Q.26 Explain the need of stabilization of operating point.

Q.27 Discuss transformer couplings used in multi stage transistor amplifier.

Q.28 Differentiate N type and P type extrinsic semiconductor.

Q.29 Draw the characteristics of zener diode and explain it.

Q.30 Explain the concept of h-parameters of a transistor..

Q.31 Draw the circuit of 2-stage RC coupled transistor amplifier.

Q.32 What are the main advantages of FET over B J T.

Q.33 Explain the working of PNP transistor.

Q.34 Define PIV and Ripple factor. what is its value for Half wave rectifier

Q.35 Explain N channel JFET.

SECTION-D

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

Q.36 Draw the circuit diagram of Full wave rectifier bridge and explain its working along with waveforms.

Q.37 Classify solids on the basis of energy level diagram.

Q.38 Draw the circuit of single stage transistor amplifier and explain it.

Roll No. .....

3rd Sem / Electrical, GE, Power Station Engg., Elect. & Eltx. Engg., Fine Tech & Safety

Subject:- ELECTRONICS-I/ BASIC EITX

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 In case of ideal current sources, they have_____

a) zero internal resistance
b) low value of voltage
c) large value of current
d) infinite internal resistance

Q.2 Pick the incorrect statement among the following .

a) Inductor is a passive element
b) Current source is an active element
c) Resistor is a passive element
d) Voltage source is a passive element

Q.3 How does a semiconductor behave at absolute zero ?

a) Conductor b) Insulator
c) Semiconductor d) Protection device

Q.4 What is a Zener diode used as?

a) Oscillator b) Regulator
c) Rectifier d) Filter

Q.5 B J T stands for_____

a) Bi-Junction Transfer
b) Blue Junction Transistor
c) Bipolar Junction Transistor
d) Base Junction Transistor

Q.6 Which junction is forward biased when transistor is used as an amplifier ?

a) Emitter-Base
b) Emitter-Collector
c) Collector-Base
d) No junction is forward biased

Q.7 The best transistor configuration is

a) CE b) CB
c) CC d) None

Q.8 Faith full Amplification is obtained when the operating point of the transistor is

a) near saturation
b) in the middle of the active region
c) near cutoff region
d) any of the above.

Q.9 The frequency response of transformer coupling is _____

a) Good b) Very Good
c) Excellent d) Poor

Q.10 Which of the following statement is true about FET ?

a) It has high output impedance
b) It has high input impedance

c) It has low input impedance
d) It does not offer any resistance

SECTION-B

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

Q.11 The electrics components which cannot process the signal are called _____components.

Q.12 Define Doping.

Q.13 Explain forbidden energy gap.

Q.14 What is knee voltage for silicon diode.

Q.15 Draw the symbol of PNP transistor.

Q.16 Define operating point in transistor biasing.

Q.17 What is AC load line.

Q.18 Define multistage transistor Amplifier.

Q.19 Write the full form of MOSFET .

Q.20 What are rectifiers.

SECTION-C

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

Q.21 What are constant voltage sources? Draw the symbol of practical AC Voltage source.

Q.22 Show a conversion of practical voltage source in to current source with appropriate circuit.

Q.23 Draw the atomic structure of Germanium and Boron.

Q.24 What are filter circuits. Explain any one filter circuit.

Q.25 Compare the three transistor configuration (CB, CE, CC).