

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 amplr. Also explain band width and gain.
18] Draw and explain RC coupled 2 stage CE amplr. with freq. response
19] Draw and explain transformer coupled 2 stage amplr. 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