Total No. of Questions : 4] **SEAT No. :**

PB5 **[Total No. of Pages : 2**

[6267]-5
F.E. (All Branches) (Insem)
BASIC ELECTRONICS ENGINEERING
(2019 Pattern) (Semester - II) (104010)

Time : 1 Hour] ***[Max. Marks : 30***

Instructions to the candidates:

1) ***Solve Q.1 or Q.2, Q.3 or Q.4.***
2) ***Figures to the right side indicates full mark***
3) ***Draw neat diagram wherever necessary.***
4) ***Assume suitable data if necessary.***

Q1) a) Compare Active and Passive Components. List out Active components. **[5]**

b) Draw and Explain V-I characteristics of P-N junction Diode and define following parameters. **[5]**

i) Cut-in Voltage.

ii) PIV

c) Explain zener diode as a voltage regulator with the help of its circuit diagrams. **[5]**

OR

Q2) a) Explain impact of Electronics on Industry and Society. **[5]**

b) Explain the operation of Bridge Rectifier with suitable diagram and waveforms. **[5]**

c) Explain the Concept of Drift and Diffusion Current with diagram. **[5]**

Q3) a) Draw and explain BJT as a switch. **[5]**

b) Give the Ideal Values of Op-Amp and typical values of IC 741 parameters. **[5]**

c) Draw and explain construction & working of N channel E-MOSFFT. **[5]**

OR

P.T.O.

Q4) a) Draw the circuit diagram of Single stage CE amplifier and explain the function of each component. **[5]**

b) Draw and explain functional Block Diagram of Operational Amplifier. **[5]**

c) Draw and explain Drain characteristics of N channel E-MOSFET and show its operating region. **[5]**

❋ ❋ ❋