

V.P. & R.P.T.P. SCIENCE COLLEGE
T.Y.B.Sc. (Sixth semester)
Instrumentation (Vocational) US06CINV01
Process Measurement Techniques II



Internal Test

Tuesday, 05/03/2019

Time: - 10:00 AM To 12:00 NOON

Marks: - 50

Q.1 Choose the correct answer (Attempt all)

(8)

- (1) What is the density of Hg?
(a) 1.0 (c) 10.0
(b) 1.356 (d) 13.56
- (2) In which type of level measuring method conducting liquid is required?
(a) Magnetic. (c) Capacitive.
(b) Ultrasonic. (d) Resistive.
- (3) Which parameter can be measured by Psychrometer?
(a) Relative flow. (c) Relative pressure.
(b) Relative Humidity. (d) Dew point.
- (4) What is used to avoid oxidation in the moisture measurement of oil and fats using oven method?
(a) Water vapors. (c) Active gas.
(b) Inert gas. (d) Air.
- (5) Among the following, which one is flow rate meter?
(a) Rotating vane meter. (c) Venturi meter.
(b) Lobed impeller meter. (d) Nutating disk meter.
- (6) In which of following pressure loss is minimum?
(a) Orifice Plates. (c) Venturi meter.
(b) Pitot tubes. (d) Flow nozzles.
- (7) Among the following which is the positive displacement flow meter?
(a) Rota meter. (c) Pitot tubes.
(b) Nutating disk meter. (d) Venturi meter.
- (8) In which type of flow meter an eccentric drum is required?
(a) Titrating trap meter. (c) Lobed impeller meter.
(b) Rotary vane meter. (d) Hot wire meter.

Q2 Answer the following questions (Any Five)

(10)

- (1) Explain Float and Shaft method for level measurement.
- (2) Give the name of quantities which can be estimated by measuring the level of liquid in the tank.
- (3) Define Moisture, Humidity and Dew point.
- (4) Explain working of simple dew point apparatus for Dew point measurement.
- (5) List the factor that governs the flow of fluids in closed pipes.
- (6) Differentiate the continuous type and quantity type flow meters.

- (7) Explain thermal flow meters briefly.
(8) Explain principle of magnetic flow meter.

Q3 Write a note on Resistance and Capacitance type methods of liquid level measurement. (8)

OR

Q3 Write a note on indirect type methods of liquid level measurement. (8)

Q4 List various methods for determination of Moisture and explain distillation method for moisture measurement. List its merits and demerits. (8)

OR

Q4 Explain Psychro-meter for moisture measurements. (8)

Q5 Derive an equation for Flow rate of incompressible fluid in closed pipe. (8)

OR

Q5 Explain various types of the Orifice plates in detail and write an equation for flow rate through Orifice plates. (8)

Q6 Explain Lobed-Impeller and Reciprocating piston type Flow meter with necessary diagrams. (8)

OR

Q6 Explain Electro-magnetic flow meter in details. (8)

