ASSIGNMENT OF BASIC ELECTRONICS - MODULE -1 & 4

2nd SEMESTER, BRANCH-CSE

SECTION-A

Each question carries 2 marks

a. What PN- junction diode? Draw its circuit symbols and its equivalents circuit diagram.
b. Write diode current equation. Define each parameters of diode equation.
c. Draw diode characteristics curve mention AC and DC resistance of diode from the graph and show Q-point.
d. Write few application of LED.
e. Draw the circuit diagram for finding the input and output characteristics if transistor.
f. An ideal diode act as like a bi-stable switch, justify.
g. Differentiate between conductor, semiconductor and insulator.
h. Draw three different circuit diagrams for CC, CB, and CE configuration of BJT.
i. Draw X-OR and EX-NOR gates with its truth table.
j. Convert$(1001110.011)_2=(\ )_{10}$

SECTION – B

Each question carries 6 marks

1) Write short note on zener and avalanche break break-down in case of PN-junction diode.
2) Write short note on Zener diode with its application.
3) Draw positive and negative series clipper and explain the working principle.
4) Draw common emitter transistor amplifier derive total current and show the relation between α and β.
5) Draw the input output characteristics of CE BJT amplifier draw AC, DC, load line.
6) Draw half wave rectifier and explain its operation find I_{dc},V_{dc},I_{rms},V_{rms},P_{dc},P_{ac}, efficiency and ripple factor

SECTION – C

Each question carries 16 marks

a) Draw the different types of logic gates with its truth table

b) Convert the following no system
$(1457.238)_8=(\ )_{10}$?
$(1A05.2C4)_{16}=(\ )_{10}$?
$(58.25)_{10}=(\ )_8$?
$(.25.25)_{10}=(\ )_2$?