Roll no._____ ID: 180942/170942/127542/106542/030942

Semester: 4th

Branch: Elect, Power Station Engg., Elect. & Eltx. Engg.

Subject Name: Electrical Measuring Instruments and Instrumentation /Elect. & Eltx. Measuring Instr.

Time Allowed : 3 Hrs. **MM:100**

Section –A

Note: Multiple Choice questions. All questions are compulsory. **10x1=10**

Q.1 The scale of PMMC instrument is__. (CO-1)
a) Uniform b) non-uniform
c) both a & b d) none of them

Q.2 Example of integrating type instrument is (CO-2)
a) Ammeter b) Energy meter
c) Wattmeter d) None of these

Q.3 Secondary instruments are widely used inpractice? (CO-1)
a) True b) False

Q.4 The speed of energy meter can be controlled by: (CO-2)
a) Series magnet b) Shunt magnet
c) Braking magnet d) None of these

Q.5 A multimeter can be used to measure both D.C as well as A.C quantities? (CO-2)
a) True b) False

Q.6 ---------- device prevents the oscillation of the moving system and enable the pointer to reach its final positionquickly. (CO-1)
a) Deflecting b) Controlling
c) Damping d) None of these

Q.7 Two holes in the disc of energy meter are drilled at theopposite sides of the spindle to: (CO-2)
a) Improve its ventilation b) Eliminate creeping at no load
c) Increase its deflecting torque d) Increase its breaking torque

Q.8 A dynamometer wattmeter can be used for: (CO-6)
a) Both D.C. and A.C. b) D. C. only
c) A.C. only d) None of these

Q.9 The maximum value of power factor is_____. (CO-6)
a) 0 b) 1
c) 2 d) None of these

Q.10 An ammeter can be converted into a voltmeter by connecting _____ in series (CO-2)
a) Low resistance b) High resistance
c) Both A & B d) None of these

Section-B

Note: Objective type questions. All questions are compulsory. **10x1=10**

Q.11 Define power factor. (CO-6)
Q.12 What is the use of tong tester? (CO-6)
Q.13 Write one use of phase Sequence indicator. (CO-6)
Q.14 Name the material which is widely used forthermocouple. (CO-7)
Q.15 Define error is measurement. (CO-1)
Q.16 Ammeter is connected in__with load. (CO-2)
Q.17 Unit of pressure is__. (CO-5)
Q.18 Creeping in energy meters can be prevented by providing. (CO-2)
Q.19 Define transducer. (CO-5)
Q.20 Platinum has a temperature Coefficient of resistance. (CO-7)

Section –C

Note: Short answer type Questions. Attempt any twelve questions out of fifteen questions. **12x5=60**

Q.21 Explain voltmeter should have high input impedance? Explain briefly. (CO-2)
Q.22 Explain working of Earth tester. (CO-6)
Q.23 Write short note on Thermistor. (CO-7)
Q.24 Explain the block diagram of CRO. (CO-2)
Q.25 What is controlling torque? Discuss any one method of providing controlling torque. (CO-1)
Q.26 Describe the working principle of single phase power factor meter. (CO-6)
Q.27 Draw and explain the working of three phase energy meter. (CO-2)
Q.28 Draw the block diagram of Multimeter. (CO-2)
Q.29 Differentiate between active and passive transducers. (CO-5)
Q.30 Draw and explain block diagram of LCR meter. (CO-2)
Q.31 Write short note on working of current transformer. (CO-4)
Q.32 Write short note on LVDT. (CO-5)
Q.33 Explain the construction of Dynamometer type wattmeter. (CO-1)
Q.34 Explain any one method of level measurement. (CO-5)
Q.35 What is the principle of repulsion type moving iron instruments? (CO-1)

Section-D

Note: Long answer type questions. Attempt any two questions out of three questions. 2x10=20

Q.36 Explain two wattmeter methods to measure power in three phase circuit (Unbalanced load). (CO-6)
Q.37 Explain the construction working principle of Moving coil instruments. (CO-1)
Q.38 Write short note on: (CO-6)
a) Application of CRO
b) Maximum demand Indicator