21BSC1C1ELL(46125)

B.Sc. I Semester Degree Examination, April/May - 2024

ELECTRONICS

DSC 1 : Basic Electronics

(NEP)

Time : 2 Hours   Maximum Marks : 60

Note : *Answer **all** sections.*

SECTION - A

1. Answer the following sub-questions.   **10x1=10**

   (a) Define passive components.

   (b) What is the unit of capacitance ?

   (c) What is phase in A.C circuits ?

   (d) Define Network and Junction.

   (e) What is Valence electron ?

   (f) What is knee voltage ?

   (g) Expand the term LED.

   (h) What is transistor ?

   (i) Define Donor in semiconductor.

   (j) Expand JFET.

SECTION - B

Answer **any Four** questions.   **4x5=20**

2. What is fixed Resistors ? Explain in brief.

3. Explain the following terms :

   (i) Amplitude   (ii) Time period

   (iii) Voltage   (iv) Peak factor

   (v) Complex number

4. State KCL and KVL in network theorems.

5. Explain the working of P-type semiconductor.

6. Explain the construction and working of LED and write applications.

7. Explain the working principle of PNP transistor.

SECTION - C

Answer **any Three** questions.   **3x10=30**

8. Explain the construction of carbon composition color code resistor with color code chart.

9. Derive the expression for RMS value of a sinusoidal wave form.

10. State and prove maximum power transformer theorem.

11. With neat circuit diagram explain Pn junction diode in forward and reverse bias and draw V-I characteristics curve.

12. Explain the CB, CE and CC configurations of transistors.

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