



**MARWADI SIKSHA SAMITHI**

**Ramnath Guljarilal Kedia College of Commerce**

(Affiliated to Osmania University, NAAC Re-Accredited)

3-1-336, Esamia Bazar, Opp. New Chaderghat Bridge, Hyderabad- 500027.

## **ELECTRONICS(2022-2023)**

### **BSc Electronics Program Outcome**

- Understand the basic concepts of electronics components, network theorem, digital electronics, solid state semi conductor devices, amplifier theory, Analog and Digital circuits, basic circuits, design using circuit maker software and their application.
- Analyze different parameters of various circuits.
- Understand the use of electronics in the field of computer science.
- Perform and testing of different electronics components and circuits.
- Analyze the Input, Output V-I characteristics of the circuits.
- Understand the application of Electronics in domestic appliances.
- Analyze the relationship between analogue and digital circuits.
- Repair small household electrical and electronics appliances.

### **COURSE OUTCOME**

#### **SUBJECT: E1-CIRCUIT ANALYSIS**

- Will be able to understand the concept of electronic components and its arrangement to retrieve the results.
- Apply Kirchhoff's laws to any network circuit to get the output.
- Understanding the concept of Node, Mesh, loop and retrieving the current and voltage outcome.
- Measuring the properties like time, frequency, current, wavelength, phase, voltage etc by using circuits and formula.
- Will be able to solve any kind of network which consists of R,L,C components in series and parallel form

#### **SUBJECT: E2-ELECTRONIC DEVICES**

- To construct PN junction diode with P-type and N-type materials and calculates its current and voltage parameters.
- To construct Zener, Tunnel, and Varactor diodes and calculates its characteristics.
- How temperature is affected by using different diodes in forward and reverse bias conditions.
- How to construct Transistors in Bi-directional and Uni-directional depending on their terminals.
- How to form Metal oxide semiconductor and to calculate depletion and enhancement modes.
- How to construct LED, LDR, SCR, Photo diode, photo transistor.

### **SUBJECT: E3- ANALOG CIRCUITS**

- How to convert AC signal into DC signal by using Rectifier and Filters.
- How three terminal devices work and how to use SMPS AND UPS technique.
- Calculation of feedback in circuit as positive or negative form.
- How Oscillations are constructed and their types.
- How to generate multiple wave form by using different components.

### **SUBJECT: E4- LINEAR INTERGRATED CIRCUITS AND BASICS OF COMMUNICATION**

- Arranging circuits in linear form and calculating the output.
- Calculation of different operations like addition, subtraction, logarithmic, comparator, differentiation and integration using Amplifier and how to generate Sine, Square, Triangular, A-stable multi-vibrator, Mono stable multi-vibrator.
- Understanding the operation of IC 555 Timer and retrieving Astable and Mono stable multi-vibrators.
- Need of modulation process in communication and generation of AM, FM PM Waves.

### **SUBJECT: E5-DIGITAL ELECTRONICS (DSE-1)**

- How communication is possible between user and any system by using Number systems.
- Applying the laws like Boolean algebra, De-Morgan's to the given circuits and reduces the operation on it.
- How sequential and combinational circuits are formed and used in day to day life.
- Knowing the difference between Analog and Digital signals.
- Application to serial communication.
- Understanding the concept of Microprocessor and how it is used in the process of digital communication.

### **SUBJECT: E6- 8051 MICRO CONTROLLER AND APPLICATION**

- Along with Processor how Controller works in process of digital and analog communication.
- How to write assemble language program using different instruction set and addressing modes.
- How it is applicable to LCD, Keyboard, seven segments LED, ADC and DAC etc.
- How to convert analog to digital form vice-versa.

  
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