⁕2295⁕

Electronics Materials & Components
(1010)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :
1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Answer **any two** from each unit.
5. All units are compulsory.
6. Figure to right indicate full marks.
7. Draw diagrams wherever necessary.
8. Assume suitable data if necessary.

UNIT - I

1. a) Enlist the factors for selecting a good conductor material. Enlist properties of copper and Aluminium. **10**

   b) What are semiconductor materials ? Enlist the properties of Germanium and silicon. **10**

   c) State the properties of soft and Hard magnetic materials along with their applications. **10**

UNIT - II

2. a) Explain the process of manufacturing wire wound resistors along with its specifications and applications. **10**

   b) Draw and explain construction of Aluminium Electrolytic capacitor ? Compare Aluminium and Tantalum electrolytic capacitor. **10**

   c) Classify inductors. Explain construction of Air core inductor. List the losses in air core inductor. **10**

UNIT - III

3. a) Draw and explain Zone refining of semiconductor material processing.   **10**

   b) Explain the manufacturing process of Epitaxial type NPN transistor.   **10**

   c) Describe fabrication process of n channel enhancement type MOSFET.   **10**

UNIT - IV

4. a) Explain fabrication process of IC Resistor and capacitor.   **10**

   b) Draw and explain fabrication process of Liquid crystal display. Give its specifications.   **10**

   c) What is monolithic IC ? What are steps involved in fabricating monolithic IC ? List types of IC packages.   **10**

UNIT - V

5. a) Write a note on.   **10**

   i) Base Material.

   ii) Conducting material.

   b) What is mass soldering ? List its types Explain in brief Dip Soldering.   **10**

   c) Explain :   **10**

   i) Photographic etching.

   ii) Mounting of components on PCB.

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