

**6th Sem.
Branch :Food Technology
Sub. : Instrumentation & Process Control**

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (6x1=6)

- Q.1 Is the measurement system Measurand is compared with the predefined quantity known as _____.
a) Measurand b) Standard
c) Feed Back d) Result
- Q.2 In secondary measurements the number of translations to be done is _____.
a) 0 b) 1
c) 2 d) 3
- Q.3 Which measuring instrument make more noise _____.
a) Mechanical b) Electrical
c) Electronic d) None of the above
- Q.4 In Bimetallic thermometer metal used as low thermal expansion is _____.
a) Wood b) Plastic
c) Invar d) Fiber

- Q.5 Bourdon tube is used for the measurement of _____.
a) Pressure b) Temperature
c) Viscosity d) Flow
- Q.6 Bubble or purge technique is used for the measurement of _____.
a) Flow b) Viscosity
c) Density d) Level

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. $(6 \times 1 = 6)$

- Q.7 Classify the measurement system.
- Q.8 Draw block diagram of typical tertiary measurement.
- Q.9 House hold cloth iron uses which instruments to control temperature?
- Q.10 Thermocouple is used to measure _____.
- Q.11 Range of Reynold number for turbulent flow is _____.
- Q.12 Name the instrument used for highly accurate measurement of fluid level.

SECTION-C

Note: Short answer type Questions. Attempt any eight questions out of ten Questions. $(8 \times 4 = 32)$

- Q.13 What are the contacting and non-contacting type of instruments?

- Q.14 Define precision with the help of diagram.
- Q.15 Write short note on diaphragm.
- Q.16 What is bimetallic thermometer? Draw its diagram.
- Q.17 Write short note on inclined tube manometer.
- Q.18 Make a list of various restriction flow measurement instruments and describe any one.
- Q.19 Write short note on float and shaft liquid level gauge.
- Q.20 Draw diagram for Bubbler or purge technique for level measurement and label it.
- Q.21 What is humidity and how it is measured?
- Q.22 Define control system and draw diagram for closed loop control system.

SECTION-D

Note: Long answer questions. Attempt any two questions out of three Questions. $(2 \times 8 = 16)$

- Q.23 Describe various performance characteristics of instruments.
- Q.24 What are the types of fluid flow? Describe with the help of diagrams.
- Q.25 Make a list of direct liquid level measurement techniques and describe any two.