S. B. Roll. No.....

BASIC ELECTRONICS
2nd Exam/ECE/IT/CSc/Mechatronic/0190/Dec'22
(For 2018 Batch Onwards)

Duration: 3Hrs. **M.Marks:75**

SECTION-A

Q1. Do as directed. **15x1=15**

a. Valence electrons are present in which orbit of an atom?
b. The majority carriers in N-type semiconductor are _____.
c. How many diodes are used in Bridge rectifier?
d. The ripple factor of Half wave rectifier is _____.
e. The rectifier efficiency of Half- wave rectifier is _____.
f. Draw circuit symbol of Zener diode.
g. Name different terminals of a transistor.
h. In any transistor circuit, I_E = _____ + _____
i. Draw circuit symbol of NPN transistor.
j. In transistor base is made very _____ and it is_____ doped.
k. The ideal value of stability factor is _____.
l. The d. c. load line is a plot of _____and _____.
m. The output impedance of a transistor amplifier in CB mode is very _____.
n. MOSFET has _____ Terminals.
o. The input impedance of an FET is _____than that of BJT.

SECTION-B

Q2. Attempt any six questions. **6x5=30**

i. Write a note on P-type semiconductor.
ii. Explain doping briefly?
iii. Write a short note on Zener diode.
iv. Explain the working of PNP transistor with diagram.
v. Why CE configuration is commonly used?
vi. Define transistor biasing.
vii. Compare JFET with Ordinary transistor.
viii. What is ripple factor? How it can be minimized?

SECTION-C

Q3. Attempt any three questions. **3x10=30**

a. Discuss the Half wave rectifier with diagram.
b. Discuss the working of filter circuits used in rectifiers.
c. Draw and explain the characteristics of common emitter configuration.
d. Explain potential divider bias circuit in detail.
e. Explain the construction and working of FET.