

22325

24225

3 Hours / 70 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Answer each next main Question on a new page.
(3) Illustrate your answers with neat sketches wherever necessary.
(4) Assume suitable data, if necessary.
(5) Use of Non-programmable Electronic Pocket Calculator is permissible.
(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following : 10
- a) State the meaning of ‘Absolute standard’ and ‘secondary standard’.
 - b) State the two advantages of P.M.M.C. instrument.
 - c) State the purpose of four quadrant meter.
 - d) List the errors occurring in single phase electronic energy meter.
 - e) Electronic energy meter is also called as static energy meter. Justify the statement.
 - f) State the need of signal generator.
 - g) State the applications of multimeter.

P.T.O.

- 2. Attempt any THREE of the following :** **12**
- a) Draw and write two applications of clamp on meter.
 - b) Write the significance of measurement.
 - c) Draw and explain Tri-vector meter.
 - d) Draw a neat sketch of earth tester and write necessity of earth tester.
- 3. Attempt any THREE of the following :** **12**
- a) A moving coil has a deflection of full scale at 26mA, when a potential of about 60 volt is applied calculate.
 - i) Series resistance for full scale deflection of 500 volts.
 - b) Draw the circuit diagram for measurement of active power in 3-phase load circuit using two wattmeter.
 - c) Explain with neat block diagram working of three phase electronic energy meter.
 - d) State the need and construction of megger with suitable sketch.
- 4. Attempt any THREE of the following :** **12**
- a) List out the comparison between deflection and null type instrument.
 - b) Draw a neat sketch and label the parts of P.M.M.C. type ammeters.
 - c) Draw and explain maximum demand indicator.
 - d) Describe construction of weston type frequency meter with neat diagram.
 - e) Draw neat diagram of CRT.

5. Attempt any TWO of the following : **12**

- a) Write the different between analog and digital instrument.
- b) Draw and explain power measurement by two wattmeter method.
- c) Explain with diagram the construction and working of synchroscope.

6. Attempt any TWO of the following : **12**

- a) Describe with neat sketch working of moving iron instrument.
 - b) Describe with neat sketch working of single phase electronic energy meter and compare it with three phase energy meter.
 - c) Describe working of function generator with neat sketch.
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