

SEMESTER END THEORY EXAMINATION, B.Tech. (Dairy Technology)

Total Marks : 50
Time : 2.00 hrs.

3) Draw neat and well labeled diagram wherever necessary.

SECTION – 'A'

- a) Bourdon gauge b) U tube manometer
c) Inclined tube manometer d) Pirani gauge

(P.T.O.)

- iv) Strain gauge pressure transducer are used to measure pressure.
 - a) Gauge as well as vacuum
 - b) Absolute as well as differential
 - c) Both a) and b)
 - d) None of these
- v) Humidity of air can be measured by
 - a) Chromatograph
 - b) Sling psychrometer
 - c) Mass spectrophotometer
 - d) Polarimeter

SECTION –‘B’

- Q. 3 A) Explain the functional elements of Bourdon Pressure Gauge with diagram. (05)
B) Write a Short notes on the following. (05)
 - a) Analog and digital instruments.
 - b) Active and passive transducer
 - c) Induction
 - d) Ohm's law
 - e) Capacitance
- Q. 4 A) Explain working principle of Resistance Thermometer / Resistance Temperature Detector (RTD) with diagram. (05)
B) Enumerate the following terms in relation to instrumentation and process control. (05)
 - a) Accuracy
 - b) Sensitivity
 - c) Repeatability
 - d) Reproducibility
 - e) Drift
- Q. 5 A) Explain role and importance of general purpose test instruments. (03)
B) Explain the working principle of pH meter with diagram. (03)
C) Define amplitude. How will you measure it? (04)
- Q. 6 A) Enlist and discuss different dynamic characteristics of an instrument. (03)
B) Write down the name of equipment / equipment's for following measurands. (03)
 - a) Speed
 - b) Humidity
 - c) Pressure
 - d) Temperature
 - e) pH
 - f) Viscosity
C) Explain different types of control actions. (04)
- Q. 7 Classify instruments based on their working principles and explain any two in detail. (10)
