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**Question Paper Code: 35601**

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Fifth Semester

Instrumentation and Control Engineering

01UIC501 - INDUSTRIAL INSTRUMENTATION - II

(Common to Electronics and Instrumentation Engineering)

(Regulation 2013)

Duration: 1:45 hour

Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

**(Answer any ten of the following questions)**

1. Define Stagnation point in pitot tube.
2. List any two disadvantages of magnetic flow meters.
3. How the mass flow rate can be determined?
4. Write the operating principle of ultrasonic level measurement.
5. What are the different types of hygrometer?
6. State Bernoulli's principle.
7. List any two disadvantages of magnetic flow meters.
8. Write the operating principle of capacitive type level gauge.
9. Write the operating principle of ultrasonic level measurement.
10. Differentiate absolute viscosity and kinematic viscosity.
11. Write the difference between venturi, orifice plate and flow nozzle?
12. Water is pumped through a 75 mm diameter pipe with a flow velocity of 760 mm/sec. Find the volume rate.

13. How the mass flow rate can be determined?
14. Mention the advantages of displacer level instrument.
15. How to measure the moisture content in the granular material?

PART – B (3 x 10= 30 Marks)

**(Answer any three of the following questions)**

16. Describe with neat sketches the principle of operation of an (i) an Orifice plate and (ii) Venturi tube as used in fluid flow measurement. (10)
17. Explain the principle, working, features and advantages of Coriolis mass flow meter in detail. (10)
18. Explain with neat sketches the construction and working of a electromagnetic flow meters. (10)
19. Discuss the construction, working, merits and demerits of capacitance level indicator and radiation level indicator. (10)
20. Write short notes on float type and optical type consistency meter. (10)