1288

Code : 15EC34T

Register Number | | | | | | | |

III Semester Diploma Examination, April/May-2018

ELECTRONIC MEASUREMENTS & INSTRUMENTATION

Time : 3 Hours] **[Max. Marks : 100**

Note : (i) Answer any **six** full questions from Part – **A**. (5 × 6 = **30** Marks)
(ii) Answer any **seven** full questions from Part – **B**. (7 × 10 = **70** Marks)

PART – A

1. Explain the working principle of Wheatstone bridge. **5**

2. List the factors which describes the selection of transducer. **5**

3. Explain the working of peak responding voltmeter. **5**

4. Define : **5**
   (i) Voltmeter sensitivity
   (ii) Calibration of meter

5. List the features of distortion analyser. **5**

6. Describe the working of Digital Storage Oscilloscope. (DSO) **5**

7. Explain the working of successive approximation type DVM. **5**

8. Explain the working of Digital Frequency Meter. **5**

9. Discuss the precautions to prevent damage to measuring instruments. **5**

[Turn over

PART – B

10. A set of independent current measurements was taken by six observers as 12.8 MA, 12.2 MA, 12.5 MA, 13.1 MA, 12.9 MA & 12.4 MA. Calculate : **10**
    (i) Arithmetic mean
    (ii) The deviation from the mean

11. (a) With neat figure, explain working of a piezo-electric transducer. **5**
    (b) Compare AC and DC bridges. **5**

12. Explain the working of **10**
    (a) L.V.D.T.
    (b) Thermo couple

13. Explain the working of **10**
    (a) Series type ohm-meter
    (b) Shunt type ohm-meter

14. Explain the operation of basic d.c. ammeter & explain why shunt resistor is necessary with an example. **10**

15. With neat block diagram, explain the operation of Cathode Ray Oscilloscope. (CRO) **10**

16. Sketch the neat block diagram of digital storage oscilloscope & explain its working and list its applications. **10**

17. With neat block diagram, explain the working of Ramp type DVM. **10**

18. Explain the working of L.C.R. meter with neat block diagram. **10**

19. (a) Explain the procedure of generalized trouble shootings in instruments.
    (b) Write short notes on grounding and shielding. **10**