



Component Devices and Instrumentation Technology
(143104 / 183104 / 233104)

P. Pages : 2

Time : Three Hours

Max. Marks : 80

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. Solve **any two** questions from each unit.
5. Draw neat diagrams wherever necessary.
6. Assume suitable data if necessary.
7. Figures to right indicate full marks.

UNIT - I

1. a) Define the following terms. 8
 - i) Accuracy.
 - ii) Arithmetic mean.
 - iii) Random error.
 - iv) Limiting error.
- b) Explain in detail the permanent magnet moving coil mechanism. 8
- c) Explain shunt type ohmmeter & working with calibration of shunt ohmmeter. 8

UNIT - II

2. a) Explain function generator with block diagram. 8
- b) Explain block diagram of digital multimeter with working. 8
- c) Draw & explain block diagram of Ramp type DVM in detail. 8

UNIT - III

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| 3. | a) Draw and explain Maxwell's Bridge. | 8 |
| | b) Draw and explain schering Bridge. | 8 |
| | c) Draw and explain Wien's Bridge. | 8 |

UNIT – IV

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| 4. | a) Explain the working of photo transistor. | 8 |
| | b) Explain turbine type of flow meter with it diagram. | 8 |
| | c) Draw & explain resistance thermometer. | 8 |

UNIT – V

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| 5. | a) Explain type of PCB. | 8 |
| | b) Explain type of mass soldering. | 8 |
| | c) Explain types of laminates for PCB. | 8 |
