

No. of Printed Pages : 4

Roll No. 170942/127542/106542
/30942

4th Sem. / Electrical/Power station Engg.

/Elect. & Eltx. Engg.

**Subject : Electrical Measuring Instruments and
Instrumentation**

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

(Course Outcome/CO)

- Q.1 Air friction damping is _____ than eddy current damping. (CO-1)
- Q.2 Why Absolute instruments are rarely used? (CO-1)
- Q.3 An ammeter can be converted into a voltmeter by connecting _____ in series. (CO-2)
- Q.4 In PMMC instruments, the scale is _____. (CO-2)
- Q.5 Creeping in energy meters can be prevented by providing _____. (CO-4)
- Q.6 Meggar is used for measurement of _____ resistance. (CO-5)
- Q.7 The maximum value of power factor is _____. (CO-5)

(1) 170942/127542/106542
/30942

Q.8 Define power factor. (CO-8)

Q.9 LVDT has _____ secondaries. (CO-9)

Q.10 Platinum has a _____ temperature coefficient of resistance. (CO-10)

SECTION-B

Note: Very Short answer type questions. Attempt any ten question out of twelve questions. (10x2=20)

Q.11 Define secondary instruments? (CO-1)

Q.12 Why we need damping torque? (CO-1)

Q.13 Write two types of moving iron instruments. (CO-2)

Q.14 The meter used for measuring potential difference of a circuit is called _____. (CO-2)

Q.15 The energy meters are called _____ instruments. (CO-4)

Q.16 What is an instrument transformer? (CO-5)

Q.17 What is the function of a phase sequence indicator. (CO-5)

Q.18 Where we used the synchroscope? (CO-5)

Q.19 DMM stands for _____. (CO-6)

Q.20 Why delay line used in CRO? (CO-6)

Q.21 What do you mean by polyphase system. (CO-8)

Q.22 $KW = KVA \times$ _____. (CO-8)

(2) 170942/127542/106542
/30942

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

Q.23 Write the short note on Thermocouple? (CO-10)

Q.24 What are transducers? Mention the advantages of converting all physical quantities into electrical signal for measurements. (CO-9)

Q.25 Describe three wattmeters methods for measurement of power in a three phase circuit. (CO-8)

Q.26 What are LCR meters and explain their application. (CO-7)

Q.27 Discuss construction & working of dynamometer type frequency meter. (CO-5)

Q.28 Explain the construction & working of maximum demand indicator. (CO-4)

Q.29 What are the phase and speed errors in induction type energy meter and how these can be adjusted? (CO-4)

Q.30 Discuss working principal and demerits of dynamometer type wattmeter. (CO-3)

Q.31 Write five differences between ammeters and voltmeters? (CO-2)

Q.32 What are the essentials of an indicating instrument? (CO-1)

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

Q.33 Explain the construction & working of earth tester with sketch. (CO-5)

Q.34 Draw block diagram for CRO and list function of various block. Also write five application of CRO. (CO-6)

Q.35 Discuss the construction and working of PMMC type instruments with neat sketch. Also write advantage and disadvantages (CO-2)

Q.36 Write short note on- (CO-1)

1. Indicating and recording instruments.
2. Errors in measurements.

(3) 170942/127542/106542
/30942

(2300)

(4) 170942/127542/106542
/30942