Q.27 What is the need for a maximum demand indicator?

Q.28 Define synchroscope. Write its applications.

Q.29 How frequency can be measured using CRO?

Q.30 Explain the use of a sweep generator.

Q.31 Explain the measurement of displacement using a potentiometer.

Q.32 Write a short note on photovoltaic cells.

Q.33 Write advantages of spring control method over gravity control method.

Q.34 Why is the coil of a voltmeter made up of thin wire with a large number of turns?

Q.35 Explain any one method for measurement of pressure.

SECTION-D

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

Q.36 Explain two wattmeter method of power measurement for star connected load.

Q.37 What are various errors occurring in energy meters and how can they be compensated for?

Q.38 Describe the working of digital wattmeter with the help of a block diagram.

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Roll No. .....

3rd Sem / Electrical Engineering, Power Stat, Engg., Elect. & Eltx. Engg.

Subject:- Electrical Measurement and measuring Instruments

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Temperature coefficient of the thermistor is_____.

a) Zero b) Positive or negative

c) Negative d) Positive

Q.2 Bourdon tube is used for the measurement of gauge pressure of

a) Gas b) Solid

c) Liquid fluid d) both a and b

Q.3 Full form of RTD is

a) Resistance thermistor detector

b) Resistance temperature detector

c) Round temperature detector

d) Resistance thermometer detector

Q.4 The function of shunt in an ammeter is to

a) by pass the current

b) increase the sensitivity of the ammeter

c) increase the resistance of ammeter

d) none of the above

Q.5 Which of the following moving coil instruments is used only for DC?

a) PMMC b) dynamometer

c) both a and b d) none of the above

Q.6 Due to over damping the system will become

a) Slow b) Lethargic

c) fast d) both a and b

Q.7 Errors introduced by the observer or user is called _____.

a) observation errors

b) Environmental errors

c) instrumental errors

d) gross errors

Q.8 To extend the range of an ammeter, a resistance is connected in (CO3)

a) parallel

b) series

c) parallel-series

d) no resistance required

Q.9 Extremely low resistance can be measured by (CO6)

a) Megger b) Kelvin bridge

c) Ohmmeter d) earth tester

Q.10 In spring control controlling torque T-C (CO1)

a) T-C μ q b) T-C μ cos q

c) T-C μ Sin q d) T-C μ Tan q

SECTION-B

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

Q.11 A voltmeter has very low resistance. (T/F)

Q.12 Moving iron instruments have a uniform scale. (T/F)

Q.13 The primary winding of a CT has _____ turns.

Q.14 Unit of power is_____.

Q.15 Expand CRO.

Q.16 Give one application of thermocouple.

Q.17 Name one recording type instrument.

Q.18 What is a creeping error?

Q.19 What is the use of damping torque.

Q.20 Name one instrument used to measure high resistance.

SECTION-C

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

Q.21 What is the basic principle of a Dynamometer type wattmeter?

Q.22 Write a short note on bimetallic thermometers.

Q.23 Give advantages of the piezoelectric transducers.

Q.24 Explain the construction and working of a potential transformer.

Q.25 How can resistance be measured using a multimeter?

Q.26 Why is deflecting torque necessary in indicating type instruments?