**AMR/ECE/BOS/2024-25/MOM/1** Date : 23-09-2024

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

**MINUTES OF MEETING - BOARD OF STUDIES (BOS)**

The first Board of Studies (BOS) meeting of the department of ECE was conducted on 23.09.2024 through online mode (ZOOM) at 3.00P.M (IST).The following members were attended the online meeting.

| S.No | Name of the Member | Designation/occupation | category | Signature |
|---|---|---|---|---|
| 1 | Mr. P S.K. Ganesh Kumar | Head of the Department | Chairman | |
| 2 | Dr.B.T. Krishna | Professor, ECE Department, UCEK, JNTUK, Kakinada | University Nominee | |
| 3 | Dr. M S S Rukmini | Professor, Dept. of ECE, Vignan University Vadlamudi, Guntur | Subject experts outside parent university | |
| 4 | Dr. Sudha Ellison Mathe | Associate Professor, Depart of ECE, VIT- AP | | |
| 5 | Mr. M Rosi Reddy | IT, Director, Sanofi US | Industrialist | |
| 6 | Mr. P.Sudheer Kumar | Asst. Professor | Faculty Members | |
| 7 | Mr. K Sanjeeva Rao | Asst. Professor | | |
| 8 | Mr. N Ramesh Babu | Asst. Professor | | |
| 9 | Mr. G. Anil Kumar | Asst. Professor | | |
| 10 | Mrs. Sk. Khasim Bee Bi | Asst. Professor | | |
| 11 | Mr. R Shantha Kumari | Software Engineer Infinite Software Pvt. Ltd | Alumni Member | |

Mr P S K Ganesh Kumar, Chairman of BOS opened the meeting by welcoming and introducing the external members to the internal members. The chairman placed the following agenda for the deliberations and discussions of the members. The following are the deliberations made during the meeting (as per the items of the circulated agenda).

**The following points were discussed and approved during the meeting**

1. University Nominee Dr. B T Krishna Garu, congratulate the Management and Staff of A.M.Reddy Memorial College of Engineering and Technology.
2. The following proposed AMR 24 Course Structure and the detailed syllabi of I-I, I-II were presented, discussed and approved.
   1. **For Group – A (CSE , EEE)**

| GROUP –A – COURSES (CSE ,EEE) | | | | | |
|---|---|---|---|---|---|
| **I Year – I SEM** | | | | | |
| **S.No.** | **Title** | **Credits** | **S.No.** | **Title** | **Credits** |
| 1 | Communicative English | 2 | 6 | Communicative English Lab | 1 |
| 2 | Engineering Chemistry/Chemistry/Fundamental Chemistry | 3 | 7 | Engineering Chemistry/ Chemistry/Fundamental Chemistry Lab | 1 |
| 3 | Linear Algebra & Calculus | 3 | 8 | Engineering Workshop | 1.5 |
| 4 | Basic Civil & Mechanical Engineering | 3 | 9 | Computer Programming Lab | 1.5 |
| 5 | Introduction to Programming | 3 | 10 | Health and wellness, Yoga and Sports | 0.5 |
| **I SEM - TOTAL CREDITS** | | | | | **20.5** |
| **I Year – II SEM** | | | | | |
| 1 | Engineering Physics | 3 | 6 | IT Workshop | 1 |
| 2 | Differential Equations & Vector Calculus | 3 | 7 | Engineering Physics Lab | 1 |
| 3 | **Basic Electrical and Electronics Engineering** | 3 | 8 | **Electrical and Electronics Engineering Workshop** | 1.5 |
| 4 | Engineering Graphics | 3 | 9 | Data Structures Lab / Electrical Circuits Lab | 1.5 |
| 5 | Data Structures / Electrical Circuit Analysis – I (Branch specific) | 3 | 10 | NSS/NCC/Scouts & Guides/Community Service | 0.5 |
| **II SEM - TOTAL CREDIT** | | | | | **19.5** |

**2. For Group –B (ECE, CE, AGE, Cyber Security)**

| GROUP –B – COURSES (Cyber Security ,ECE,MECH,CE, AGE) | | | | | |
|---|---|---|---|---|---|
| I Year – I SEM | | | | | |
| **S.No.** | **Title** | **Credits** | **S.No.** | **Title** | **Credits** |
| 1 | Engineering Physics | 3 | 6 | IT Workshop | 1 |
| 2 | Linear Algebra & Calculus | 3 | 7 | Engineering Physics Lab | 1 |
| 3 | **Basic Electrical & Electronics Engineering** | 3 | 8 | **Electrical & Electronics Engineering Workshop** | 1.5 |
| 4 | Engineering Graphics | 3 | 9 | Computer Programming Lab | 1.5 |
| 5 | Introduction to Programming | 3 | 10 | NSS/NCC/Scouts & Guides/Community Service | 0.5 |
| **I SEM - TOTAL CREDITS** | | | | | **20.5** |
| I Year – II SEM | | | | | |
| 1 | Communicative English | 2 | 6 | Communicative English Lab | 1 |
| 2 | Engineering Chemistry / Chemistry / Fundamental Chemistry | 3 | 7 | Engineering Chemistry / Chemistry /Fundamental Chemistry Lab | 1 |
| 3 | Differential Equations & Vector Calculus | 3 | 8 | Engineering Workshop | 1.5 |
| 4 | Basic Civil & Mechanical Engineering | 3 | 9 | Engineering Mechanics & Building Practices Lab Engineering Mechanics Lab / Network Analysis and Simulation Lab / Data structures Lab / Soil Science and Agronomy Field Lab | 1.5 |
| 5 | Engineering Mechanics/ Network Analysis/ Data structures / Principles of Soil Science and Agronomy (Branch Specific) | 3 | 10 | Health and wellness, Yoga and Sports | 0.5 |
| **II SEM - TOTAL CREDITS** | | | | | **19.5** |

3. Discussed and Approved the syllabus of Basic Electrical & Electronics Engineering (T)**(Annexure -1)**, Electrical & Electronics Engineering Workshop (L) **(Annexure -2)**I year – I Sem & II semester

**The following points were suggested for future possible implementations:**

1. Dr B T Krishna Suggested that we can change the syllabus upto 25% if necessary.
2. Dr. Sudha Ellison MatheSuggested to enhance the quality as per industrial requirements.

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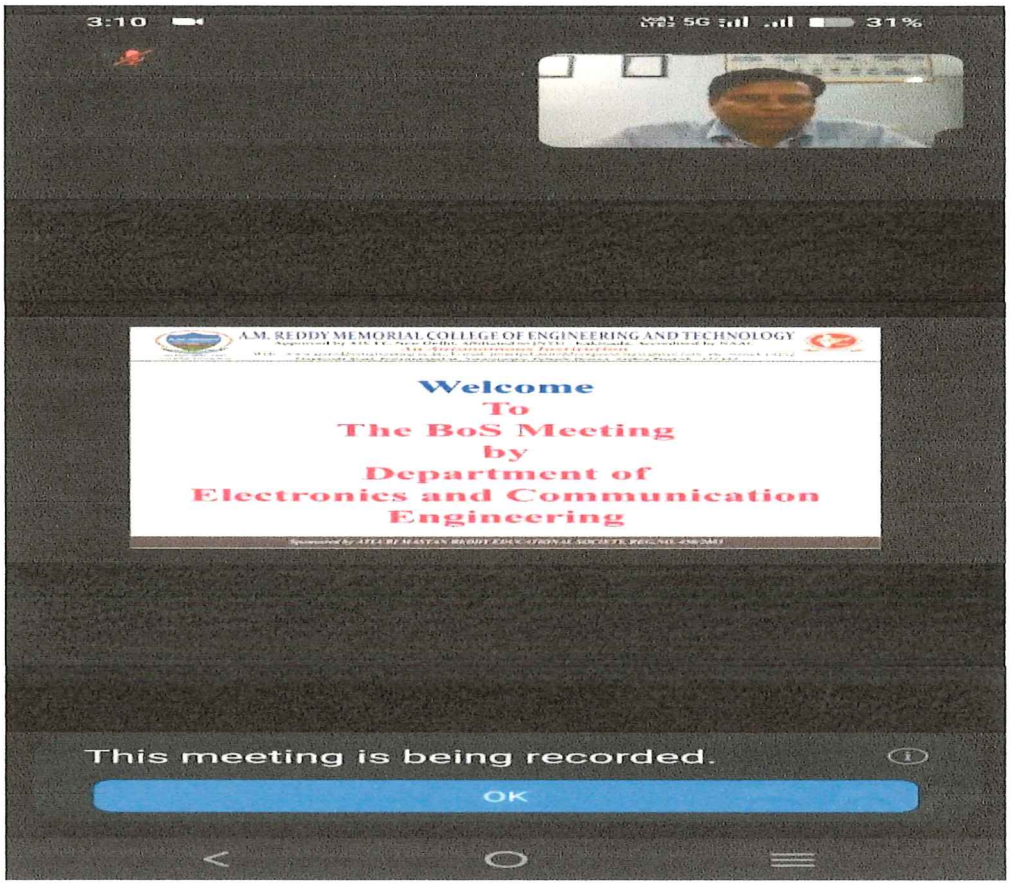


P. S. Ch

**Chairman**

**BoS – Dept. of ECE**

HEAD OF THE DEPARTMENT
ELECTRONICS AND COMMUNICATION ENGINEERING
A.M. REDDY MEMORIAL COLLEGE OF ENGG & TECH
PETLURIVARIPALEM
Narasaraopet (Md.), Guntur (Dt.)

**Copy to:**

1. **Principal**
2. **IQAC**



P. S. Ch

B. T. Krishna

# ANNEXURE – 1

**AMR – 24**

## BASIC ELECTRICAL & ELECTRONICS ENGINEERING

**(Common to All branches of Engineering)**

| L | T | P | C |
|---|---|---|---|
| 3 | 0 | 0 | 3 |

**PART- B**

**Course Objectives**

To teach the fundamentals of semiconductor devices and its applications, principles of digital electronics.

**UNIT I**

**SEMICONDUCTOR DEVICES**

Introduction - Evolution of electronics – Vacuum tubes to nano electronics - Characteristics of PN Junction Diode — Zener Effect — Zener Diode and its Characteristics. Bipolar Junction Transistor — CB, CE, CC Configurations and Characteristics — Elementary Treatment of Small Signal CE Amplifier.

**UNIT II**

**BASIC ELECTRONIC CIRCUITS AND INSTRUMENTTAION**

Rectifiers and power supplies: Block diagram description of a dc power supply, working of a full wave bridge rectifier, capacitor filter (no analysis), working of simple zener voltage regulator. Amplifiers: Block diagram of Public Address system, Circuit diagram and working of common emitter (RC coupled) amplifier with its frequency response. Electronic Instrumentation: Block diagram of an electronic instrumentation system.

**UNIT III DIGITAL ELECTRONICS**

Overview of Number Systems, Logic gates including Universal Gates, BCD codes, Excess-3 code, Gray code, Hamming code. Boolean Algebra, Basic Theorems and properties of Boolean Algebra, Truth Tables and Functionality of Logic Gates – NOT, OR, AND, NOR, NAND, XOR and XNOR. Simple combinational circuits–Half and Full Adders. Introduction to sequential circuits, Flip flops, Registers and counters (Elementary Treatment only)

**Textbooks:**

1. R. L. Boylestad & Louis Nashlesky, Electronic Devices & Circuit Theory, Pearson Education, 2021.
2. R. P. Jain, Modern Digital Electronics, 4th Edition, Tata Mc Graw Hill, 2009

**Reference Books:**

1. R. S. Sedha, A Textbook of Electronic Devices and Circuits, S. Chand & Co, 2010.
2. Santiram Kal, Basic Electronics- Devices, Circuits and IT Fundamentals, Prentice Hall, India, 2002.
3. R. T. Paynter, Introductory Electronic Devices & Circuits – Conventional Flow Version, Pearson Education,2009.

**End examination pattern:**

i) Question paper shall be in two parts viz., Part A and Part B with equal weightage of 35marks each.

ii) In each part, question 1 shall contain 5 compulsory short answer questions for a total of5 marks such that each question carries 1 mark.

iii) In each part, questions from 2 to 4, there shall be either/or type questions of 10 marks each. Student shall answer any one of them. The questions from 2 to 4 shall be set by covering one unit of the syllabus for each question.

# ANNEXURE – 2

**AMR – 24**

## ELECTRICAL & ELECTRONICS ENGINEERING WORKSHOP

**(Common to All branches of Engineering)**

| L | T | P | C |
|---|---|---|---|
| 0 | 0 | 3 | 1.5 |

**PART- B**

**ELECTRONICS ENGINEERING LAB**

**Course Objectives**

To impart knowledge on the principles of digital electronics and fundamentals of electron devices & its applications.

**Course Outcomes:** At the end of the course, the student will be able to

**CO1:** Identify & testing of various electronic components.

**CO2:** Understand the usage of electronic measuring instruments.

**CO3:** Plot and discuss the characteristics of various electron devices.

**CO4:** Explain the operation of a digital circuit.

**List of Experiments:**

1. Plot V-I characteristics of PN Junction diode A) Forward bias B) Reverse bias.
2. Plot V – I characteristics of Zener Diode and its application as voltage Regulator.
3. Implementation of half wave and full wave rectifiers
4. Plot Input & Output characteristics of BJT in CE and CB configurations
5. Frequency response of CE amplifier.
6. Simulation of RC coupled amplifier with the design supplied
7. Verification of Truth Table of AND, OR, NOT, NAND, NOR, Ex-OR, Ex-NOR gates using ICs.
8. Verification of Truth Tables of S-R, J-K& D flip flops using respective ICs

Tools / Equipment Required: DC Power supplies, Multi meters, DC Ammeters, DC Voltmeters, ACVoltmeters, CROs, all the required active devices.

**References:**

1. R. L. Boylestad & Louis Nashlesky, Electronic Devices & Circuit Theory, PearsonEducation,2021.
2. R. P. Jain, Modern Digital Electronics, 4th Edition, Tata Mc Graw Hill, 2009
3. R. T. Paynter, Introductory Electronic Devices & Circuits – Conventional Flow Version,PearsonEducation,2009.

**Note:** Minimum Six Experiments to be performed. All the experiments shall be implemented using both Hardware and Software.