BCA 03 Basic Electronics

SET: 1

Section-A

Very Short Answer Questions

1. (i)What is crystal diode?

(ii)What is ripple factor?

(iii)What is zener diode?

(iv)Name the three possible transistor actions.

(v)What is the transistor?

(vi)What is the utility of d.c load line?

(vii)What is faithfull amplification?

(viii) Explain the term universal gates.

(ix) What are the postulates?

(x)What is light emitting diode?

Short Answer Questions

2. Explain a half wave rectifier using crystal diode.

3. Explain the nature of rectifier output.

4. Explain the operation of transistor as an amplifier.

5. Why is collector current slightly less than emitter current?

6. What is significance of arrow in the transistor symbol?

7. Why has transistor inherent variation of parameter?

8. What do you understand by transistor biasing? What is its need?

9. Draw the symbol of npn and pnp transistor and specify the leads.

Long Answer Questions

10. Explain the potential divider method in detail. How stabilisation of operating point achieved by this method.

11. Draw the circuit of a practical single stage common emitter transistor amplifier is 180 degree out of phase with the input voltage.

12. Describe the construction and charactistics of p channel enhancement MOSFET, also define the threshold voltage.

13. Explain how zener diodes maintain constant voltage across the load.

BCA 03 Basic Electronics

SET-2

Very Short Answer Questions

1.(i)Explain any two properties of Boolean algebra.

(ii) Define minterm and maxtrerm.

(iii) Draw a NAND gate with the help of NOR gate.

(iv) Explain synchronous sequential circuits.

(v)Explain UJT.

(vi)Explain early effect.

(vii)Explain the shape of the curve.

(viii)What is the order of magnitude?

(ix)Explain a half wave rectifier using crystal diode.

(x)Why base is made thin?

Short Answer Questions

2. Explain the working of tri state TTL NAND GATE.

3. Draw in CMOS NAND, NOR, Inverted gate.

4. What is significance of arrow in the transistor symbol?

5. Why does a.c load differ from a.c load?

6. What is the importance of load line analysis?

7. What do you understand by a.c and d.c resistance of ctrystal diode?

8. Why is collector current slightly less than emitter current?

9. Explain the construction and working of a FET.

Long Answer Questions

10. Describe the construction and charactistics of p channel enhancement MOSFET, also define the threshold voltage.

11. Draw the circuit diagram of a two stage RC coupled FET amplifier and its equivalent also analyse it to obtain its gain bandwidth product.

12. Draw the circuit a common gate FET amplifier and derive expressions for voltage gain.

13. Explain how zener diode maintains constant voltage across the load.