

- 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.

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

Time : 3 Hrs.

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 Expalin 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?