



**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. Answer sheet 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. Attempt **any two** questions from each unit.
5. Figures to the right indicate full marks.
6. Assume suitable data, if required.

UNIT – I

1. a) What are different types of conducting materials ? Explain their properties and applications. **10**
- b) Explain various factor on which the choice of magnetic materials depend ? Also explain Amorphous semi conductor. **10**
- c) Explain different Insulating materials. Enlist their properties and applications. **10**

UNIT – II

2. a) Explain in detail construction and application of variable tuning capacitor. **10**
- b) Explain various types of Losses in transformer. **10**
- c) Describe the process of manufacturing metal film resistor with constructional detail and typical applications ? **10**

UNIT – III

3. a) Explain in details manufacturing of C-MOS. **10**
- b) Explain in details fabrication of Light Emitting diode. **10**
- c) Explain manufacturing steps in fabrication of NPN epitaxial planar transistor. **10**

UNIT – IV

4. a) Explain different types of bonding of Leads and packaging of ICS. **10**
- b) Describe the fabrication process of IC-diode by diffusion process. **10**
- c) Write short notes on : **10**
- i) Fabrication process of phototransistor.
- ii) Fabrication of LCD.

UNIT – V

5. a) Explain fabrication of PCB for microwave use Enlist materials for microwave PCB. **10**
- b) Explain sequence of operation of Dip soldering and Give their advantages. **10**
- c) Explain different conducting materials used for PCB. **10**
