*3243*

C09-EE-**305**

# 3243

## BOARD DIPLOMA EXAMINATION, (C-09)
## OCTOBER/NOVEMBER-2018
## DEEE – THIRD SEMESTER EXAMINATION

ELECTRICAL AND ELECTRONIC MEASURING INSTRUMENT

*Time :* 3 Hours ] [ Total Marks: 80

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**PART-A**

3X10=30

***Instructions :***
1. Answer **All** questions.
2. Each question carries **three** marks.
3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. Give one example each for the following instruments:

   (a) Indicating instrument (b) Integrating instrument (c) Recording instrument.

2. Why damping torque is necessary in measuring instruments?

3. Calculate the shunt required to extend the range of moving coil ammeter, which takes 100mA to measure 50 A if the resistance of the coil is 0.1ohm

4. State any three advantages of dynamometer type instruments.

5. For a certain balanced 3-phase load, one wattmeter reads 20kW and other 5kW after the reversal of current coil in two-wattmeter method. Calculate the power of the load.

6. Classify resistances based on their values.

7. Write a short notes on semiconductor sensors.

8. List any three specifications of ramp-type digital voltmeter.

9. List any three advantages of Digital Energy Meters.

10. List any three applications of digital multimeters.

## PART-B

10X5=50

***Instructions :*** 1. Answer any **Five** questions.
2. Each question carries **ten** marks.

11. Draw a legible sketch of 3-phase energy meter and explain its construction.

12. Explain the construction and working of trivector meter with a legible sketch.

13. Explain the construction and working of M.I. attraction type instruments with legible sketch.

14. State any three errors in moving coil instrument and explain their remedies.

15. Explain the working of a potentiometer with a legible sketch.

16. Explain the classification of transducers.

17. Explain the working of three phase digital energy meter with a block diagram

18. (a) What are the different types of supporting systems? Explain any one of them.

    (b) Explain the working of rectifier type voltmeter.

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