

Total No. of Questions : 4]

SEAT No. :

PB5

[6267]-5

[Total No. of Pages : 2

**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-MOSFET. [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]

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