

- Q.29 Write applications of CMOS.
 Q.30 Explain operations of FET.
 Q.31 Explain CB Configuration of transistor.
 Q.32 Compare P and N type semiconductor.
 Q.33 Explain Series inductor filter
 Q.34 Explain V-I characteristics of diode
 Q.35 Explain fixed bias circuit

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain Single stage transistor amplifier circuit.
 Q.37 Explain energy level diagram of conductors, semiconductors and insulators.
 Q.38 Compare CB, CC and CE configuration.

No. of Printed Pages : 4 202424/ 170827/ 120826/
 Roll No. 030823

**2nd Sem / Comp, ECE, IT & control, Mechatronics,
 Med. Eltx, Eltx & Instr., Power Eltx , EEE
 Subject:- Basic Electronics / Analog Eltx.**

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 The width of base region as compared to emitter _____
 a) Small b) Large
 c) Same d) Half
- Q.2 Acceptor type semiconductor is formed by adding impurity of valency _____
 a) 3 b) 4
 c) 5 d) 6
- Q.3 At room temperature, the intrinsic semiconductor act as _____
 a) Copper wire b) Insulator
 c) semiconductor d) Conductor

- Q.4 The rectification efficiency of a half wave rectifier_____
- a) 40.6% b) 25.6%
- c) 82.6% d) 54.6%
- Q.5 The ideal value of stability factor is _____
- a) 1 b) 0
- c) Infinity d) None
- Q.6 Ideally an amplifier must have _____input resistance
- a) 0 b) low
- c) medium d) infinite
- Q.7 A zener diode is operated in _____region
- a) Breakdown b) Forward bias
- c) Both A and B d) None
- Q.8 Under saturation condition , collector current has----
-- value
- a) maximum b) Zero
- c) Infinite d) None
- Q.9 Semiconductors have-----bonds
- a) Ionic b) Covalent
- c) Both d) None
- Q.10 The CE transistor circuit has _____
- a) High Gain b) Low gain
- c) zero d) None

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 majority carriers in P Type semiconductor is _____?
- Q.12 A semiconductor diode has _____ no of junctions?
- Q.13 What is doping?
- Q.14 BJT stands for _____
- Q.15 The bridge rectifier uses _____ no of diodes.
- Q.16 What is drift current ?
- Q.17 What is filter .
- Q.18 Explain BJT .
- Q.19 What is zener diode
- Q.20 Draw symbol of PNP transistor

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Explain working of PNP Transistor?
- Q.22 Explain avalanche breakdown
- Q.23 Explain in brief operation of Half wave rectifier
- Q.24 Explain the concept of Junction capacitance in forward and reverse biased diodes
- Q.25 Explain concept of DC load line .
- Q.26 Explain operation of MOSFET in depletion mode.
- Q.27 Define PIV and potential barrier
- Q.28 Explain the concept of leakage current?