD SEMESTER (2023-2024)**

# **INSTITUTE VISION**

**To emerge as a Premier Institute for developing industry ready engineers with competency, initiative and character to meet the challenges in global environment.**

## **INSTITUTE MISSION**

**To impart state-of-the-art engineering and professional education through strong theoretical basics and hands on training to students in their choice of field.**

**To serve our students by teaching them leadership, entrepreneurship, teamwork, values, quality, ethics and respect for others.**

**To provide opportunities for long-term interaction with academia and industry.**

**To create new knowledge through innovation and research.**



## **DEPARTMENT VISION**

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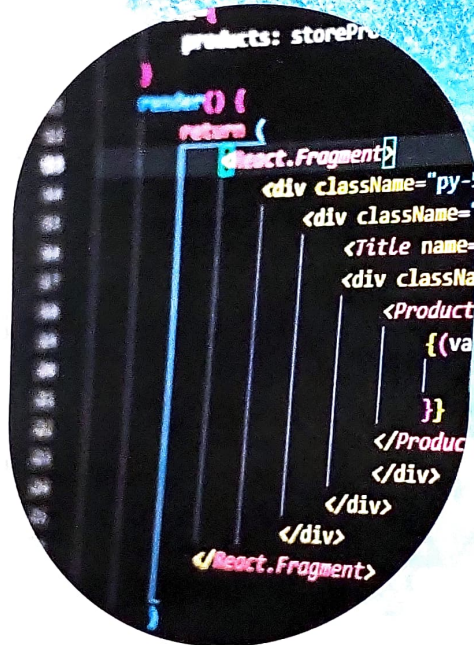
**Electronics and Communication Engineering department aims to empower the budding engineers with technological excellence to meet current and imminent challenges in creative research and employment.**

## **DEPARTMENT MISSION**

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- **To cater all necessary inputs to excel in electronics knowledge both in theory and practical. To develop leadership and entrepreneurship qualities with social and ethical values.**
- **To provide the opportunities for innovation & collaborative research with industry.**





## POGRAMME OUTCOMES

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems. 2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences. 3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations. 4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions. 5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations. 6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice. 7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. 8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice. 9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. 10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions. 11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments. 12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## PEO

1. Graduates will have the potential to become globally competent team players and leaders in the allied fields of electronics and communication engineering 2. Graduates will have the core technical skills and knowledge that will empower them to pursue lifelong learning and research 3. Graduates will deliver innovative solutions and services to address industrial and societal challenges, upholding ethical principles and social responsibility.

## PSO

1. Analyze, Design, Simulate and Integrate Electronic Circuits and Systems for given specifications.
2. Apply the technical knowledge to solve complex problems in the areas like signal processing, Communication, VLSI design and Embedded Systems.



## Academic Calendar 2023-2024 (ODD SEMESTER)

| JULY 2023          |      |              |                         | AUGUST 2023 |                    |              |                  | SEPTEMBER 2023 |      |                    |                           | OCTOBER 2023 |      |              |                    | NOVEMBER 2023 |      |              |                              |
|--------------------|------|--------------|-------------------------|-------------|--------------------|--------------|------------------|----------------|------|--------------------|---------------------------|--------------|------|--------------|--------------------|---------------|------|--------------|------------------------------|
| Date               | Days | Working Days | Details                 | Date        | Days               | Working Days | Details          | Date           | Days | Working days       | Details                   | Date         | Days | Working days | Details            | Date          | Days | Working days | Details                      |
| 1                  | Sat  |              |                         | 1           | Tue                |              |                  | 1              | Fri  |                    |                           | 1            | Sun  | 39           | HOLIDAY            | 1             | Wed  |              |                              |
| 2                  | Sun  |              |                         | 2           | Wed                |              |                  | 2              | Sat  | 16                 |                           | 2            | Mon  |              | GANDHI JAYANTI     | 2             | Thu  |              |                              |
| 3                  | Mon  |              |                         | 3           | Thu                |              |                  | 3              | Sun  | 17                 | HOLIDAY                   | 3            | Tue  | 40           |                    | 3             | Fri  |              | SEMINAR                      |
| 4                  | Tue  |              |                         | 4           | Fri                |              |                  | 4              | Mon  | 18                 |                           | 4            | Wed  | 41           |                    | 4             | Sat  | 59           |                              |
| 5                  | Wed  |              |                         | 5           | Sat                |              | WEBINAR          | 5              | Tue  | 19                 |                           | 5            | Thu  | 42           |                    | 5             | Sun  | 60           | HOLIDAY                      |
| 6                  | Thu  |              |                         | 6           | Sun                |              | HOLIDAY          | 6              | Wed  | 20                 |                           | 6            | Fri  |              |                    | 6             | Mon  | 61           |                              |
| 7                  | Fri  |              |                         | 7           | Mon                |              |                  | 7              | Thu  |                    |                           | 7            | Sat  | 43           |                    | 7             | Tue  | 62           |                              |
| 8                  | Sat  |              |                         | 8           | Tue                |              |                  | 8              | Fri  |                    | CLASS COMMITTEE MEETING I | 8            | Sun  | 44           | HOLIDAY            | 8             | Wed  | 63           |                              |
| 9                  | Sun  |              |                         | 9           | Wed                |              |                  | 9              | Sat  | 21                 |                           | 9            | Mon  | 45           |                    | 9             | Thu  | 64           |                              |
| 10                 | Mon  |              |                         | 10          | Thu                |              |                  | 10             | Sun  | 22                 | HOLIDAY                   | 10           | Tue  |              |                    | 10            | Fri  |              |                              |
| 11                 | Tue  |              |                         | 11          | Fri                |              |                  | 11             | Mon  | 23                 | SEMINAR                   | 11           | Wed  |              |                    | 11            | Sat  | 65           | HOLIDAY                      |
| 12                 | Wed  |              |                         | 12          | Sat                | 1            |                  | 12             | Tue  | 24                 | CIA TEST I                | 12           | Thu  |              |                    | 12            | Sun  | 66           | DIWALI                       |
| 13                 | Thu  |              |                         | 13          | Sun                | 2            | HOLIDAY          | 13             | Wed  | 25                 | CIA TEST I                | 13           | Fri  |              |                    | 13            | Mon  | 67           | CLASS COMMITTEE MEETING II   |
| 14                 | Fri  |              |                         | 14          | Mon                | 3            |                  | 14             | Thu  | 26                 | CIA TEST I                | 14           | Sat  | 46           |                    | 14            | Tue  | 68           |                              |
| 15                 | Sat  |              |                         | 15          | Tue                |              | INDEPENDENCE DAY | 15             | Fri  |                    |                           | 15           | Sun  | 47           | HOLIDAY            | 15            | Wed  | 69           | CIA TEST II                  |
| 16                 | Sun  |              |                         | 16          | Wed                | 4            |                  | 16             | Sat  |                    |                           | 16           | Mon  | 48           |                    | 16            | Thu  | 70           | CIA TEST II                  |
| 17                 | Mon  |              |                         | 17          | Thu                | 5            |                  | 17             | Sun  | 27                 | HOLIDAY                   | 17           | Tue  | 49           |                    | 17            | Fri  |              | CIA TEST II                  |
| 18                 | Tue  |              |                         | 18          | Fri                |              |                  | 18             | Mon  | 28                 |                           | 18           | Wed  | 50           |                    | 18            | Sat  | 71           |                              |
| 19                 | Wed  |              |                         | 19          | Sat                | 6            |                  | 19             | Tue  | 29                 | VINAYAKA CHATHURTHI       | 19           | Thu  | 51           |                    | 19            | Sun  | 72           | HOLIDAY                      |
| 20                 | Thu  |              |                         | 20          | Sun                | 7            |                  | 20             | Wed  | 30                 |                           | 20           | Fri  |              | DURGA PUJA         | 20            | Mon  | 73           |                              |
| 21                 | Fri  |              |                         | 21          | Mon                | 8            |                  | 21             | Thu  | 31                 |                           | 21           | Sat  | 52           | HOLIDAY            | 21            | Tue  | 74           |                              |
| 22                 | Sat  |              |                         | 22          | Tue                | 9            |                  | 22             | Fri  |                    |                           | 22           | Sun  | 53           | HOLIDAY            | 22            | Wed  | 75           | SEMINAR                      |
| 23                 | Sun  |              |                         | 23          | Wed                | 10           |                  | 23             | Sat  | 32                 |                           | 23           | Mon  | 54           | HOLIDAY            | 23            | Thu  |              |                              |
| 24                 | Mon  |              |                         | 24          | Thu                |              |                  | 24             | Sun  | 33                 | HOLIDAY                   | 24           | Tue  | 55           | DUSSEHRA           | 24            | Fri  |              | Commencement of End Semester |
| 25                 | Tue  |              |                         | 25          | Fri                |              |                  | 25             | Mon  | 34                 |                           | 25           | Wed  | 56           | WORKSHOP           | 25            | Sat  |              |                              |
| 26                 | Wed  |              |                         | 26          | Sat                |              |                  | 26             | Tue  | 35                 |                           | 26           | Thu  |              |                    | 26            | Sun  |              |                              |
| 27                 | Thu  | 11           | Commencement of classes | 27          | Sun                | 11           | HOLIDAY          | 27             | Wed  | 36                 |                           | 27           | Fri  |              |                    | 27            | Mon  |              |                              |
| 28                 | Fri  | 12           |                         | 28          | Mon                | 12           |                  | 28             | Thu  | 37                 | MILAD UN-NABI             | 28           | Sat  | 57           |                    | 28            | Tue  |              |                              |
| 29                 | Sat  | 13           |                         | 29          | Tue                | 13           | ONAM             | 29             | Fri  |                    |                           | 29           | Sun  | 58           | HOLIDAY            | 29            | Wed  |              |                              |
| 30                 | Sun  | 14           | HOLIDAY                 | 30          | Wed                | 14           |                  | 30             | Sat  | 38                 |                           | 30           | Mon  |              |                    | 30            | Thu  |              |                              |
| 31                 | Mon  | 15           |                         | 31          | Thu                | 15           |                  |                |      |                    |                           | 31           | Tue  |              |                    |               |      |              |                              |
| TOTAL WORKING DAYS |      |              |                         | 15          | TOTAL WORKING DAYS |              |                  |                | 23   | TOTAL WORKING DAYS |                           |              |      | 20           | TOTAL WORKING DAYS |               |      |              | 17                           |





**JCT COLLEGE OF ENGINEERING AND TECHNOLOGY**  
**PICHANUR, COIMBATORE - 641105**



**List of Government Holidays**

| <b>Month</b> | <b>Date</b> | <b>Day</b> | <b>Occasion</b>     |
|--------------|-------------|------------|---------------------|
| AUGUST       | 8/15/2023   | TUESDAY    | INDEPENDENCE DAY    |
| AUGUST       | 8/29/2023   | TUESDAY    | ONAM                |
| SEPTEMBER    | 9/19/2023   | TUESDAY    | VINAYAKA CHATHURTHI |
| SEPTEMBER    | 9/28/2023   | THURSDAY   | MILAD UN-NABI       |
| OCTOBER      | 10/2/2023   | MONDAY     | GANDHI JAYANTI      |
| OCTOBER      | 10/20/2023  | FRIDAY     | DURGA PUJA          |
| OCTOBER      | 10/24/2023  | TUESDAY    | DUSSEHRA            |
| NOVEMBER     | 11/12/2023  | SUNDAY     | DIWALI              |

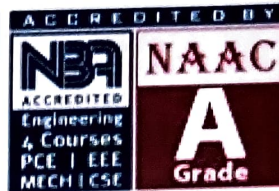
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**IMPORTANT DATES**

| Month     | Date       | Day       | Occasion                     |
|-----------|------------|-----------|------------------------------|
| JULY      | 7/27/2023  | THURSDAY  | COMMENCEMENT OF CLASSES      |
| AUGUST    | 8/5/2023   | SATURDAY  | WEBINAR                      |
| SEPTEMBER | 9/11/2023  | MONDAY    | SEMINAR                      |
| SEPTEMBER | 9/8/2023   | FRIDAY    | CLASS COMMITTEE MEETING I    |
| SEPTEMBER | 9/12/2023  | TUESDAY   | CIA TEST I                   |
| SEPTEMBER | 9/13/2023  | WEDNESDAY | CIA TEST I                   |
| SEPTEMBER | 9/14/2023  | THURSDAY  | CIA TEST I                   |
| OCTOBER   | 10/25/2023 | WEDNESDAY | WORKSHOP                     |
| NOVEMBER  | 11/3/2023  | FRIDAY    | SEMINAR                      |
| NOVEMBER  | 11/13/2023 | MONDAY    | CLASS COMMITTEE MEETING II   |
| NOVEMBER  | 11/15/2023 | WEDNESDAY | CIA TEST II                  |
| NOVEMBER  | 11/16/2023 | THURSDAY  | CIA TEST II                  |
| NOVEMBER  | 11/17/2023 | FRIDAY    | CIA TEST II                  |
| NOVEMBER  | 11/22/2023 | WEDNESDAY | SEMINAR                      |
| NOVEMBER  | 11/24/2023 | FRIDAY    | COMMENCEMENT OF END SEMESTER |



# JCT



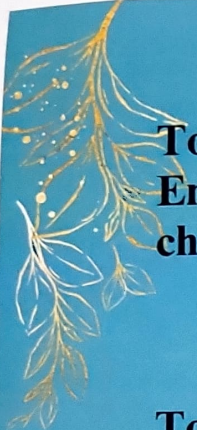
**COLLEGE OF ENGINEERING AND TECHNOLOGY**

**DEPARTMENT OF ELECTRONICS AND  
COMMUNICATION ENGINEERING**



**ACADEMIC CALENDAR  
EVEN SEMESTER (2023-2024)**





## **INSTITUTE VISION**

**To emerge as a Premier Institute for developing industry ready Engineers with competency, initiative and character to meet the challenges in global environment.**

## **INSTITUTE MISSION**

**To impart state-of-the-art engineering and professional education through strong theoretical basics and hands on training to students in their choice of field.**

**To serve our students by teaching them leadership, entrepreneurship, teamwork, values, quality, ethics and respect for others.**

**To provide opportunities for long-term interaction with academia and industry.**

**To create new knowledge through innovation and research.**



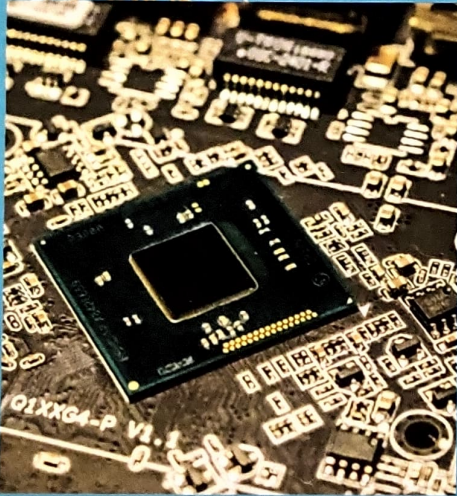


## DEPARTMENT VISION

Electronics and Communication Engineering department aims to empower the budding engineers with technological excellence to meet current and imminent challenges in creative research and employment.

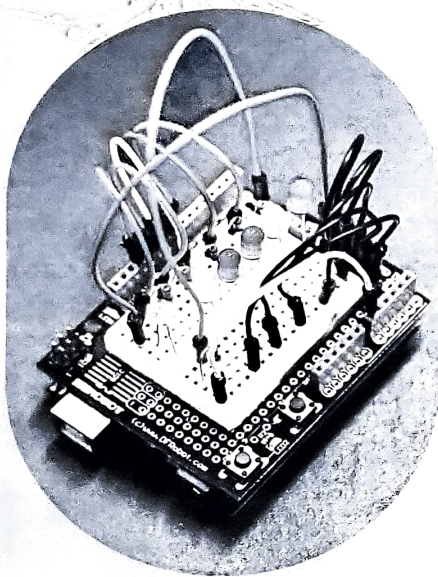
## DEPARTMENT MISSION

- To cater all necessary inputs to excel in electronics knowledge both in theory and practical.
- To develop leadership and entrepreneurship qualities with social and ethical values.
- To provide the opportunities for innovation & collaborative research with industry





# POGRAMME OUTCOMES



1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## PEO

1. Graduates will have the potential to become globally competent team players and leaders in the allied fields of electronics and communication engineering
2. Graduates will have the core technical skills and knowledge that will empower them to pursue lifelong learning and research
3. Graduates will deliver innovative solutions and services to address industrial and societal challenges, upholding ethical principles and social responsibility.

## PSO

1. Analyze, Design, Simulate and Integrate Electronic Circuits and Systems for given specifications.
2. Apply the technical knowledge to solve complex problems in the areas like signal processing, Communication, VLSI design and Embedded Systems.



## Academic Calendar 2023-2024 (EVEN SEMESTER)

| FEBRUARY 2024      |      |              |                                            | MARCH 2024 |                    |              |                                                                                     | APRIL 2024 |      |                    |                                                            | MAY 2024 |      |              |                                                    | JUNE 2024 |      |              |                                              |
|--------------------|------|--------------|--------------------------------------------|------------|--------------------|--------------|-------------------------------------------------------------------------------------|------------|------|--------------------|------------------------------------------------------------|----------|------|--------------|----------------------------------------------------|-----------|------|--------------|----------------------------------------------|
| Date               | Days | Working days | Details                                    | Date       | Days               | Working days | Details                                                                             | Date       | Days | Working days       | Details                                                    | Date     | Days | Working days | Details                                            | Date      | Days | Working days | Details                                      |
| 1                  | Thu  | 1            | Third & Final year Commencement of classes | 1          | Fri                | 26           | Third & Final Year Continuous Internal Assessment-1                                 | 1          | Mon  | 51                 | CLASS COMMITTEE MEETING -2                                 | 1        | Wed  |              | MAY DAY                                            | 1         | Sat  | 51           |                                              |
| 2                  | Fri  | 2            |                                            | 2          | Sat                | 27           | Third Year Continuous Internal Assessment-1                                         | 2          | Tue  | 52                 |                                                            | 2        | Thu  | 75           | Third Year Continuous Internal Assessment-1        | 2         | Sun  | 52           | SUNDAY HOLIDAY                               |
| 3                  | Sat  | 3            | Prize-Buy Order-PROJECT EXHIBIT REVIEW     | 3          | Sun                |              | SUNDAY HOLIDAY                                                                      | 3          | Wed  | 53                 | 3 PIPABLES-TECHNICAL SYMPOSIUM                             | 3        | Fri  | 76           | Last Working day for Third and Final Year Seminars | 3         | Mon  | 53           | CLASS COMMITTEE MEETING -3                   |
| 4                  | Sun  |              | SUNDAY HOLIDAY                             | 4          | Mon                | 28           | Third Year Continuous Internal Assessment-1 (COMMENCEMENT OF CLASSES - SECOND YEAR) | 4          | Thu  | 54                 | Final Year Continuous Internal Assessment-1                | 4        | Sat  |              |                                                    | 4         | Tue  | 54           |                                              |
| 5                  | Mon  | 4            |                                            | 5          | Tue                | 29           |                                                                                     | 5          | Fri  | 55                 |                                                            | 5        | Sun  |              | SUNDAY HOLIDAY                                     | 5         | Wed  | 55           | Second Year Continuous Internal Assessment-2 |
| 6                  | Tue  | 5            |                                            | 6          | Wed                | 30           |                                                                                     | 6          | Sat  | 56                 | Monday -Buy Order-                                         | 6        | Mon  |              | Commencement of Practical Examinations             | 6         | Thu  | 56           | Second Year Continuous Internal Assessment-2 |
| 7                  | Wed  | 6            |                                            | 7          | Thu                | 31           |                                                                                     | 7          | Sun  |                    | SUNDAY HOLIDAY                                             | 7        | Tue  |              |                                                    | 7         | Fri  |              | Second Year Continuous Internal Assessment-2 |
| 8                  | Thu  | 7            |                                            | 8          | Fri                | 32           |                                                                                     | 8          | Mon  | 57                 |                                                            | 8        | Wed  |              |                                                    | 8         | Sat  | 57           |                                              |
| 9                  | Fri  | 8            |                                            | 9          | Sat                | 33           |                                                                                     | 9          | Tue  |                    | HOLIDAY- Tulu New Year Day                                 | 9        | Thu  |              |                                                    | 9         | Sun  |              | SUNDAY HOLIDAY                               |
| 10                 | Sat  | 9            | Tuesday-Buy Order                          | 10         | Sun                |              | SUNDAY HOLIDAY                                                                      | 10         | Wed  | 58                 |                                                            | 10       | Fri  |              |                                                    | 10        | Mon  | 58           |                                              |
| 11                 | Sun  |              | SUNDAY HOLIDAY                             | 11         | Mon                | 34           |                                                                                     | 11         | Thu  |                    | HOLIDAY- Ramadan (Rabi Fari)                               | 11       | Sat  |              |                                                    | 11        | Tue  |              |                                              |
| 12                 | Mon  | 10           |                                            | 12         | Tue                | 35           | Sending Report to Parents-Clk 1                                                     | 12         | Fri  | 59                 |                                                            | 12       | Sun  |              | SUNDAY HOLIDAY                                     | 12        | Wed  | 59           |                                              |
| 13                 | Tue  | 11           |                                            | 13         | Wed                | 36           |                                                                                     | 13         | Sat  | 60                 |                                                            | 13       | Mon  |              |                                                    | 13        | Thu  | 60           | LAST WORKING DAY FOR SECOND YEAR             |
| 14                 | Wed  | 12           |                                            | 14         | Thu                | 37           | SEMINAR ON VLSE                                                                     | 14         | Sun  |                    | HOLIDAY-Tamil New Years Day and Dr.B.R.Ambabedkar Birthday | 14       | Tue  |              |                                                    | 14        | Fri  |              |                                              |
| 15                 | Thu  | 13           | Guest Lecture                              | 15         | Fri                | 38           |                                                                                     | 15         | Mon  | 61                 |                                                            | 15       | Wed  |              | Commencement of End Semester Examinations          | 15        | Sat  | 61           |                                              |
| 16                 | Fri  | 14           |                                            | 16         | Sat                | 39           | Wednesday -Buy Order                                                                | 16         | Tue  | 62                 |                                                            | 16       | Thu  |              |                                                    | 16        | Sun  | 62           | SUNDAY HOLIDAY                               |
| 17                 | Sat  | 15           | Thursday-Buy Order                         | 17         | Sun                |              | SUNDAY HOLIDAY                                                                      | 17         | Wed  | 63                 |                                                            | 17       | Fri  |              |                                                    | 17        | Mon  | 63           | BAKED HOLIDAY                                |
| 18                 | Sun  |              | SUNDAY HOLIDAY                             | 18         | Mon                | 40           | Friday -Buy Order-CLASS COMMITTEE MEETING -2                                        | 18         | Thu  | 64                 |                                                            | 18       | Sat  |              |                                                    | 18        | Tue  | 64           |                                              |
| 19                 | Mon  | 16           |                                            | 19         | Tue                | 41           |                                                                                     | 19         | Fri  | 65                 | BOT WORKSHOP                                               | 19       | Sun  |              | SUNDAY HOLIDAY                                     | 19        | Wed  | 65           |                                              |
| 20                 | Tue  | 17           |                                            | 20         | Wed                | 42           |                                                                                     | 20         | Sat  | 66                 | Thursday -Buy Order                                        | 20       | Mon  |              |                                                    | 20        | Thu  | 66           |                                              |
| 21                 | Wed  | 18           |                                            | 21         | Thu                | 43           | Third & Final Year Continuous Internal Assessment-2                                 | 21         | Sun  |                    | SUNDAY HOLIDAY                                             | 21       | Tue  |              |                                                    | 21        | Fri  |              |                                              |
| 22                 | Thu  | 19           | SEMINAR ON SIGNAL PROCESSING               | 22         | Fri                | 44           | Third Year Continuous Internal Assessment-2                                         | 22         | Mon  | 67                 |                                                            | 22       | Wed  |              |                                                    | 22        | Sat  | 67           |                                              |
| 23                 | Fri  | 20           |                                            | 23         | Sat                | 45           | Third Year Continuous Internal Assessment-2                                         | 23         | Tue  | 68                 |                                                            | 23       | Thu  |              |                                                    | 23        | Sun  | 68           | SUNDAY HOLIDAY                               |
| 24                 | Sat  | 21           |                                            | 24         | Sun                |              | HOLIDAY-Makaver Jayanti                                                             | 24         | Wed  | 69                 | Sending Report to Parents-Clk 2                            | 24       | Fri  |              |                                                    | 24        | Mon  | 69           |                                              |
| 25                 | Sun  |              | SUNDAY HOLIDAY                             | 25         | Mon                | 46           | SEMINAR ON WEARABLE TECHNOLOGY                                                      | 25         | Thu  | 70                 |                                                            | 25       | Sat  |              |                                                    | 25        | Tue  | 70           |                                              |
| 26                 | Mon  | 22           |                                            | 26         | Tue                | 47           |                                                                                     | 26         | Fri  | 71                 |                                                            | 26       | Sun  |              | SUNDAY HOLIDAY                                     | 26        | Wed  | 71           |                                              |
| 27                 | Tue  | 23           |                                            | 27         | WED                | 48           |                                                                                     | 27         | Sat  | 72                 | Wednesday -Buy Order-CLASS COMMITTEE MEETING -1            | 27       | Mon  |              |                                                    | 27        | Thu  | 72           |                                              |
| 28                 | Wed  | 24           | CLASS COMMITTEE MEETING -1                 | 28         | Thu                | 49           |                                                                                     | 28         | Sun  |                    | SUNDAY HOLIDAY                                             | 28       | Tue  |              |                                                    | 28        | Fri  |              |                                              |
| 29                 | Thu  | 25           |                                            | 29         | FRI                |              | HOLIDAY-Good Friday                                                                 | 29         | Mon  | 73                 |                                                            | 29       | Wed  |              |                                                    | 29        | Sat  | 73           |                                              |
|                    |      |              |                                            | 30         | Sat                | 50           |                                                                                     | 30         | Tue  | 74                 | Third Year Continuous Internal Assessment-1                | 30       | Thu  |              |                                                    | 30        | Sun  | 74           | SUNDAY HOLIDAY                               |
|                    |      |              |                                            | 31         | Sun                |              | SUNDAY HOLIDAY                                                                      |            |      |                    |                                                            | 31       | Fri  |              |                                                    |           |      |              |                                              |
| TOTAL WORKING DAYS |      |              |                                            | 25         | TOTAL WORKING DAYS |              |                                                                                     |            | 28   | TOTAL WORKING DAYS |                                                            |          |      | 24           | TOTAL WORKING DAYS                                 |           |      |              | 2                                            |

**JCT****JCT COLLEGE OF ENGINEERING AND TECHNOLOGY  
PICHANUR, COIMBATORE – 641105****List of Government Holidays**

| Month | Date      | Day       | Occasion             |
|-------|-----------|-----------|----------------------|
| MARCH | 3/29/2024 | FRIDAY    | GOOD FRIDAY          |
| APRIL | 4/9/2024  | TUESDAY   | TELUNGU NEW YEAR DAY |
| APRIL | 4/11/2024 | THURSDAY  | RAMZAN               |
| APRIL | 4/14/2024 | SUNDAY    | TAMIL NEW YEAR       |
| APRIL | 4/21/2024 | SUNDAY    | MAHAVEER JAYANTHI    |
| MAY   | 5/1/2024  | WEDNESDAY | MAY DAY              |
| JUNE  | 6/17/2024 | MONDAY    | BAKRID               |

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## IMPORTANT DATES

| Month    | Date        | Day       | Occasion                                            |
|----------|-------------|-----------|-----------------------------------------------------|
| FEBRUARY | 2/1/2024    | THURSDAY  | THIRD & FINAL YEAR COMMENCEMENT OF CLASSES          |
| MARCH    | 3/4/2024    | MONDAY    | SECOND YEAR COMMENCEMENT OF CLASSES                 |
| FEBRUARY | 2/3/2024    | SATURDAY  | PROJECT REVIEW                                      |
| FEBRUARY | 2/15/2024   | THURSDAY  | GUEST LECTURE                                       |
| FEBRUARY | 2/22/2024   | THURSDAY  | SEMINAR                                             |
| FEBRUARY | 2/28/2024   | WEDNESDAY | CLASS COMMITTEE MEETING -1                          |
| MARCH    | 3/1/2024    | FRIDAY    | THIRD & FINAL YEAR CONTINUOUS INTERNAL ASSESSMENT I |
| MARCH    | 3/2/2024    | SATURDAY  | THIRD YEAR CONTINUOUS INTERNAL ASSESSMENT I         |
| MARCH    | 3/4/2024    | MONDAY    | THIRD & FINAL YEAR CONTINUOUS INTERNAL ASSESSMENT I |
| MARCH    | 3/14/2024   | THURSDAY  | SEMINAR                                             |
| MARCH    | 3/18/2024   | MONDAY    | CLASS COMMITTEE MEETING -2                          |
| MARCH    | 3/21/2024   | THURSDAY  | THIRD YEAR-CONTINUOUS INTERNAL ASSESSMENT-2         |
| MARCH    | 3/22/2024   | FRIDAY    | THIRD YEAR-CONTINUOUS INTERNAL ASSESSMENT-2         |
| MARCH    | 3/23/2024   | SATURDAY  | THIRD & FINAL YEAR-CONTINUOUS INTERNAL ASSESSMENT-2 |
| MARCH    | 3/25/2024   | MONDAY    | SEMINAR                                             |
| APRIL    | 4/1/2024    | MONDAY    | CLASS COMMITTEE MEETING -3                          |
| APRIL    | 4/3/2024    | WEDNESDAY | J FINAGLES-TECHNICAL SYMPOSIUM                      |
| APRIL    | 04--04-2024 | THURSDAY  | FINAL YEAR CONTINUOUS INTERNAL ASSESSMENT-3         |
| APRIL    | 4/19/2024   | FRIDAY    | IOT WORKSHOP                                        |
| APRIL    | 4/27/2024   | SATURDAY  | CLASS COMMITTEE MEETING -I( 2nd YEAR)               |
| APRIL    | 4/29/2024   | MONDAY    | SECOND YEAR CONTINUOUS INTERNAL ASSESSMENT-I        |
| APRIL    | 4/30/2024   | TUESDAY   | SECOND YEAR CONTINUOUS INTERNAL ASSESSMENT-I        |
| MAY      | 5/2/2024    | THURSDAY  | SECOND YEAR CONTINUOUS INTERNAL ASSESSMENT-I        |
| MAY      | 5/3/2024    | FRIDAY    | LAST WORKING DAY FOR THIRD & FINAL YEAR STUDENTS    |
| MAY      | 5/6/2024    | MONDAY    | COMMENCEMENT OF PRACTICAL EXAMINATION               |
| MAY      | 5/15/2024   | WEDNESDAY | COMMENCEMENT OF END SEMESTER EXAMINATION            |
| JUNE     | 6/3/2024    | MONDAY    | CLASS COMMITTEE MEETING -II( 2nd YEAR)              |
| JUNE     | 6/5/2024    | WEDNESDAY | SECOND YEAR CONTINUOUS INTERNAL ASSESSMENT-II       |
| JUNE     | 6/6/2024    | THURSDAY  | SECOND YEAR CONTINUOUS INTERNAL ASSESSMENT-II       |
| JUNE     | 6/7/2024    | FRIDAY    | SECOND YEAR CONTINUOUS INTERNAL ASSESSMENT-II       |
| JUNE     | 6/13/2024   | THURSDAY  | LAST WORKING DAY FOR THIRD YEAR STUDENTS            |



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# *Selection of Elective Courses*

**Elective Selection for Nov./ Dec. 2024 Examinations****Year: III****Semester: V**

| S. no | Subject Code | Subject Name                                   |
|-------|--------------|------------------------------------------------|
| 1     | EE3014       | Power Electronics for Renewable Energy Systems |
| 2     | EE3020       | Smart System Automation                        |
| 3     | EE3028       | Design of Electric Vehicle Charging System     |
| 4     | MX3084       | Disaster Risk Reduction and Management         |

**Year: IV****Semester: VII**

| S. no | Subject Code | Subject Name                                   |
|-------|--------------|------------------------------------------------|
| 1     | GE3751       | Principles Of Management                       |
| 2     | OCS351       | Artificial Intelligence And Machine Learning   |
| 3     | OML353       | Nanomaterials and Applications                 |
| 4     | OHS351       | English for Competitive Examinations           |
| 5     | EE3014       | Power Electronics For Renewable Energy Systems |

  
**HoD / EEE**  
**Principal**



**Department of Electrical and Electronics Engineering****Elective Selection For NOV./DEC. 2024 Examinations****PG: Power Electronics & Drives****Semester: III**

| S.no | Subject Code | Subject Name                  |
|------|--------------|-------------------------------|
| 1    | PX4012       | Renewable Energy Technology   |
| 2    | PX4013       | Wind Energy Conversion System |
| 3    | OBA433       | Intellectual Property Rights  |

  
**HOD/ EEE**  
**Principal**



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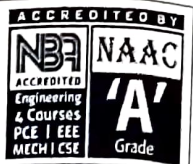
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# *Subject Preference & Allocation*

**JCT**

College of Engineering and Technology

**JCT COLLEGE OF ENGINEERING AND TECHNOLOGY**  
PICHANUR, COIMBATORE - 641105**SUBJECT PREFERENCE BY FACULTY**

Note: Give Preference for 3 Theory and 3 Practical subjects

| Faculty Name: <u>M. Chandrasekaran</u> Designation: <u>AP</u> PG Specialization: <u>M.E</u> / <u>A-E</u> |                   |                                           |                      |
|----------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------|----------------------|
| Areas of Specialization / Interest:                                                                      |                   |                                           |                      |
| S.No.                                                                                                    | Class             | Subject                                   | No. of Times Handled |
| T1.                                                                                                      | <u>III - Year</u> | <u>Transmission Lines and RF systems</u>  | <u>3</u>             |
| T2.                                                                                                      | <u>IV - Year</u>  | <u>Antennas and Microwave Engineering</u> | <u>3</u>             |
| T3.                                                                                                      | <u>II - Year</u>  | <u>Digital system design</u>              | <u>2</u>             |
| L1.                                                                                                      | <u>II - Year</u>  | <u>Electronic Devices Lab</u>             | <u>2</u>             |
| L2.                                                                                                      | <u>II - Year</u>  | <u>DPCo Lab</u>                           | <u>1</u>             |
| L3.                                                                                                      | <u>IV - Year</u>  | <u>Embedded Lab</u>                       | <u>-</u>             |
| Allotted Subjects :                                                                                      |                   |                                           |                      |
|                                                                                                          | <u>III - ECE</u>  | <u>Transmission Lines and RF Systems</u>  |                      |
|                                                                                                          | <u>IV - ECE</u>   | <u>Antenna and Microwave Engineering</u>  |                      |
|                                                                                                          | <u>IV - ECE</u>   | <u>Embedded LAB</u>                       |                      |
| Signature: <u>[Signature]</u>                                                                            |                   |                                           |                      |

**SUBJECT PREFERENCE BY FACULTY**

| Faculty Name: <u>K. Babu</u> Designation: <u>AP</u> PG Specialization: |                  |                                                      |                      |
|------------------------------------------------------------------------|------------------|------------------------------------------------------|----------------------|
| Areas of Specialization / Interest:                                    |                  |                                                      |                      |
| S.No.                                                                  | Class            | Subject                                              | No. of Times Handled |
| T1.                                                                    | <u>II - Year</u> | <u>Digital principles and computer organizations</u> | <u>1</u>             |
| T2.                                                                    | <u>IV - Year</u> | <u>Hospital Management</u>                           | <u>1</u>             |
| T3.                                                                    |                  |                                                      |                      |
| L1.                                                                    | <u>II - Year</u> | <u>DPCo Lab</u>                                      | <u>1</u>             |
| L2.                                                                    |                  |                                                      |                      |
| L3.                                                                    |                  |                                                      |                      |
| Allotted Subjects :                                                    |                  |                                                      |                      |
|                                                                        | <u>III ECE</u>   | <u>Wearable Devices</u>                              |                      |
|                                                                        | <u>II AIDS-B</u> | <u>Digital principles and computer Organizations</u> |                      |
|                                                                        | <u>II AIDS-A</u> | <u>Digital principles and Computer Organizations</u> |                      |
|                                                                        | <u>II ECE</u>    | <u>Digital System Design Integrated Lab</u>          |                      |
| Signature: <u>[Signature]</u>                                          |                  |                                                      |                      |



**SUBJECT PREFERENCE BY FACULTY**

Note: Give Preference for 3 Theory and 3 Practical subjects

Faculty Name: Thahreen Thahir Designation: AP PG Specialization: M.E. - VLSI

Areas of Specialization / Interest:

| S.No. | Class             | Subject                                   | No. of Times Handled |
|-------|-------------------|-------------------------------------------|----------------------|
| T1.   | <u>II - Year</u>  | <u>Digital System Design</u>              | <u>1</u>             |
| T2.   | <u>III - Year</u> | <u>VLSI Wearable Devices</u>              | <u>2</u>             |
| T3.   | <u>IV Year</u>    | <u>Adhoc and wireless sensor networks</u> | <u>3</u>             |
| L1.   | <u>II - Year</u>  | <u>Digital Lab</u>                        |                      |
| L2.   | <u>IV - Year</u>  | <u>VLSI Lab</u>                           |                      |
| L3.   |                   |                                           |                      |

Allotted Subjects :

|                  |                                           |  |
|------------------|-------------------------------------------|--|
| <u>III - ECE</u> | <u>Digital System Design</u>              |  |
| <u>IV - ECE</u>  | <u>Adhoc and Wireless Sensor Networks</u> |  |
| <u>II - PG</u>   | <u>VLSI Signal Processing</u>             |  |
|                  |                                           |  |

Signature: [Signature]

**SUBJECT PREFERENCE BY FACULTY**

Faculty Name: M. Shobana Designation: AP PG Specialization: ME VLSI

Areas of Specialization / Interest:

| S.No. | Class             | Subject                        | No. of Times Handled |
|-------|-------------------|--------------------------------|----------------------|
| T1.   | <u>III - Year</u> | <u>Satellite Communication</u> | <u>2</u>             |
| T2.   | <u>II Year</u>    | <u>Digital System Design</u>   | <u>2</u>             |
| T3.   | <u>III - Year</u> | <u>Wireless communication</u>  | <u>1</u>             |
| L1.   |                   |                                |                      |
| L2.   |                   |                                |                      |
| L3.   |                   |                                |                      |

Allotted Subjects :

|                  |                                            |  |
|------------------|--------------------------------------------|--|
| <u>III - ECE</u> | <u>Satellite Communication</u>             |  |
| <u>II - PG</u>   | <u>CAD for VLSI Design</u>                 |  |
| <u>IV - ECE</u>  | <u>VLSI LAB</u>                            |  |
| <u>II - ECE</u>  | <u>Electronics Devices and Circuit LAB</u> |  |

Signature: [Signature]

## ACADEMIC YEAR: 2023-24

Name of the Faculty : Babu.k  
Designation : Assistant Professor  
Experience : 6 year  
Date : 4-12-2023

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## ACADEMIC YEAR: 2023-24

## COURSE PREFERENCE FORM

Name of the Faculty : Mohana Priya.S  
Designation : Assistant Professor  
Experience : 2 Year  
Date : 4.12.2023

Date

: 4.12.2023

| Theory Courses                                                                                              |             |                                          |          |            |                      | Courses (Theory and Practical) allotted by HoD                                                           |                                            |
|-------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------|----------|------------|----------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------|
| S. No.                                                                                                      | Course Code | Course Name                              | Semester | Department | No. of Times Handled | Course code                                                                                              | Name of the Course                         |
| 1.                                                                                                          | EC3492      | Digital Signal Processing                | 04       | ECE        | 1                    |                                                                                                          | Artificial Intelligence & Machine Learning |
| 2.                                                                                                          | EC3251      | Circuit Analysis                         | 02       | ECE        | 2                    |                                                                                                          |                                            |
|                                                                                                             |             |                                          |          |            |                      |                                                                                                          |                                            |
|                                                                                                             |             |                                          |          |            |                      |                                                                                                          |                                            |
|                                                                                                             |             |                                          |          |            |                      |                                                                                                          |                                            |
|                                                                                                             |             |                                          |          |            |                      |                                                                                                          |                                            |
|                                                                                                             |             |                                          |          |            |                      |                                                                                                          |                                            |
| Practical Courses                                                                                           |             |                                          |          |            |                      |                                                                                                          |                                            |
| 1.                                                                                                          | EC3492      | Digital Signal Processing <sup>lab</sup> | 04       | ECE        | 1                    | EC3492                                                                                                   | Digital signal Processing Lab              |
| 2.                                                                                                          | EC3271      | Circuit Analysis lab                     | 02       | ECE        | 2                    |                                                                                                          | Project work                               |
|                                                                                                             |             |                                          |          |            |                      |                                                                                                          |                                            |
|                                                                                                             |             |                                          |          |            |                      |                                                                                                          |                                            |
| Signature of the Faculty:  |             |                                          |          |            |                      | Signature of the HoD  |                                            |





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## *Class Timetable*

# JCT

College of Engineering and Technology

## JCT COLLEGE OF ENGINEERING AND TECHNOLOGY Pichanur, Coimbatore - 641 105



### CLASS TIME TABLE Department of food technology (WITH EFFECT FROM 27.07.2023)

REV. No : 01  
Lecture Hall: F2CR2

Academic Year: 2023-2024

Class: III FT

Semester: 05

| Academic Year: 2025-2026 |                |             | Class: XII P1 |                | Semester: 05 |             |                |             |             |
|--------------------------|----------------|-------------|---------------|----------------|--------------|-------------|----------------|-------------|-------------|
| Period/Time              | I              | II          | BREAK         | III            | IV           | LUNCH BREAK | V              | VI          | VII         |
| Day                      | 9.10-10.05     | 10.05-10.55 |               | 11.15-12.05    | 12.05-12.55  |             | 01.45-02.35    | 02.35-03.25 | 03.25-04.15 |
| Monday                   | FPP            | CT          |               | FA             | FA           |             | FPP LAB        |             |             |
| Tuesday                  | IMMP           | FA          |               | FPP            | DM           |             | FA LAB         |             |             |
| Wednesday                | CT             | FA          |               | IMMP           | FPP          |             | LIBRARY        | DM          | MENTOR      |
| Thursday                 | FA             | DM          |               | IMMP           | CT           |             | MENTOR         | SEMINAR     |             |
| Friday                   | DM             | FPP         |               | CT             | IMMP         |             | PROJECT        |             |             |
| Saturday                 | NAAN MUDHALVAN |             |               | NAAN MUDHALVAN |              |             | NAAN MUDHALVAN |             |             |

| Course Code            | Name of the Course                      | Faculty In-Charge    | Course Code              | Name of the Course                       | Faculty In-Charge    |
|------------------------|-----------------------------------------|----------------------|--------------------------|------------------------------------------|----------------------|
| FD3501                 | FOOD PROCESS AND PRESERVATION (FPP)     | Mrs. S. M. VAISHNAVI | FD3511                   | FOOD PROCESS AND PRESERVATION LABORATORY | Mrs. S. M. VAISHNAVI |
| FD3502                 | FOOD ANALYSIS (FA)                      | Ms. J. PRIYANGA      | FD3512                   | FOOD ANALYSIS LABORATORY                 | Ms. J. PRIYANGA      |
| FD3005                 | CHEESE TECHNOLOGY (CT)                  | Ms. S. INDU          | MX3084                   | DISASTER MANAGEMENT                      | Mr. SETTU            |
| FD3015                 | INTRODUCTION TO MEAT MARINE AND POULTRY | Dr. M. INDUMATHI     |                          | LIBRARY                                  | Ms. S. INDU          |
| Class Advisor & Mentor |                                         |                      | Students Register Number |                                          |                      |
| Mrs. S. M. VAISHNAVI   |                                         |                      | 720921218001- 31         |                                          |                      |
| Ms. S. INDU            |                                         |                      | 720921218033- 53         |                                          |                      |

Time Table In-charge

HOD

Time Table Coordinator

Principal

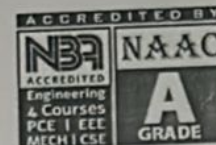


# JCT

College of Engineering and Technology

**JCT COLLEGE OF ENGINEERING AND TECHNOLOGY**

**Pichanur, Coimbatore - 641 105**



**CLASS TIME TABLE**  
**Department of food technology**  
(WITH EFFECT FROM 20.09 .2023)

**Academic Year: 2023-2024**

**Class: II FT**

**Semester: 03**

REV. NO : 01  
**Lecture Hall: F2CR3**

| Period/Time |  |  | I              |  | II          |  | BREAK | III            |  | IV          |  | LUNCH BREAK | V              |  | VI          |  | VII         |  |
|-------------|--|--|----------------|--|-------------|--|-------|----------------|--|-------------|--|-------------|----------------|--|-------------|--|-------------|--|
| Day         |  |  | 9.10-10.05     |  | 10.05-10.55 |  |       | 11.15-12.05    |  | 12.05-12.55 |  |             | 01.45-02.35    |  | 02.35-03.25 |  | 03.25-04.15 |  |
| Monday      |  |  | FM             |  | TPDE        |  |       | FMMO           |  | FC          |  |             | FM LAB         |  |             |  |             |  |
| Tuesday     |  |  | PH             |  | FM          |  |       | FPC            |  | LIBRARY     |  |             | PH             |  | TPDE        |  | FC          |  |
| Wednesday   |  |  | FMMO           |  | PH          |  |       | FM             |  | MENTOR      |  |             | FPC            |  | FM          |  | TPDE        |  |
| Thursday    |  |  | TPDE           |  | TPDE        |  |       | FC             |  | FMMO        |  |             | FPC            |  | SEMINAR     |  | FM          |  |
| Friday      |  |  | FC             |  | FPC         |  |       | PH             |  | TPDE        |  |             | FC LAB         |  |             |  |             |  |
| Saturday    |  |  | NAAN MUDHALVAN |  |             |  |       | NAAN MUDHALVAN |  |             |  |             | NAAN MUDHALVAN |  |             |  |             |  |

| Course Code | Name of the Course                                   | Faculty In-Charge  | Course Code | Name of the Course            | Faculty In-Charge |
|-------------|------------------------------------------------------|--------------------|-------------|-------------------------------|-------------------|
| MA3351      | TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS (TPDE) | Mr. RAMKUMAR       | FD3311      | FOOD CHEMISTRY LAB            | Mr. DHAYALAN      |
| FD3301      | FLUID MECHANICS AND MECHANICAL OPERATIONS (FMMO)     | Mr. R. MAGENDRAN   | FD3312      | FOOD MICROBIOLOGY LAB         | Ms. E. NIVETHA    |
| FD3302      | FOOD CHEMISTRY (FC)                                  | Mr. DHAYALAN       | FD3305      | POST HARVEST ENGINEERING (PH) |                   |
| FD3303      | FOOD MICROBIOLOGY (FM)                               | Ms. E. NIVETHA     |             | LIBRARY                       | PRIYANGA J        |
| FD3304      | FOOD PROCESS CALCULATIONS (FPC)                      | Dr. P. BALAMURUGAN |             |                               |                   |

**Class Advisor & Mentor**

PRIYANGA J

**Students Register Number**

22FTR001-22FTR036

22FTR037- 075

**Time Table In-charge**

**HOD**

**Time Table Coordinator**

**Principal**





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## ***Department Meeting***

### ***Minutes***

| Name of the Meeting: HOD Meeting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                | Ref.No:ECE/DM/29/07/23 |                   |         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------|---------|
| Venue: DSP LAB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                | Date: 29/07/23         |                   |         |
| <b><u>Chair Person:</u></b><br><b><u>Dr.V.J.Arulkarthick (HOD/ECE)</u></b><br><b><u>Members present:</u></b><br>1) Prof.Vedha Vinodha.D (AP/ECE) <i>Vedha</i><br>2) Prof.Chandrasekaran.M (AP/ECE) <i>Chandrasekaran</i><br>3) Prof.Renswick.S (AP/ECE) <i>Renswick</i><br>4) Prof.Thahseen Thahir (AP/ECE) <i>Thahseen</i><br>5) Prof.Babu.K (AP/ECE) <i>Babu</i><br>6) Prof.Shabana.M (AP/ECE) <i>Shabana</i><br>7) Prof.Poornima.R (AP/ECE) <i>Poornima</i><br>8) Prof.Mohanapriya.S (AP/ECE) <i>Mohanapriya</i><br>9) Prof.Sindhu.A (AP/ECE) <i>Sindhu</i> |                                                                                                                                |                        |                   |         |
| Sl. No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Points Discussed                                                                                                               | Target Date            | Responsibility    | Remarks |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | The institute's vision, mission, department's vision, mission and program's PEO and PSO were discussed.                        | -                      | All staff members | -       |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | After Lecture hours within 30 minutes attendance and notes of lesson must be entered in ERP and it must match in log book also | -                      | All staff members |         |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | In course file lecture notes must filed and for each unit there must be 9 bunches of notes                                     | -                      | All staff members | -       |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | All the class advisors were asked to call their wards regarding absence of their wards during working days.                    | -                      | Class advisors    | -       |

|                             |                                                                                                                                                                             |             |                            |   |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------|---|
| 5                           | Students are asked to pay all their fees before last date                                                                                                                   | -           | All Mentors                | - |
| 6                           | Attendance percentage for II, III & Final year must be displayed in the notice board                                                                                        | -           | All Mentors                | - |
| 7.                          | Long absentees list must be informed to HOD                                                                                                                                 | -           | All Mentors                | - |
| 8.                          | Mentoring of students and counseling details must be entered in mentor record                                                                                               | -           | All mentors                | - |
| 9.                          | Students must maintain 80% of attendance. If they have got less than 80% no function, Industrial Visit will be entertained.                                                 | -           | All Faculty Members        | - |
| 10.                         | Funding Proposals must be submitted to Anna University AICTE etc., for FDP, Seminar, Conference, Workshop, Installation of new research Labs, research funded project etc., | -           | HOD<br>Mr.Chandrasekaran.M | - |
| <b>Copy to: 1.PRINCIPAL</b> |                                                                                                                                                                             | Prepared by | Mrs.D.Vedha Vinodha        |   |
|                             |                                                                                                                                                                             | Approved by | <b>Dr.V.J.Arulkarthick</b> |   |
|                             |                                                                                                                                                                             | Date        | 29/07/23                   |   |
|                             |                                                                                                                                                                             | Page No.    | 2 of 2                     |   |





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# *Class Committee Meeting*

## *Minutes*

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

**CLASS COMMITTEE MEETING**

**Academic Year : 2023 – 2024 (ODD SEMESTER)**

| Class Committee Meeting No:1                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                          | Ref.No: ECE/CCM/10.11.2023                                                                                                                                                                                                                                                                                                                                                                               |                    |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------|
| Venue: Communication Lab                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                          | Date & Time:10.11.2023 & 2.30 PM onwards                                                                                                                                                                                                                                                                                                                                                                 |                    |         |
| <b>Chairperson–Dr.V.J.Arulkarthick HoD/ECE Faculty –</b><br>1. Prof.M.Shabana (AP/ECE) <i>Shabana</i><br>2. Prof.R.Poornima (AP/ECE) <i>Poornima</i><br>3. Prof .Sindhu A (AP/ECE) <i>A Sindhu</i><br>4. Prof .Mohanapriya S (AP/ECE) <i>Mohanapriya</i><br>5. Prof. Thahseen Thahir (AP/ECE) <i>Thahseen</i><br>6. Prof.V.P.Anila (AP/CSE) <i>Anila</i><br>7. Dr.S.Saravanan (AP/S & H) <i>Saravanan</i> |                                                                                                                                                                                                                                                                                                                                          | <b>Class Advisor</b><br>1. Prof.Babu K (AP/ECE) <i>Babu</i><br><br><b>Mentor:</b><br>1. Prof.Renswick S (AP/ECE) <i>Renswick</i><br>2. Prof.Mohanapriya S (AP/ECE) <i>Mohanapriya</i><br><br><b>Student Representatives:</b><br>1.Arish M <i>Arish</i><br>2.Gunapriya T <i>Gunapriya</i><br>3.Ijas Shahadh Y <i>Ijas</i><br>4.Vennapusa Abhishek Reddy <i>Abhishek</i><br>5.Subramani P <i>Subramani</i> |                    |         |
| Sl. No.                                                                                                                                                                                                                                                                                                                                                                                                   | Points Discussed                                                                                                                                                                                                                                                                                                                         | Target Date                                                                                                                                                                                                                                                                                                                                                                                              | Responsibility     | Remarks |
| 1.                                                                                                                                                                                                                                                                                                                                                                                                        | <b><u>MA3355 Random Process and Linear Algebra - Dr.S.Saravanan (AP/S &amp; H)</u></b><br><ul style="list-style-type: none"> <li>Coverage of syllabus- 2 Units</li> <li><u>Students' Feed Back</u>: Requested to Solve the home work problems in class</li> <li><u>Staff Feed Back</u>: No Problem</li> </ul>                            | -                                                                                                                                                                                                                                                                                                                                                                                                        | Individual Faculty | -       |
| 2.                                                                                                                                                                                                                                                                                                                                                                                                        | <b><u>CS3353 C Programming and Data Structure - Prof.V.P Anila (AP/CSE)</u></b><br><ul style="list-style-type: none"> <li>Coverage of syllabus-1.5 Units</li> <li><u>Students' Feed Back</u>: State the real time examples to the students and elaborate them where it is applied</li> <li><u>Staff Feed Back</u>: No Problem</li> </ul> | -                                                                                                                                                                                                                                                                                                                                                                                                        | Individual Faculty | -       |

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

|    |                                                                                                                                                                                                                                                                                         |   |                    |   |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------------------|---|
| 3. | <b><u>EC3354 Signals and Systems - Prof.Mohanapriya S (AP/ECE)</u></b> <ul style="list-style-type: none"> <li>Coverage of syllabus- 2 Units</li> <li><u>Students' Feed Back</u>: Requested to give more problems for practices</li> <li><u>Staff Feed Back</u>: No Problem</li> </ul>   | - | Individual Faculty | - |
| 4  | <b><u>EC3353 Electronic Devices and Circuits - Prof .Sindhu A (AP/ECE)</u></b> <ul style="list-style-type: none"> <li>Coverage of syllabus-2.5 Units</li> <li><u>Students' Feed Back</u>: Expected to go slow</li> <li><u>Staff Feed Back</u>: No Problem</li> </ul>                    | - | Individual Faculty | - |
| 5  | <b><u>EC3351 Control Systems -Prof.R.Poornima (AP/ECE)</u></b> <ul style="list-style-type: none"> <li>Coverage of syllabus-2 Units</li> <li><u>Students' Feed Back</u>: Requested to solve previous year question paper</li> <li><u>Staff Feed Back</u>: No Problem</li> </ul>          | - | Individual Faculty | - |
| 6  | <b><u>EC3352 Digital System Design - Prof.Thahseen Thahir (AP/ECE)</u></b> <ul style="list-style-type: none"> <li>Coverage of syllabus-2 Units</li> <li><u>Students' Feed Back</u>: Asked to give lab usage after extended hours</li> <li><u>Staff Feed Back</u>: No Problem</li> </ul> | - | Individual Faculty | - |
| 7  | <b><u>EC3352 Digital System Design (Integrated Lab) - Prof.Thahseen Thahir (AP/ECE)</u></b> <ul style="list-style-type: none"> <li>Coverage of syllabus-3 Experiments</li> <li><u>Students' Feed Back</u>: No Problem</li> <li><u>Staff Feed Back</u>: No Problem</li> </ul>            | - | Individual Faculty | - |
| 8  | <b><u>EC3361 Electronic Devices and Circuits Laboratory - Prof .Sindhu A (AP/ECE)</u></b> <ul style="list-style-type: none"> <li>Coverage of syllabus - 4 Experiments</li> <li><u>Students' Feed Back</u>: No Problem</li> <li><u>Staff Feed Back</u>: No Problem</li> </ul>            | - | Individual Faculty | - |



**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |                               |   |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------|---|
| 9                         | <b><u>CS3362 C Programming and Data Structure Laboratory-Prof.V.P Anila (AP/CSE)</u></b> <ul style="list-style-type: none"> <li>Coverage of syllabus - 6 Experiments</li> <li><u>Students' Feed Back:</u> No Problem</li> <li><u>Staff Feed Back:</u> No Problem</li> </ul>                                                                                                                                                                                                                                                                             | -           | Individual Faculty            | - |
| 10                        | <b>Points were discussed</b> <ul style="list-style-type: none"> <li>Vision, Mission of the Institute and Department were discussed among with the staffs and students.</li> <li>Students were instructed to be punctual for their classes and maintain the proper dress code</li> <li>Students were instructed to be attentive in the classroom and laboratory classes .</li> <li>University exam results were discussed and students were asked to improve their performance</li> <li>Students were advised to maintain good internal marks</li> </ul> | -           | Class Advisor                 | - |
| <b>Copy to: PRINCIPAL</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Prepared by | Prof.Mohanapriya S (AP/ECE)   |   |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Approved by | Dr.V.J.Arulkarthick (HoD/ECE) |   |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Date        | 11.11.2023                    |   |



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## *Course File*

**Academic Year: 2023 - 2024 (Odd Sem)**

Name of the Faculty: VEDHA VINODHA.D

Year/Semester: IV / VII

Course Code & Title: EC8751 OPTICAL COMMUNICATION

Branch: ECE

| S.NO      | CONTENT                                                                                                            | SUBMISSION DATE | SIGNATURE |                      |                      |
|-----------|--------------------------------------------------------------------------------------------------------------------|-----------------|-----------|----------------------|----------------------|
|           |                                                                                                                    |                 | FACULTY   | HOD                  | DIRECTOR (IQAC)      |
| 1.        | Vision & Mission of Institute and Department                                                                       | 24.7.23         | Vedha     |                      | V.J. Dms<br>28/7/23  |
| 2.        | PEOs, POs, PSOs                                                                                                    | 24.7.23         |           |                      |                      |
| 3.        | Class Timetable                                                                                                    | 24.7.23         |           |                      |                      |
| 4.        | Individual Timetable                                                                                               | 24.7.23         |           |                      |                      |
| 5.        | Student Name List                                                                                                  | 24.7.23         |           |                      |                      |
| 6.        | Syllabus                                                                                                           | 24.7.23         |           |                      |                      |
| 7.        | Course Information Sheet                                                                                           | 24.7.23         |           |                      |                      |
| 8.        | Lesson Plan                                                                                                        | 24.7.23         |           |                      |                      |
| 9.        | Tutorial with Solutions                                                                                            | 24.7.23         |           |                      |                      |
| 10.       | Course materials                                                                                                   | 24.7.23         |           |                      |                      |
| 11.       | Question Bank                                                                                                      | 24.7.23         |           |                      |                      |
| 12.       | Previous 5 years Question Papers with sample answer key for latest question paper                                  | 24.7.23         |           |                      |                      |
| CIA - I   |                                                                                                                    |                 |           |                      |                      |
| 13.       | Question Paper with answer key                                                                                     | 8-9-23          | Vedha     | V.J. Dms             | V.J. Dms<br>19/9/23  |
|           | Answer Scripts (Best, Average, Poor)                                                                               | 13-9-23         |           |                      |                      |
|           | Result Analysis                                                                                                    | 19-9-23         |           |                      |                      |
| CIA - II  |                                                                                                                    |                 |           |                      |                      |
| 14.       | Question Paper with answer key                                                                                     | 20.10.23        | Vedha     | V.J. Dms<br>31/10/23 | V.J. Dms<br>29/11/23 |
|           | Answer Scripts (Best, Average, Poor)                                                                               | 22-10-23        |           |                      |                      |
|           | Result Analysis                                                                                                    | 22-10-23        |           |                      |                      |
| CIA - III |                                                                                                                    |                 |           |                      |                      |
| 15.       | Question Paper with answer key                                                                                     | 15.11.23        | Vedha     | V.J. Dms<br>29/11/23 | V.J. Dms<br>29/11/23 |
|           | Answer Scripts (Best, Average, Poor)                                                                               | 16.11.23        |           |                      |                      |
|           | Result Analysis                                                                                                    | 16.11.23        |           |                      |                      |
| 16.       | Documents for Assignment / Seminar / Case Study / Mini Projects with CO Mapping and Consolidated Evaluation Sheet. | 8.11.23         | Vedha     |                      | V.J. Dms<br>29/11/23 |
| 17.       | Current End Semester Examination (ESE) Question Paper with feedback                                                | 23.12.23        | Vedha     | V.J. Dms             | V.J. Dms             |
| 18.       | Consolidated Internal Mark Statement                                                                               | 27.12.23        | Vedha     | V.J. Dms             | V.J. Dms<br>2/1/24   |
| 19.       | Course Outcome Assessment                                                                                          | 15.5.23         | Vedha     |                      | V.J. Dms             |

STAFF IN-CHARGE

HoD





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## *Internship Report*



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amigosconstructions...kdp@gmail.com

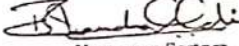
Date: 29<sup>th</sup> July 2023

### **INTERNSHIP CERTIFICATE**

This is to certify that Mr. MANGALI SAI KUMAR, student of B.E(Civil Engineering) 4<sup>th</sup> year (Reg no:720920103317) studying at JCT College of Engineering and Technology, Pichanur, Coimbatore, Tamilnadu, has been successfully completed one month (from 01-07-2023 to 29-07-2023) internship program at the company.

Sai kumar completed his training on various jobs on civil constructions and operation of different civil construction machinery. His attendance and performance during the training was found excellent.

For Amigos constructions,

For AMIGOS CONSTRUCTIONS  
  
Managing Partner

Authorized signatory

Office Address:

Amigos Constructions, D. No: 44/35-1-2, A Block,

Prakruthi Nagar, chemmumiapeta (v), Kadapa - 516003

# **SITE ORIENTED TRAINING PROGRAMME**

## **INDUSTRIAL TRAINING REPORT**

Submitted by

**M.SAI KUMAR (720920103317)**

In partial fulfilment for the award of the degree

Of

**BACHELOUR OF ENGINEERING**

In

**CIVIL ENGINEERING**

**JCT COLLEGE OF ENGINEERING AND TECHNOLOGY,**

**PICHANUR, COIMBATORE-641105**

**ANNA UNIVERSITY: CHENNAI 600 025**

**NOVEMBER 2023**



**BONAFIDE CERTIFICATE**

Certified that this is the bonafide report on **INDUSTRIAL TRAINING**, presented by **Mr MANGALI SAI KUMAR (720920103317)** Seventh semester B.E. CIVIL Engineering, JCT College of Engineering and Technology, Pichanur, Coimbatore, in partial fulfillment of the requirements for the award of bachelor of Engineering in Civil Engineering under Anna University Chennai 600 025 during the year 2023.

  
**HEAD OF THE DEPARTMENT**

Prof. Dr. V. MURUGESH, M.E., Ph.D, (PDF)

Department of Civil Engineering

JCT College of Engineering and  
Technology, Coimbatore.

  
**GUIDED BY**

Prof. G. S. HARI, M.E

Assistant Professor

Department of civil Engineering  
JCT CET, Coimbatore

Submitted for the Viva-voice held on. 23-11-2023.....

  
**INTERNAL EXAMINER**

**EXTERNAL EXAMINER**

# ACKNOWLEDGEMENT

If words are considered as the symbol of approval and token of acknowledgement, then let words play the heralding role of thanks giving just to glorify to exhibit the deeply embedded feelings of gratitude.

First and foremost, we would like to thank the almighty, through whom all things are possible. This work was done not only by our power, but his spirit.

I would like to place on record my deep sense of gratitude to our chairman **Thiru.R.ARULSELVAN**, JCT College of Engineering and Technology, Pichanur, who has been a source of inspiration and encouragement for the successful completion of my inplant training.

We express our profuse thanks to the principal, **Dr.S.MANOCHARAN,M.E,Ph.D**, for his kind permission to do this training.

We are greatly indebted to our head of the department. **Dr.V. MURUGESH, M.E,Ph.D,(PDF)** and all the staffs of Civil Department for their endless encouragement.

I once again thank all those who helped me in doing this training directly or indirectly, and for bringing out this training a very successful one.

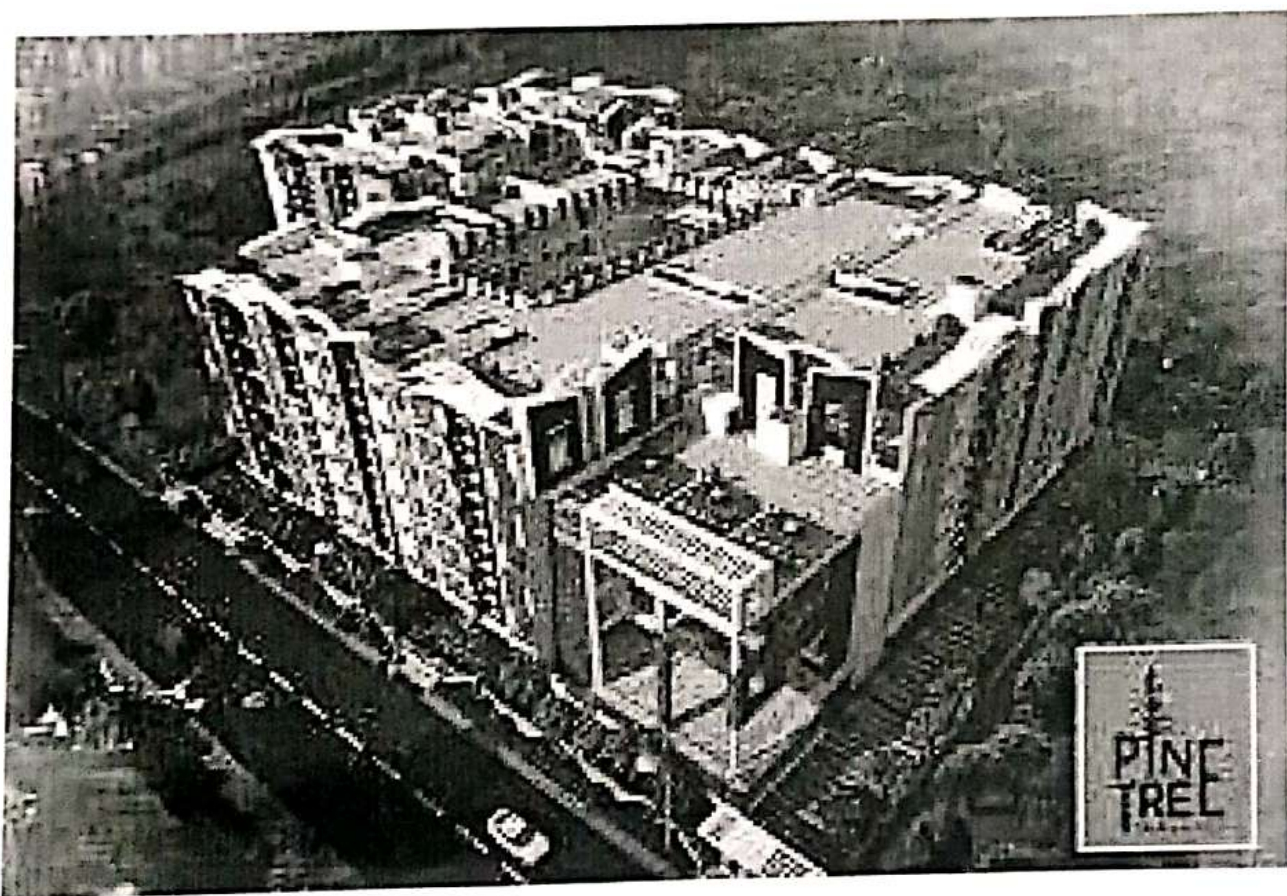
Finally, we would like to express our deepest gratitude to our parents. and well-wishers for their understanding, support, love, and patience.



## **1.1. COMPANY INTRODUCTION**

**AMIGOS** is one of the fastest growing group in Infrastructure, Real Estate and Modern Agricultural Farming sectors in Kadapa- AP.

Founded in 2008, named **AMIGOS Builders Pvt Ltd** Company to provide the **QUALITY** construction to the people of the then United Andhra Pradesh. Ventured into both construction and contracting business, has built **LANDMARK** projects in multiple cities namely Andhra Pradesh, Telangana and Karnataka. With just over a decade of experience in the space of construction, they made their mark by completed 6 Projects with a development area of about 11 Lakh square feet comprising of living space as well as Commercial Spaces.





## **1.2. PROJECT INTRODUCTION**

The basic needs of human existence are food, clothing & shelter. From times immemorial man has been making efforts in improving their standard of living. The point of his efforts has been to provide an economic and efficient shelter. The possession of shelter besides being a basic need, gives a feeling of security, responsibility and shows the social status of man. Every human being has an inherent liking for a peaceful environment needed for his pleasant living, this object is achieved by having a place of living situated at a safe and convenient location, such a place for comfortable and pleasant living requires consideration and is kept in view.

**Scope of the project :**

**Design and construction of multistoried finished houses.**



## **1. 2.1.TYPES OF BUILDINGS :**

Buildings are classified on the basis of character of occupancy and type of use as.

- 1. Residential Building**
- 2. Educational Building**
- 3. Institutional Building**
- 4. Industrial Building**
- 5. Assembly buildings**
- 6. Business buildings**
- 7. Mercantile buildings**
- 8. Storage buildings**
- 9. Hazardous buildings**

**Residential building:** In such building sleeping accommodation is provided. IT includes the living room, bed room, kitchen, hall, toilet and bath room. It may be a single storey building or apartments.

**Educational building:** These includes any building using for school, college, assembly for instruction, education or recreation.

**Institutional building:** These building are used for different purposes, such as medical or other treatment or care of a person suffering from a physical or mental illnesses. These building includes hospital, sanatoria, jail etc.

**Industrial building:** These are buildings in which products or material s of all kind of properties are fabricated, assembled, processed. For example refineries, gas plant, mills etc.

**Assembly buildings :** These are defined as buildings or parts of them which houses public



### ***Types of Buildings***

gatherings congregated with the intent of amusement, recreation, social, religious, patriotic, civil,

travel or other similar purposes. Buildings such as movie houses, drama theatres, drive-in theatres,

assembly halls, clubhouses, town halls, auditoriums, exhibition halls, museums, manganal karyalayas, gymnasiums, sports complexes, restaurants, boarding houses, dance clubs, gymkhanas, places of worship, bus stops, taxi stands, railway stations, airports, piers, etc. are categorized as assembly buildings

**Business buildings :** If a building or a part of it is primarily used for keeping records of business transactions, maintaining accounts, bookkeeping purposes or managing other types of records then it can be classified as a business building. Buildings under this category include offices, banks, courthouses and other professional establishments serving the aforementioned purposes.

**Mercantile buildings :** In these types of buildings, either the entire building or a part of it is used for housing shops, stores or showrooms where display and sale of wholesale goods, retail goods or merchandise is carried out. Such buildings should also accommodate office, storage and service facilities essential for the business which should be located in the same building.

**Storage buildings :** If a building or a part of it is used for the storage of commodities, goods, merchandise, etc. then it is categorised as a storage building. They comprise buildings such as warehouses, cold storages, grain storage units, barns, stables, freight depot, transit shed, hangars, truck terminals, public garages, etc.

**Hazardous buildings :** It includes any buildings used for the storage of poisonous substances like pesticides, toxic or noxious alkalis, acids or other chemicals producing explosive or poisonous fumes.



## **SAFETY INDUCTION**

Safety is very important part of any work. An induction video was showed which highlighted the need and importance of safety at construction site. Most accidents can be prevented by taking simple measures or adopting proper working procedures. It is very important to discuss issues on safety and health that should be paid attention to on construction sites for easy reference by the workers. If we work carefully and take appropriate safety measures, there will definitely be fewer work injury cases, and our sites will become a safe and secure place to work in. It is important to educate everyone in the site regarding safety for following purposes.

- Workers safety
- Construction progress
- Standard procedure
- Legal cases
- Working efficiency

### **Precautions at site for safety**

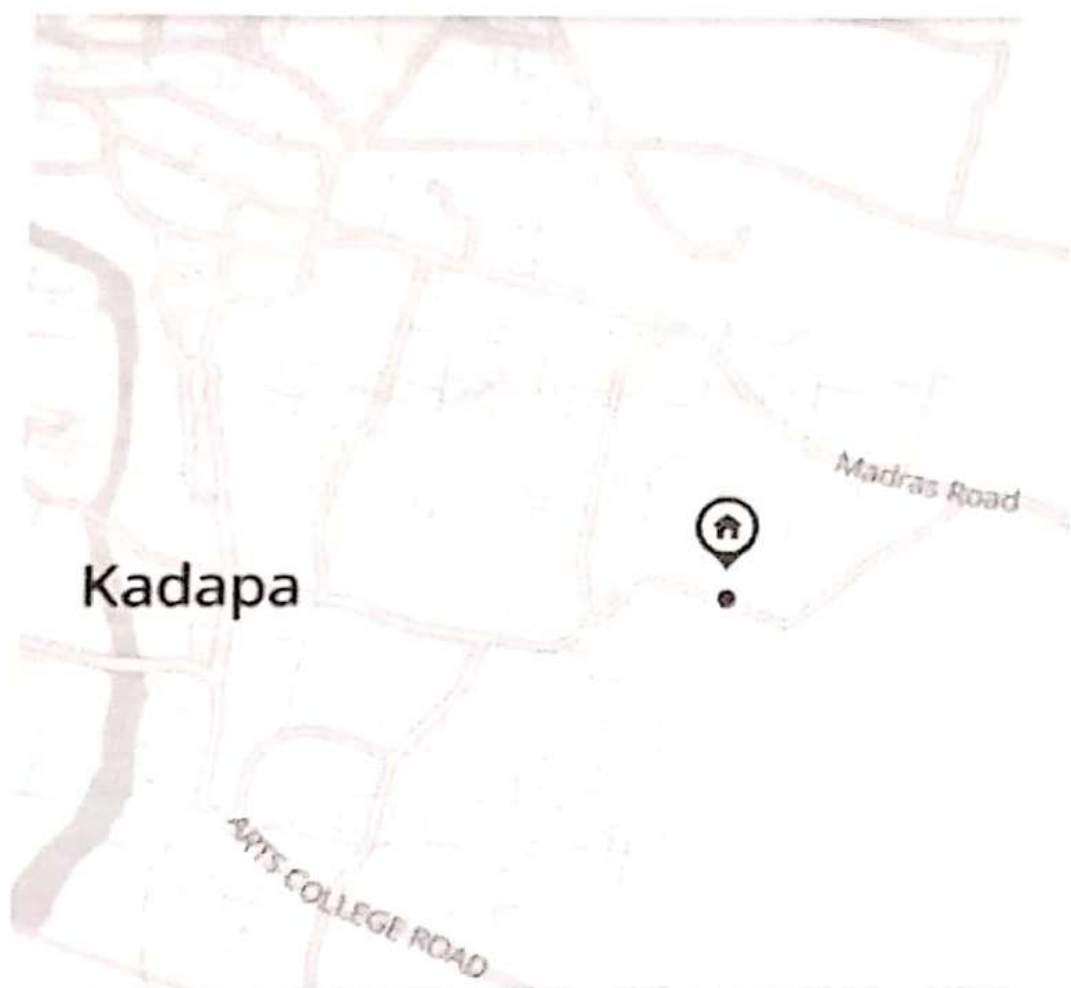
- Wear protective equipment.
- Do not drink or take drugs while working.
- Pay attention to personal hygiene.
- Do not play in the workplace.
- Report to your supervisor immediately if you notice any unsafe condition.

## *Types of Buildings*

### **Possible types of accidents and ill health :**

- . **Construction Site Fall**
- . **Crane Accidents**
- . **Scaffolding Accidents**
- . **Electrical Accidents**
- . **Trench Collapses**
- . **Fires and Explosions**
- . **Welding Accidents**
- . **Cutting Accidents**
- . **Structure Failure**
- . **Building Collapse**
- . **Supervisor Negligence**
- . **Punch Press Malfunctions**
- . **Compressor Accidents**
- . **Exploding Compressor**
- . **Gas Explosions During Welding**
- . **Run-Over by Operating Equipment**
- . **Unsafe/ Dangerous Equipment Accidents**

**Work Location**





## **SECTION -3**

### **CONSTRUCTION STEPS INVOLVED**

#### **Sequence of Structure Work**

- 1) Site Clearance
- 2) Demarcation of Site
- 3) Positioning of Central coordinate ie (0,0,0) as per grid plan
- 4) Surveying and layout
- 5) Excavation
- 6) Laying of PCC
- 7) Bar Binding and placement of foundation steel
- 8) Shuttering and Scaffolding
- 9) Concreting
- 10) Electrical and Plumbing
- 11) Dershuttering
- 12) Brickwork
- 13) Doors and windows frames along with lintels
- 14) Wiring for electrical purposes
- 15) Plastering
- 16) Flooring and tiling work
- 17) Painting
- 18) Final Completion and handing over the project

#### **3.1.1 Site Clearance:**

The very first step is site clearance which involves removal of grass and vegetation along with any other objections which might be there in the site location.

#### **Demarcation of Site :**

The whole area on which construction is to be done is marked so as to identify the construction zone. In our project, a plot of 450\*350 sq ft was chosen and the respective marking was done.

## ***Construction steps involved***

### **Surveying and layout :**

Survey is the first step done in any construction site so as to get the required level of surface. It is also used in level transferring during construction of retaining wall. Generally at site survey is carried out by following two instruments.

**A-Total**

**station      B-**

**Auto level**

**A-Total Station:** A total station is an electronic/optical instrument used in modern surveying and building construction. The total station is an electronic theodolite (transit) integrated with an electronic distance meter (EDM) to read slope distances from the instrument to a particular point. By this instrument we can measure Angle, Distance, Coordinate and also Data Processing. Advantages:

1. The following are some of the major advantages of using total station over the conventional surveying instruments
2. Field work is carried out very fast.
3. Accuracy of measurement is high.
4. Manual errors involved in reading and recording are eliminated.
5. Calculation of coordinates is very fast and accurate. Even corrections for temperature and pressure are automatically made.
6. Computers can be employed for map making and plotting contour and cross-sections. Contour intervals and scales can be changed in no time.

**B-Auto level:** It is a leveling instrument which was on site checking the elevations of various points.

Auto level is a modified form of dumpy level. We used auto level to transfer the level of ground to retaining wall and setting thickness of slab in which first of all marking was made to fix the level of particular elevations then casting of slab was performed.

**Transferring of surface level to retaining wall**

1. Set the auto level at the building floor level.
2. Level the instrument.
3. Take the staff reading at point also on floor level surface.



### ***Construction steps involved***

4. Locate the staff on the formwork of retaining wall and adjust the staff in such a way so that reading of staff is same as staff reading in step 3.

### **Positioning of Central coordinate and layout :**

The centre point was marked with the help of a thread and plumb bob as per the grid drawing. With respect to this center point, all the other points of columns were to be decided so its exact position is very critical.

### **Excavation:**

Excavation was carried out both manually as well as mechanically. Normally 1-2 earth excavators (JCB"s) were used for excavating the soil. Adequate precautions are taken to see that the excavation operations do not damage the adjoining structures. Excavation is carried out providing adequate side slopes and dressing of excavation bottom. The soil present beneath the surface was too clayey so it was dumped and was not used for back filling. The filling is done in layer not exceeding 20 cm layer and than its compacted.

Depth of excavation was 5"4" from Ground Level.





*Construction steps involved*



### ***Construction steps involved***

#### **PCC – Plain Cement Concrete:**

After the process of excavation, laying of plain cement concrete that is PCC is done. A layer of 4 inches was made in such a manner that it was not mixed with the soil. It provides a solid base for the raft foundation and a mix of 1:5:10 that is, 1 part of cement to 5 parts of fine aggregates and 10 parts of coarse aggregates by volume were used in it. Plain concrete is vibrated to achieve full compaction. Concrete placed below ground should be protected from falling earth during and after placing. Concrete placed in ground containing deleterious substances should be kept free from contact with such a ground and with water draining there from during placing and for a period of seven days. When joint in a layer of concrete are unavoidable, and end is sloped at an angle of 30° and junctions of different layers break joint in laying upper layer of concrete. The lower surface is made rough and clean watered before upper layer is laid.



### **Laying of Foundation:**

At our site, Raft foundations are used to spread the load from a structure over a large area, normally the entire area of the structure. Normally raft foundation is used when large load is to be distributed and it is not possible to provide individual footings due to space constraints that is they would overlap on each other. Raft foundations have the advantage of reducing differential settlements as the concrete slab resists differential movements between loading positions. They are often needed on soft or loose soils with low bearing capacity as they can spread the loads over a larger area. In laying of raft foundation, special care is taken in the reinforcement and construction of plinth beams and columns. It is the main portion on which ultimately whole of the structure load is to come. So a slightest error can cause huge problems and therefore all this is checked and passed by the engineer in charge of the site.







Apart from raft foundation, individual footings were used. Foundation footings are strips of concrete or filled concrete blocks placed under foundation wall. Gravel or crushed stone footings may also be used. The purpose of footing is to transfer the loads safely in the ground. Generally in high rise buildings three types of footings are provided

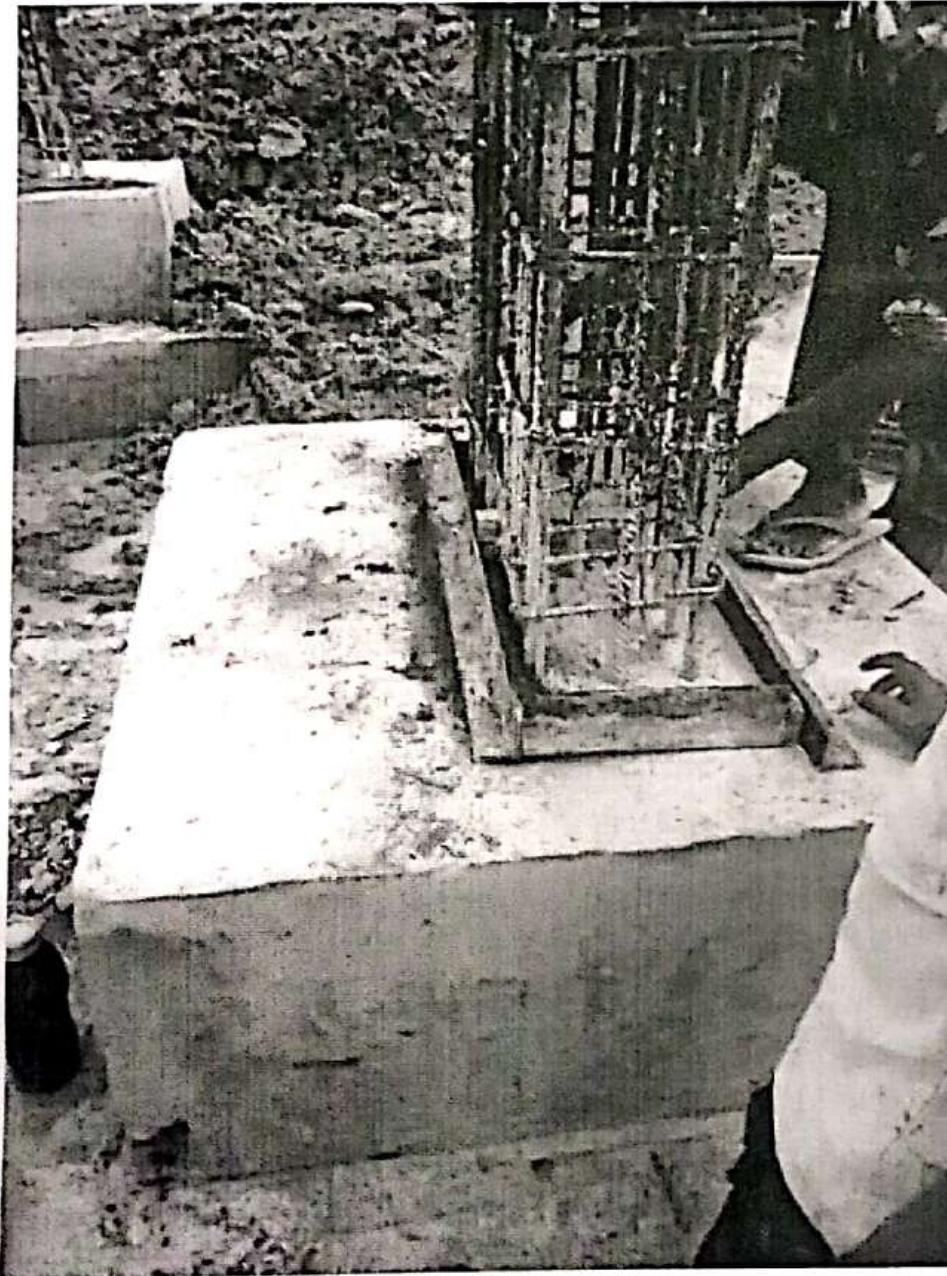
**Isolated Footing-** An isolated footing is used to support the load on a single column. It is usually either square or rectangular in plan. It represents the simplest, most economical type and most widely used footing. Whenever possible, square footings are provided so as to reduce the bending moments and shearing forces at their critical sections. Isolated footings are used in case of light column loads, when columns are not closely spaced. An isolated footing must, therefore, be provided by two sets of reinforcement bars placed on top of the other near the bottom of the footing. In case of property line restrictions, footings may be designed for eccentric loading or combined footing is used as an alternative to isolated footing.

**Combined footing-** Whenever a column is to be provided near the edge of property and it may not be permissible to extend the footing beyond a certain limit. In such a case, the load on the footing will be eccentric and hence this will result in uneven distribution of load to the supporting soil. Hence, an alternative design would be to provide a common footing to the



### ***Construction steps involved***

edge column and to an interior column close to it. Combined footings under two or more columns are used under closely spaced, heavily loaded interior columns where individual footings, if they were provided, would be either very close to each other, or overlap each other. This footing is called “combined footing”.



**Construction steps involved**  
**Raft footing or Mat footing:**

This is a footing that covers the entire area under the structure. This footing is used when very heavy loads of building are to be transmitted to the underlying soil having very low and differential bearing capacities. Due to its rigidity, it minimizes differential settlement. There are several types of raft foundation in use. The most common types are; the flat slab and the slab-beam types Raft footings are provided in following cases.

- When the ground water table is high, rafts are often placed over piles to control buoyancy.
- When isolated footings for column overlap on each other.
- When total area of footing slab is more than 50% of total area.
- Where underground flooring is required this type of footing is provided and it serves as footing as well as floor.





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## ***Student Project Report***



# **EXPERIMENTAL INVESTIGATION ON REPLACEMENT OF CEMENT AND FINE AGGREGATE USING PLASTIC WASTE ASH AND SILICA SAND IN CONCRETE**

**A PROJECT REPORT**

*Submitted by*

**ABHISHEK V K (720920103002)**

**DEEKSHITA B (720920103306)**

**DADDALA VAISHNAVI (720920103310)**

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

**BACHELOR OF ENGINEERING  
IN  
CIVIL ENGINEERING**

**JCT COLLEGE OF ENGINEERING AND TECHNOLOGY  
PICHANUR, COIMBATORE - 641105**

**ANNA UNIVERSITY: CHENNAI 600 025**

**MAY 2024**



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**MAY 2024**



# ANNA UNIVERSITY: CHENNAI 600 025

## BONAFIDE CERTIFICATE

Certified that this Project report "EXPERIMENTAL INVESTIGATION ON REPLACEMENT OF CEMENT AND FINE AGGREGATE USING PLASTIC WASTE ASH AND SILICA SAND IN CONCRETE" the bonafide work of DEEKSHITA.B [720920103306]..... who carried out the Project work under my supervision.



HEAD OF THE DEPARTMENT

Dr.V.MURUGESH, M.E, Ph.D, (PDF)

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SUPERVISOR

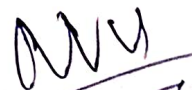
Mr.M.SADHASIVAM., M.E.,

Department of Civil Engineering  
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Submitted for the Viva-voice held on...13/05/2024.....



INTERNAL EXAMINER



EXTERNAL EXAMINER

## ACKNOWLEDGEMENT

Any organized and systematic work calls for the co-operation and co-ordination of a team people's .our project is no expectations to this. Hence, these pages find the space for thanking all those who have directly and indirectly contributed to completion of this work in a successful manner.

I would like to place on record my deep sense of gratitude to our **MANAGEMENT**, JCT College of Engineering and Technology, Pichanur, who has been sources of inspiration and encouragement for the successful completion of our project.

Our special thanks to our principal **Dr.S.MANOCHARAN, M.E, Ph.D., FIE.**, for giving permission, constant support and guidance to enable me to complete my project successfully.

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We would like to extend thanks to our guide **Mr.M.SADHASIVAM, M.E.**, Department of civil Engineering, JCT College of Engineering and Technology, for her encouragement and valuable guidance in carrying out our project work.

We also express our thanks to our parents, our friends, well-wisher for their encouragement and best wishes in successful completion of this dissertation.



## **VISION AND MISSION OF THE INSTITUTION**

### **VISION**

- To emerge as a Premier Institute for developing industry ready engineers with competency, initiative and character to meet the challenges in global environment.

### **MISSION**

- To impart state-of-the-art engineering and professional education through strong theoretical basics and hands on training to students in their choice of field.
- To serve our students by teaching them leadership, entrepreneurship, teamwork, values, quality, ethics and respect for others.
- To provide opportunities for long-term interaction with academia and industry.
- To create new knowledge through innovation and research.

## **VISION AND MISSION OF THE DEPARTMENT**

### **VISION**

- To become leaders in Civil Engineering Education, to meet the most onerous challenges in construction, sanitation and environment at the global level.

### **MISSION**

- To produce outstanding Civil Engineering graduates with highest ethical values.
- To provide state – of – the – art learning and laboratory environments.
- To interact with industries and address issues related to infrastructure and environment for sustainable living.



### **Program Educational Objectives (PEOs)**

**PEO1:** Graduates shall become outstanding engineers in industries and other Institutions for higher studies.

**PEO2:** Graduates shall have the caliber to contribute to national goals through design and manufacturing.

**PEO3:** Graduates shall serve the society by being entrepreneurs or consultants to Overcome the challenges they face.

### **Program Outcomes (POs)**

|     |                                                                                                                                                                                                                                                                                                  |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PO1 | <b>Engineering knowledge:</b> Apply the knowledge of mathematics, science, Engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.                                                                                                          |
| PO2 | <b>Problem analysis:</b> Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.                                                         |
| PO3 | <b>Design/development of solutions:</b> Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations. |
| PO4 | <b>Conduct investigations of complex problems:</b> Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.                                                        |
| PO5 | <b>Modern tool usage:</b> Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.                                                         |
| PO6 | <b>The engineer and society:</b> Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering +practice.                                                      |

|      |                                                                                                                                                                                                                                                                                                          |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PO7  | <b>Environment and sustainability:</b> Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.                                                                                   |
| PO8  | <b>Ethics:</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.                                                                                                                                                                    |
| PO9  | <b>Individual and team work:</b> Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.                                                                                                                                                   |
| PO10 | <b>Communication:</b> Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions. |
| PO11 | <b>Project management and finance:</b> Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.                                               |
| PO12 | <b>Life-long learning:</b> Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.                                                                                                                 |

### **Program Specific Outcomes (PSOs)**

|      |                                                                                                                                                                            |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO1 | Capable of successfully qualifying in national level competitive examinations for higher studies and employment.                                                           |
| PSO2 | Contribute to Nation's Infrastructure through technologies for low-cost housing, skyscraper, sanitation, pollution free environment, water harvesting, transportation etc. |



## ABSTRACT

The ingredients of concrete include cement, sand, coarse particles, and water. The main ingredient in both regular and replacement concrete is cement. The process of making cement releases large amounts of carbon dioxide into the atmosphere. Any locally accessible cementation material is substituted for cement to lower the concentration. These days, replacement cement is the subject of numerous investigations because of carbon dioxide and global warming. A number of novel items, such as rice husk ash, eggshell waste, luggage ash, etc., are utilized as cement substitutes in effluent systems. The handling of plastic trash from hospitals is a major issue in our society. Approximately 2,50,000 tons of medical waste are produced annually by healthcare facilities. The aim of this research is to evaluate the viability of replacing some of the cement with hospital plastic waste ash generated from a medical institution.

The main variable in this study is the amount of hospital plastic waste ash 5, 10, 15, and 20% by weight of cement while the amounts of cementitious material, water to cementitious material ratio, and fine and coarse aggregate content are all fixed. These days, a realistic substance such as natural sand is required. M-sand has several disadvantages because of its angular size and incapacity to fill pore spaces, even if it is utilized as a substitute for river sand. A silica-containing substance that effectively seals concrete pores is silica sand. The principal aim of this study is to improve the characteristics of concrete by substituting some of the M-Sand with Silica Sand. M-Sand is mixed with silica sand in different ratios: 5%, 10%, 15%, and 20%.



The concrete that was both fresh and hardened has now undergone testing. The results indicate that silica sand can be utilized as a partial M-Sand alternative. The concrete employed in the experimental inquiry is M30 mix design. Concrete's strength, durability, and workability are its primary significant parameters. The study unequivocally shows that a variety of cement substitutes were investigated, with hospital plastic waste ash accounting for 5% to 20% of the cement weight in the mix. The trial mix percentage is used to produce the best amount of cement substitution with hospital plastic waste ash by accounting for the various qualities of workability, durability, and strength.

**Keywords:** Cement, M-30 grade, Hospital Plastic Waste Ash (HPWA), Silica Sand.

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# CHAPTER I

## INTRODUCTION

### LIST OF SYMBOLS

#### SYMBOLS DESCRIPTION

**SS** - **Silica sand**

**HPWA** - **Hospital Plastic Waste Ash**

**S** - **Sand**

**C** - **CEMENT**

**Kg** - **Kilogram**

**Mpa** - **Megapascal**

**P** - **Bulk Density**

**P<sub>d</sub>** - **Dry Density**

**W** - **Water content**

**g** - **Gram**

**mm** - **millimeter**



# CHAPTER 1

## INTRODUCTION

### 1.1 GENERAL

Cement is most utilizing material in the construction field and it leads to enormous carbon pollution into the environment. Over the last decades, there has been an increasing trend on blending ordinary Portland cement with locally sourced raw materials like industrial, agricultural or domestic waste. Alternative ingredients for cement manufacture have already been investigated and employed, including fly ash, silica fume, rice husk, coconut shell, eggshell, and sugarcane fiber. The search for a new and viable alternative is important for conservation of natural resources and also reduction in manufacturing cost. Hospital waste ash used as unutilized supplementary cementitious material until now and silica sand as partial replacement for M-sand.

According to the Ministry of Environment and Forestry, India produces 4,05, 702 kg of biomedical waste per day. Approximately 72% of the total is discarded. On the other hand, more than 28% of biological waste is left neglected. The most frequent method of disposing of biological waste is incinerating it in specially designed biomedical waste incinerators. The ash generated from the burning of biomedical waste is used to create a landfill. On the other hand, these wastes may be successfully employed in concrete manufacture, decreasing the requirement for land for biomedical waste ash disposal on the one hand, and saving the environment by reducing cement consumption and production on the other.

## 1.2 SCOPE OF THE STUDY

The angularity of M-sand, which is produced by crushing aggregates, is lost. The strength of the mortar is primarily determined by one of these two types of fine aggregates. The mechanical and rheological properties of cement mortars are affected by aggregates. Physical characteristics, form, particle-size distribution, and surface all have an effect on various properties of mortar in the new state. The substitution of M-sand with Silica sand was the focus of a considerable portion of the exploration studies. It's worth noting that there haven't been many studies done on replacing fine aggregates in mortar with eco-sand. Silica Sand is actually a granular material which contains quartz and minute amounts of coal, clay.

Because silica is a key component in the production of artificial glass, ceramics, and concrete, it has a wide range of applications. Silicon dioxide, often known as silica, is a chemical substance found as a primary ingredient in this sand. When used for this purpose, silica sand (also known as industrial sand) is the principal structural component in a variety of building products. Silica is used to increase the durability and structural integrity of flooring, mortars, cement, roofing shingles, asphalt, and other industrial products. Because silica is weather, wear, and corrosion resistant, it is frequently used as a caulk or sealer. For the first time, tests were conducted to assess this bio-waste as a supplemental cementitious material and silica sand for M-sand.



### 1.3 OBJECTIVES OF THE STUDY

- ✓ Study on Physical and Chemical Analysis of HPWA
- ✓ Study on Fresh and Hardened Properties of Concrete by use of HPWA in the Partial Replacement of Cement.
- ✓ Study on Flexural Behavior of RC Beams.
- ✓ Investigation on Crack Width of Reinforced Concrete Elements Under Static Loading Conditions.
- ✓ Test Results are Compared with Conventional Concrete (CC) Of Same Grade With and Without HPWA
- ✓ Cost Analysis

### 1.4 APPLICATIONS OF PLASTIC WASTE IN CONCRETE

Plastic waste can be effectively utilized in concrete in various ways, contributing to both environmental sustainability and enhancing the properties of concrete. Here are some applications:

1. **Aggregate Replacement:** Plastic waste can be shredded into small pieces and used as a partial replacement for conventional aggregates like gravel and sand. This not only reduces the demand for natural aggregates but also improves the ductility and durability of concrete due to the polymer's flexibility.
2. **Fiber Reinforcement:** Plastic fibers, either from waste plastic or specifically manufactured, can be added to concrete mixtures to enhance tensile strength, crack resistance, and impact resistance. These fibers help in controlling crack propagation and increase the toughness of concrete.
3. **Binder Modification:** Plastic waste, when processed into a fine powder, can be used as a partial replacement for cement in concrete mixes. This reduces the



## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **1) P.O. Awoyeraa, A. Adesinab “Plastic wastes to construction products: Status, limitations and future perspective” (DEC 2020)**

Plastic waste is becoming extremely threatening to the environment due to their high quantities generated which pose serious harm to both the environment and its inhabitants. A major victim of this menace is the marine environment. Plastic wastes generated on land find their way to water bodies where they cause detrimental effects such as flooding and poisoning of the animals in the marine ecosystem. The plastics in the marine environment, which are ingested in fish, are also deleterious to human health if such fish are consumed. Cancer is a major disease that emanates as a consequence. In order to find an effective way to manage these wastes and improve the sustainability of our environment, this study, therefore, explores various approaches to recycling plastic wastes into new products. The critical threat of the presence of plastic wastes in our marine environment is also presented. The limitation of the use of plastic waste for construction applications alongside the prospects is discussed. It is concluded that the use of plastic wastes for construction applications will improve the sustainability of the environment significantly, and also serve as a reliable source of materials for construction purposes. In addition, the use of recycled plastic wastes as a component in cementitious composites has been found to be the most beneficial as it can be used to replace all solid components of the composite. Finally, areas for further studies are also presented

## SUMMARY

| Influence of incinerated plastic waste ash on the properties of concrete |                                                   |                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SLNo.                                                                    | Authors                                           | Year and Journal                                                                                                                                                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 1.                                                                       | Harsimranpreet Kaur et.al                         | Construction and Building Materials (2019)                                                                                                                                           | <ul style="list-style-type: none"> <li>➤ Paper presents economic and environmental benefits of concrete made with IBWA.</li> <li>➤ Fine aggregate replaced with 0%, 5%, 10%, 15% and 20% Incinerated Biomedical Waste Ash.</li> <li>➤ Strength, permeability, water absorption and sorptivity properties investigated.</li> <li>➤ Use of 5% IBWA improves strength and reduces permeability.</li> <li>➤ Cement stabilization reduces the leaching of metals from IBWA concrete.</li> </ul>                                                |
| 2                                                                        | Shazim Ali Memon<br>Muhammad Ali Sheikh,<br>et.al | Utilization of Hospital Waste Ash in Concrete (2013)-<br>Mehran University Research Journal of Engineering and Technology 32(1):1-8                                                  | <ul style="list-style-type: none"> <li>➤ By using HWA as a partial replacement of cement in concrete without sacrificing the strength parameters, low-cost concrete can be made.</li> <li>➤ The setting time increased, while the mixture density and water absorption decreased as the percentage of HWA in the mixture increased.</li> <li>➤ The use of HWA as a partial concrete cement substitute solves the problem of disposal, thereby keeping the atmosphere free of pollution.</li> </ul>                                        |
| 3                                                                        | Shamila Habeeb                                    | Partial Replacement Of Cement With Hospital Waste Ash In Concrete- JETIR May 2019, Volume 6, Issue 5                                                                                 | <ul style="list-style-type: none"> <li>➤ Workability decreased in this study with the percentage of ash ratio increasing.</li> <li>➤ As the proportion decreased, the density also decreased.</li> <li>➤ The compressive strength of other samples are comparable to control mix. And the flexural strength and split tensile strength of 5HWA shows similar trend of control mix..</li> </ul>                                                                                                                                            |
| 4                                                                        | Udit Kumar, Vikas Srivastava, et.al               | Suitability of Biomedical Waste Ash in Concrete- International Journal of Engineering and Technical Research (IJETR) ISSN: 2321-0869 (O) 2454-4698 (P), Volume-5, Issue-2, June 2016 | <ul style="list-style-type: none"> <li>➤ Biomedical waste ash can effectively be used in concrete making.</li> <li>➤ Workability of concrete made using biomedical waste ash is lower than that of conventional concrete.</li> <li>➤ Density of concrete decreased slightly with increase in replacement level. However upto 15% replacement level density was about 99% of that of conventional concrete.</li> <li>➤ Compressive strength of concrete with biomedical waste ash satisfied the requirement of normal concrete.</li> </ul> |



## **CHAPTER 3**

### **METHODOLOGY**

#### **3.1 GENERAL**

The methodology clearly shows process which have been carried out in this work. The step by step process of this project is explained in the figure.

- ❖ The materials such as hospital plastic waste and silica sand are collected from various places.
- ❖ The material properties of each material are analyzed through various test.
- ❖ Different test are conducted on silica sand such as specific gravity test sieve analysis, free swell index etc.
- ❖ After adding admixture like HPWA and Silica sand like fresh and harden concrete test are conducted.
- ❖ The values of each test were noted and calculations are made on the test result.
- ❖ Experimental investigations are made on the slump cone test, compaction factor test, compression test etc of the concrete in different percentage.
- ❖ The result are analyzed so that in which percentage of HPWA and Silica Sand maximum value is obtained.



## **3.2 METHODOLOGY**

**SELECTION OF THE TOPIC**



**LITERATURE REVIEW**



**COLLECTION OF MATERIALS AND MIX DESIGN**



**CASTING AND CURING**



**EXPERIMENTAL INVESTIGATION**



**ANALYSIS AND COMPARSION OF RESULT**



**CONCLUSION**

## CHAPTER 4

### MATERIALS AND PROPERTIES

#### 4.1 CEMENT:

In this project, OPC 53 cement grade was used. Cement is tested according to Indian standard IS 4031-1988. Tables 2 show the parameters of cement.

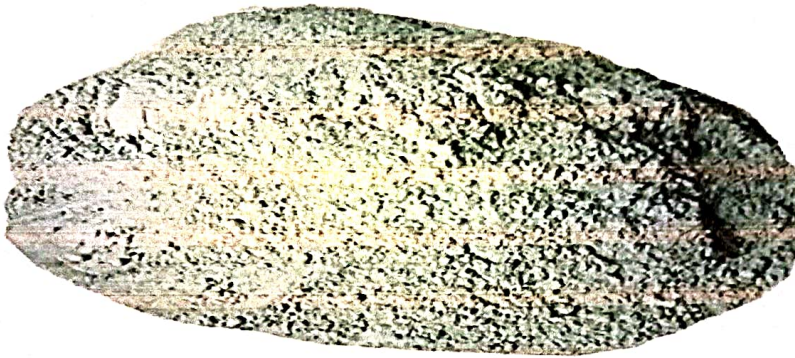


Fig 1, Cement

Table 2. Properties of Cement

| Sl. No. | Characteristics of Cement | Results Obtained       | As per IS 12269:2013 |
|---------|---------------------------|------------------------|----------------------|
| 1       | Specific Gravity          | 3.15                   | 3.1 - 3.15           |
| 2       | Fineness                  | 3%                     | $\leq 10\%$          |
| 3       | Consistency               | 30%                    | 30 - 35              |
| 4       | Initial Setting Time      | 180 (min)              | $\geq 30$            |
| 5       | Final Setting Time        | 250 (min)              | $< 600$              |
| 6       | Specific Surface Area     | 294 m <sup>2</sup> /kg | $\geq 225$           |

## CHAPTER 5

### EXPERIMENTAL INVESTIGATIONS

The laboratory tests carried out on the HPWA and silica sand include Sieve analysis, Specific gravity, slump cone test, compaction test, Compression test and flexural strength test.

#### 5.1 Specific Gravity Test:

The appropriate method for determining the specific gravity of silica sand and plastic waste ash is the pycnometer test. Specific gravity of the silica sand particles is the ratio of weight of given volume of silica sand to the weight of an equal volume of water at 4°C. i.e.  $G = \frac{W_2 - W_1}{W_3 - W_4}$ . Specific gravity as such does not indicate the behaviour of a sand under external load, but it is an important factor which is used in computing other sand properties. For example sand particle size determination by means of the hydrometer method.

Specific gravity of a substance is defined as the ratio of its mass in air to the mass of an equal volume of water. The specific gravity of the silica sand has been determined using the density bottle method, as per IS: 2720 – (part III section I, 1980).

#### FORMULA:-

$$\text{Specific gravity} = \frac{(W_2 - W_1)}{(W_2 - W_1) - (W_3 - W_4)}$$

Where,

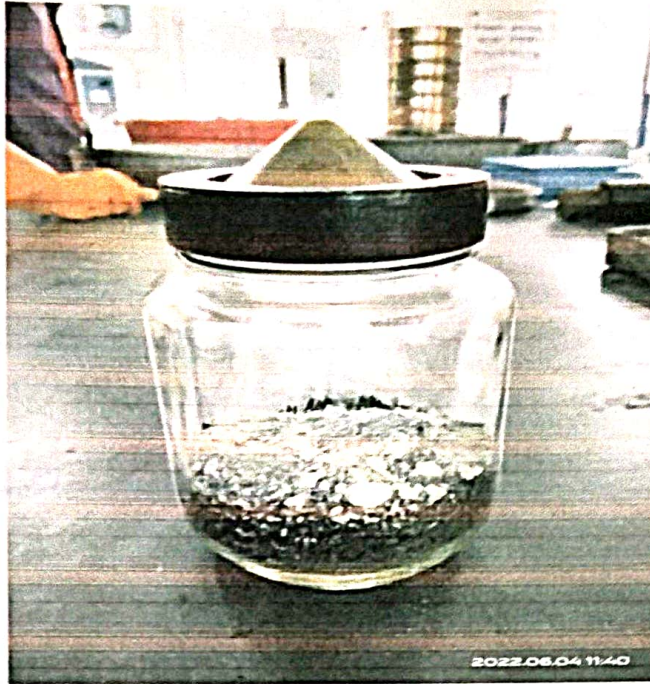
W1 – Empty weight of Pycnometer

W2 – Sand filled up to half

W3 – Sand + Water

W4 – Pycnometer filled with water





**Fig 6: Specific Gravity of Silica Sand**

**Table 7 - Specific Gravity**

| Sl.No | Percentage of Admixtures | W1 (g) | W2 (g) | W3 (g) | W4 (g) | Specific Gravity (G) |
|-------|--------------------------|--------|--------|--------|--------|----------------------|
| 1     | HPWA - 10%, SS- 5%       | 595    | 899    | 1694   | 1513   | 2.47                 |
| 2     | HPWA - 10%, SS- 10%      | 595    | 827    | 1304   | 1513   | 2.87                 |
| 3     | HPWA - 10%, SS- 15%      | 595    | 956    | 1845   | 1513   | 3.24                 |
| 4     | HPWA - 10% SS- 20%       | 595    | 875    | 1498   | 1513   | 2.96                 |
| 5     | HPWA - 10%, SS- 25%      | 595    | 822    | 1320   | 1513   | 2.67                 |

## CHAPTER 6

### CONCLUSIONS

- The working capacity of the concrete is decreased according to the Hospital Waste Ash substitution percentage. In an equivalent weight basis, hospital waste ash and silica sand occupy more volume than cement, requiring more water for concrete workability.
- In addition to 10 percent substitution of cement with Hospital Waste Ash, the setting time increases.
- The findings show that as the substitution standard increased, the workability of concrete reduced. This may be attributed to the fact that ash is lighter than cement. In an equivalent weight basis, hospital waste ash and silica sand occupy more volume than cement, requiring more water for concrete workability.
- The mechanical performance of a blended concrete shows high compression, tensile and flexural strength at 10% partly replaced cement by HWA than conventional concrete and other proportions.
- For M30-At 28 days the compressive strength for 5%, and 10% attains 2.28%, 6.01% more than conventional concrete. The strength of 15% and 20% attains 2.10%, 1.35% which is less than conventional concrete.
- For M30-At 28 days the split tensile strength for 5%, and 10% attains 1.74%, 3.29% more than conventional concrete. The strength of 15% and 20% attains 0.25%, decrease by 1.77% which is less than conventional concrete.



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