

Question Bank (G scheme)

Name of subject: Basic electronics

Subject code: 17213

Semester: II

Unit Test :II

Course : CM/IF

CHAPTER 4: Transistors

[24MARKS]

3 MARKS

1] Draw the symbol of;

- a] PNP and NPN transistor
- b] N channel and p channel JFET
- c] Depletion and enhancement MOSFET

2] Write advantages of JFET over BJT

3] Define with diag.

A] DC load line

B] Q point

4] Define;

A] Drain resistance

B] Trans conductance

C] Amplification factor

4 MARKS

5] Draw and explain NPN and PNP transistor with principle of working

6] Draw and explain input and output characteristics of CE config. Explain active region, saturation region and CUT OFF REGION

7] Explain current gain α , β and give relation between α , β

8] Derive and explain with ckt diag. of v_{tg} divider bias of BJT

9] Draw and explain n channel and p channel jfet with const. and working

- 10] Draw and explain e and d type MOSFET with symbol and working principle
- 11] Compare BJT and JFET and MOSFET

CHAPTER 5: Amplifiers and Oscillators [24MARKS]

3 MARKS

- 12] What is need of multirange amplifier
- 13] Give any 3 applications of multirange amplifier
- 14] Define oscillator and need of oscilloscope
- 15] What is multi vibrator? Give type of multi vibrator?

4 MARKS

- 16] Draw and explain single stage CE amplifier with function of various components
- 17] Draw and explain freq. response of single stage CE amplifier. Also explain band width and gain.
- 18] Draw and explain RC coupled 2 stage CE amplifier. with freq. response
- 19] Draw and explain transformer coupled 2 stage amplifier. with freq. response
- 20] Draw and explain critical oscillators with operating principle and applications
- 21] Draw and explain transistors as a switch with operating and applications
- 22] Draw and explain Bistable multi vibrator with working principle and application

CHAPTER 6: Integrated Circuits [4 MARKS]

3 MARKS

- 23] Give any 2 advantages and disadvantages of IC's

4 MARKS

- 24] Compare analog and digital IC
- 25] Draw and explain CLC filter with principle of working and input and output waveforms