

- Q.27 How thermocouple is used for the measurement of temperature?
  - Q.28 Write a short note on classification of instruments.
  - Q.29 Explain static characteristics of an instrument.
  - Q.30 Explain the working principle of thermistor.
  - Q.31 Describe the significance of pressure measurement and write unit of pressure.
  - Q.32 Explain the working principle of pitot tube.
  - Q.33 Write a short note on industrial weighing system.
  - Q.34 Explain working principle of pH meter.
  - Q.35 Explain any one method for liquid measurement.

## **SECTION-D**

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

- Q.36 Explain working principle of thermocouple with diagram. Also write its applications.

Q.37 How manometers are used for measurement of pressure? Also discuss various types of manometer.

Q.38 What is viscosity and its units? Also discuss any one method for viscosity measurement.

No. of Printed Pages : 4 181154/121154/031154  
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**5th Sem. / Food Technology**

**Subject:- Instrumentation & Process Control**

Time : 3Hrs.

M.M. : 100

## **SECTION-A**

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

- Q.1 Celsius is unit of

  - a) Temperature
  - b) Pressure
  - c) Flow
  - d) None of these

Q.2 Working principle of thermocouple is

  - a) Halls effect
  - b) Seebck effect
  - c) Hooks law
  - d) None of these

Q.3 Manometer is used for the measurement of

  - a) Pressure
  - b) Velocity
  - c) Flow
  - d) None of these

Q.4 Unit of pressure is

  - a) Second
  - b) Pascal
  - c) Gram
  - d) Meter

Q.5 pH value of water is

- a) 1
- b) 5
- c) 7
- d) 10

Q.6 Hygrometer is used for the measurement of

- a) Pressure
- b) Flow
- c) Humidity
- d) None of these

Q.7 Rotameter is used for the measurement of

- a) Flow
- b) Rotation
- c) Length
- d) None of these

Q.8 Pressure management can be done by

- a) Thermistor
- b) Bourdon gauge
- c) pH meter
- d) None of these

Q.9 Which part of instrument is used to sense the quantity to be measured?

- a) Body
- b) Sensor
- c) Display unit
- d) None of these

Q.10 Flow at specified point is measured by

- a) Pitot tube
- b) Orifice tube
- c) Venturi tube
- d) None of these

## SECTION-B

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

- Q.11 Write down two units of temperature.
- Q.12 Write two applications of Bourdon gauge.
- Q.13 Name two flow measuring instruments.
- Q.14 Write formula for conversion of degree celsius into degree Fahrenheit.
- Q.15 Write two applications of thermistor.
- Q.16 Name two pressure measuring instruments.
- Q.17 What is capacitance?
- Q.18 What is unit of flow?
- Q.19 Name three types of manometer.
- Q.20 Name two meters used for head flow measurement.

## SECTION-C

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

- Q.21 Briefly explain different types of controllers.
- Q.22 Explain any one method for the measurement of humidity.
- Q.23 Explain the concept of automatic process control.
- Q.24 Write a short note on industrial weighing systems.
- Q.25 Explain flow measurement with the help of orifice.
- Q.26 Explain any one method for the measurement of pressure.