

## BASIC ELECTRONICS

2nd/ECE/Comp/EMP/ETV/ECE(II)/EEE/CSc/0664/Nov'15

Duration: 3 Hrs.

M.Marks=75

### SECTION A

Q.1 Fill in the Blanks

10x1.5=15

- A. The turn on voltage of a Germanium diode is \_\_\_\_\_
- B. A FET depend on the Variation of the \_\_\_\_\_ with reverse voltage for its operation.
- C. The output voltage waveform of CE amplifier is \_\_\_\_\_ with its input voltage.
- D. Draw the symbol of p-MOSFET.
- E. A zener diode is always operated in \_\_\_\_\_ regon.
- F. When pn junction is heavily doped, its breakdown voltage will \_\_\_\_\_.
- G. Current amplification factor of CB is \_\_\_\_\_
- H. The smaller the stability factor, the \_\_\_\_\_ will be the thermal stability of the circuit.
- I. The meaning of hybrid is \_\_\_\_\_.
- J. DC Load line gives the locus of \_\_\_\_\_ under dc conditions.

### SECTION B

Note: Attempt any FIVE Questions

5x6=30

- A. Explain the need of Stabilization of the Operating Point.
- B. Discuss the advantages of FET over Conventional transistor.
- C. What is fixed bias circuit? Draw and explain.
- D. Compare the forward volt ampere Characteristics of germanium and silicon diode with the help of a diagram
- E. Draw circuit of a Full Wave Bridge Rectifier and explain its working. Draw the output waveform.
- F. Draw and explain the hybrid equivalent circuit of a transistor on CE Configuration.
- G. Draw and explain Filter Circuits.
- H. What is Zener Diode? Explain its Applications.

### SECTION C

Note: Attempt any THREE questions.

3x10=30

- A. Draw and Explain the Common Base Configurations Characteristics.
- B. Explain construction and working principle of FET. Draw the neat diagram.
- C. Write note on PN Junction and its biasing. Difference between the n-type and p-type semiconductor.
- D. Draw the practical circuit of single stage transistor amplifier and state the function of each component.
- E. Write note on

(i) LED

(ii) DC Load Line

(iii) Schottky Diode