Q.31 Draw diagram for one dimensional, two dimensional, three dimensional fluid flows.

Q.32 Write short note on venture meter.

Q.33 Make a list of direct methods of liquid level measurement and define any one.

Q.34 What is float and chain liquid level gauge, draw its diagram.

Q.35 Write down the advantages and disadvantages of closed loop control system.

SECTION-D

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

Q.36 Define accuracy and precision Describe the difference between them with the help of diagram.

Q.37 Classify the instruments and briefly describe it.

Q.38 Name the various liquid level measuring instruments and describe any one with the help of diagram.

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5th Semester : Food Technology
Subject:- Instrumentation and process control

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Viscometer is used for the measurement of.....
a) Pressure b) Viscosity
c) Flow d) Temperature

Q.2 Primary measurement involves ..... translations on the quantity to be measured.
a) 1 b) 2
c) 3 d) 0

Q.3 The unknown variable that has to be measured is known as .....
a) Measurand b) Standard
c) Feedback d) None of these

Q.4 As per the history of development of instruments there are ..... phases of instruments.
a) 1 b) 3
c) 5 d) 7

Q.5 The response time of electronics instruments is in .....
a) Mili seconds and micro seconds

b) Seconds
c) Minutes
d) Hours

Q.6 Unit of Length is .....
a) Kilogram b) Meter
c) Kelvin d) Mass/ Volume

Q.7 A scale with a least count of 1 mm may be used to measure to the nearest..... mm.
a) 0.5 b) 0
c) 1 d) None of the above

Q.8 Which instrument is used to measure air pressure ?
a) Bourdon tube b) Orifice meter
c) Load cell d) None of the above

Q.9 $^0K = {}^0C +$ .....
a) 100 b) 273.15
c) 0 d) None of the above

Q.10 Select the correct formula
a) $^0R = 9/5\ ^0K$ b) $^0R = 5/9\ ^0K$
c) $^0R = 9/5\ ^0C$ d) $F = {}^0R = 5/9\ ^0C$

SECTION-B

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

Q.11 Name two temperature measurement instruments.

Q.12 Name two types of bourdon tubes.

Q.13 The lower temperature limit for mercury is .....

Q.14 Sight tubes of sight glass level measurement instrument is made of .....

Q.15 What is measured with Voltmeter ?

Q.16 Draw simple block diagram for measurement

Q.17 Name two types of instruments methods

Q.18 Primary measurement can also be called as .....

Q.19 Draw block diagram for tertiary measurement system.

Q.20 Name any two types of instruments

SECTION-C

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

Q.21 Define primary, secondary and tertiary measurement systems.

Q.22 Draw block diagram for tertiary measurement system and label it

Q.23 Write short note on Electronic instruments.

Q.24 Write short note on analog and digital types of instruments

Q.25 Define accuracy and how its calculated on the basis of true value.

Q.26 Mark a neat and clean diagram for hysteresis and label threshold on it.

Q.27 Write short note on thermocouple.

Q.28 What is radiation thermometry ? Draw diagram for infrared thermometer and label it.

Q.29 Write short note on U tube manometer.

Q.30 Draw diagram for any three pressure sensing elements.