QUESTIONS BANK

1st SEM – MINING , METALLURGY, ELECTRICAL

2nd SEM- CIVIL , MECHANICAL

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Chapter-1

1. Define Electronics & its application.
2. Define work function.
3. Define Electronic Emission & different types of Emission.
4. Explain Conductor, Semiconductor & Insulator with respect to energy band diagram only.
5. Define doping.
7. Discuss Intrinsic Semiconductor.

8. Discuss Extrinsic Semiconductor.

9. Explain the difference between vacuum tube & semiconductor.

10. State basic concept of integrated circuits (I.C) & its use.

11. Define accepter & donor atom

12. State the difference between N and P type of semiconductor.

13. Differentiate between Intrinsic and Extrinsic Semiconductor.

CHAPTER-2

1. Define Rectifier & state its use.

2. Explain P- N junction .

3. Define PN junction Barrier voltage, depletion region.

4. Draw Forward biased & reversed biased junction Diode

5. Draw symbol, circuit diagram for characteristics (Forward & reversed) Characteristics PN junction diode.

6. Define Forward voltage drop, Reversed saturation current, maximum forward current.

7. Explain Construction characteristics of Zener Diode

8. Explain Avalanche & Zener breakdown and its comparison.

9. Define Zener voltage, power dissipation, breaks over current, dynamic resistance & maximum reverse current.

10. Explain Construction, Symbol circuit diagram for characteristics of LED.

11. Draw and explain the working principle of centertap full wave rectifier.

12. Explain the working principle of Bridge rectifier.

13. State PIV of a diode.

14. State the full wave rectifier efficiency.

15. Compare HWR &FWR.

16. Need of filter in power supply.

17. State different types of filters .

18. Define ripple & ripple factor.

19. State voltage regulation.

20. Draw the circuit diagram of zener diode as a voltage regulator .

21. Draw the basic block diagram of Unregulated DC power supply.

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CHAPTER-3

1. What is a transistor?
2. Define α.
4. Draw the transistor symbols.
3. State relation between α, β & γ.
5. State different types of transistor configurations (CE,CB& CC) .
7. Define input & output resistance of transistor.
8. Draw the input output characteristics of common emitter configuration.
11. State the need of biasing & name different types of biasing.
12. Draw the circuit of base bias method of biasing.
13. State saturation & cut-off of transistor.
14. What is Q point? State need of stabilization of Q-piont?

15. Explain Single stage transistor CE amplifier.

16. What is Oscillator?

17. Differentiate between amplifier and oscillator.

CHAPTER-4

1. Draw and explain the Blockdiagram communication system.

2. Define Transmission & Reception.

3. Define Modulation & its need.

4. Define Signal, Carrier Wave & Modulated Wave

5. Name different types of Modulation.(AM,FM & PM)

6. Discuss Amplitude Modulation & draw its wave form

7. Discuss Frequency Modulation & draw its wave form.

8. Differentiate between AM & FM.

CHAPTER-5

1. Define transducer.
2. Classify different type of transducers.
3. Differentiate between active and passive transducer.
4. Differentiate between sensor and transducer.
4. Explain working of Digital multimeter with neat block diagram
5. Comparison between Analog and Digital multimeter
6. Explain internal architecture of CRO, Measurement (Frequency & amplitude)& its use.