

- Q.26 What is the difference between threshold and resolution.
- Q.27 Write short note on bimetallic thermometer.
- Q.28 What is optical thermometry? Draw diagram for disappearing filament thermometer.
- Q.29 Draw diagram showing different types of pressure and label it.
- Q.30 Write short note on C type bourdon tube.
- Q.31 Classify the fluid flow and define any one.
- Q.32 Write short note on orifice meter.
- Q.33 Write short note on dip stick method of liquid level measurement.
- Q.34 Write five examples of automatic control system.
- Q.35 Write short note on RTD's.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Make a list of various static characteristics of instruments and briefly describe any two.
- Q.37 Name the various temperature measuring instruments and describe any one with help of diagram.
- Q.38 Describe the construction and working detail of U tube manometer with help of diagram

No. of Printed Pages : 4
Roll No.

181154/121154/031154

5th Sem / Branch : Food Tech. Sub.: Instrumentation and Process Control

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Mercury in glass thermometers are used for the measurement of _____.
a) Weight b) Velocity
c) Flow d) Temperature
- Q.2 Tertiary measurement involves _____ translations on the quantity to be measured.
a) 1 b) 2
c) 3 d) 0
- Q.3 The matching of two lengths, such as when determining the length of an object with a metre rod is known as _____.
a) Primary Measurement
b) Secondary Measurement
c) Tertiary Measurement
d) None
- Q.4 The part of the instrument used to convert the quantity to be measured into the measurable form is known as _____.

- a) Intermediate transfer device
 - b) Standard
 - c) Result
 - d) Feed Back
- Q.5 The fixed value that is used for comparison purposes in measurement system is known as _____
- a) Measurand
 - b) Feed Back
 - c) Standard
 - d) All of the above
- Q.6 Unit of weight is _____.
- a) Kilogram
 - b) Meter
 - c) Kelvin
 - d) Mass/Volume
- Q.7 In electronic devices, the only movement involved is that of _____
- a) Electrons
 - b) Gears
 - c) Plates
 - d) None of the above
- Q.8 _____ is defined as the ability of the instrument to reproduce a repeated set of readings with in a given accuracy.
- a) Accuracy
 - b) Precision
 - c) Durability
 - d) Dependability
- Q.9 Select the correct formula
- a) $F = 32 + 9/5 \text{ } ^\circ\text{C}$
 - b) $F = 32 + 5/9 \text{ } ^\circ\text{C}$
 - c) $F = 32 - 9/5 \text{ } ^\circ\text{C}$
 - d) $F = 32 - 5/9 \text{ } ^\circ\text{C}$
- Q.10 Boiling point of water in _____ $^\circ\text{K}$.
- a) 373.15
 - b) 100
 - c) 273
 - d) None of the above

SECTION-B

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

- Q.11 Name two liquid flow measurement instruments.
- Q.12 Give the full form of WBT.
- Q.13 Bimetallic thermometer are used to measure the range of _____ to _____ $^\circ\text{C}$
- Q.14 The higher temperature limit for mercury is _____.
- Q.15 Write down the equation used to convert the degree Celsius into degree Kelvin.
- Q.16 Draw simple block diagram for process control.
- Q.17 Name three types of measurement systems.
- Q.18 Instrumentation is defined as the science of _____.
- Q.19 Write the names of three types of instruments.
- Q.20 What is measured with Ventury Meter?

SECTION-C

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

- Q.21 Define direct and indirect type of measurement.
- Q.22 Draw block diagram for secondary measurement system and label it.
- Q.23 Write short note on mechanical instruments.
- Q.24 Write short note on null and deflection type of instruments.
- Q.25 Make a list of all the performance characteristics of instruments.