Q.29 Discuss about the angular velocity measurement using stroboscopic method.

Q.30 Discuss about the light modulating techniques.

Q.31 Define LED & explain working also.

Q.32 What is density & discuss hydrometer.

Q.33 Write a note on PH measurement.

Q.34 Discuss about the falling sphere viscometer.

Q.35 Discuss about measurement of thickness by Capacitive method.

SECTION-D

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

Q.36 Explain dial bevel protector angle. Measuring instrument & draw the diagram also.

Q.37 Discuss about any two

a) Opto-isolator

b) Photo Voltic cell

c) LDR

Q.38 What is LVDT & explain its working & construction details also.

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Subject:-Advanced Measurement Techniques

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 For Basic solution PH value lies B/w :-

a) 7 to 14 b) 0 to 7

c) 0 to 14 d) All of these

Q.2 A measuring system consists of:-

a) Sensor

b) Variable conversion elements

c) Signal processing elements

d) All of these

Q.3 Displacement:-

a) Acceleration / time b) Velocity X time

c) Speed X Time d) Velocity / Time

Q.4 LED stands for :-

a) Light enter Day b) Light emitted Diode

c) Level emitted Delay d) Level enter Delay

Q.5 SI unit of Force-

a) Pascal b) Newton

c) Both d) None

Q.6 Viscosity is measured by :-

a) Hydrometer b) Accelerometer

c) Viscometer d) None of these

Q.7 Density is measured by :-

a) Hydrometer b) Viscometer

c) Accelerometer d) LVDT

Q.8 Unit of Inductor:-

a) Farad b) Henery

c) Hertz d) None

Q.9 Active transducer is :-

a) Potentiometer b) Thermo couple

c) Both d) None

Q.10 Signal condition Ckts are

a) Wein Bridge b) Amplifier

c) Both d) None

SECTION-B

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

Q.11 Define Measurement.

Q.12 What is A/D converter.

Q.13 What do you mean by Accuracy.

Q.14 Define Instrumentation.

Q.15 SI unit of Temp.

Q.16 Explain Strain Gauge.

Q.17 Explain Potentiometer.

Q.18 Define Velocity.

Q.19 Define Density.

Q.20 Differentiate b/w Accuracy & precision.

SECTION-C

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

Q.21 What are the functional elements of a measuring system.

Q.22 Explain input & output configuration of instrumentation system.

Q.23 Explain length measuring micrometer & draw the diagram also.

Q.24 Explain clinometers instrument.

Q.25 Explain Numerical method for area measurement.

Q.26 Discuss about the strain gauge accelerometers.

Q.27 Define tachogenerator & explain its principle also.

Q.28 Explain linear velocity measurement using seismic transducer.