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Question Paper Code: 55502

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Fifth Semester

Electronics and Instrumentation Engineering

15UEI502 - INDUSTRIAL INSTRUMENTATION – II

(Regulation 2015)

Duration: One hour

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. In metering dirty fluids, slurries and fluids containing solids, what type of orifice plate is used
(a) Concentric (b) Eccentric (c) Segmental (d) Quadratic
2. The Target flow meters comes under
(a) Mechanical type (b) Electrical type
(c) Inferential type (d) Mass flow type
3. The anemometer is used to measure the flow rate of fluids by measuring velocity of
(a) Conducting liquid (b) semi conducting liquid
(c) Non conducting liquid (d) Viscous liquid
4. Ultrasonic level measurement is not suitable for
(a) Liquids (b) slurries
(c) granular (d) interfaces
5. Which of the following is a direct level measurement?
(a) Air trap method (b) float level gauge
(c) Diaphragm box method (d) ultrasonic method

6. The boiler drum level measurement is based on
- (a) density (b) differential pressure
(c) viscosity (d) ultrasonic method
7. The ultrasonic refers to the frequency in the range of
- (a) 20 to 20000KHz (b) 20 to 20000Hz
(c) 20 to 20000MHz (d) 20 to 2000Hz
8. The air purge or bubbler systems can exceed pressure of liquid at
- (a) 0.1kg/cm^2 (b) 5kg/cm^2 (c) 0.01kg/cm^2 (d) 3kg/cm^2
9. A solution which reached the limit of solubility is called as
- (a) Dew point solution (b) Saturated solution
(c) Absorbed solution (d) Cavity solution
10. For continuous recording and control of relative humidity, electrical transducers of _____ type are widely used.
- (a) Thermistor (b) Dun more
(c) RTD (d) Dew cells

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Pressure before orifice plate rises and pressure after it reduces but velocity increases-Justify the statement. Describe its construction and Working in detail. (8)
12. With a neat diagram explain about the construction and working operation of Electromagnetic flow meter and also discuss its advantages and limitations. (8)
13. Explain in detail about different types of Level detectors used in Level measurement. (8)
14. Draw and explain different types of Contact level sensors. (8)
15. Describe the working principle of Rota meter type viscosity measurement. Mention the effect of temperature on viscosity. State the application of viscosity measurements in process industries. (8)

