Q.27 Explain with neat sketch the working of mcleod gauge used for measuring vacuum pressure

Q.28 Explain feed forward automatic control system.

Q.29 Define Range, span zero & set point.

Q.30 Describe with neat sketch any one graphical chart recorder.

Q.31 Explain different types of valve & its characteristics.

Q.32 Explain valve actuator and valve positioning

Q.33 Explain with neat sketch optical level detector

Q.34 Explain pit meter and its applications.

Q.35 Convert 200°C into °k, °F & Ranbine.

SECTION-D

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

Q.36 Explain with neat diagram the working principle and constructional details of optical pyrometer

Q.37 Define thermocouple. Explain with neat diagram the working & constructional details of thermocouple pyrometer.

Q.38 Explain with neat diagram representation of the concept and components of automatic control system.

Roll No. .....

6th Sem / Branch : Chemical Engg. P&P, Chem Engg. (Spl. Paint Tech.) Chem Engg. (Spl Polymer Tech)

Subject:- Process Instrumentation and Control

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Hydrostatic pressure level indicator is a

a) direct method b) Indirect method

c) Both a & b d) None of the above

Q.2 Ultrasonic level measurement words on the principle of :

a) Light b) Sound

c) Flow late d) None

Q.3 For pressure gauge level measurement pressure gauge is mounted at :

a) Top of the tank

b) Lowest level of the tank

c) Both top & lowest level

d) None

Q.4 Mcleod gauge measures the pressure

a) gauge b) absolute

c) atmospheric d) vacuum

Q.5 PH meter has _____ electrodes

a) One b) Two

c) three d) Four

Q.6 Which device is used for calibrating pressure gauges:

a) Manometer

b) Diaphragm

c) Bellows

d) Dead weight pressure tester

Q.7 One torr is equal to

a) One mm Hg b) One inch Hg

c) One atmosphere d) One kilopascal

Q.8 A black body is a

a) good absorber

b) good emitter

c) bad absorber

d) good absorber & emitter

Q.9 Working principle of thermocouple is based on

a) Thomson effect b) See beck effect

c) Peltier effect d) None

Q.10 Zero is

a) Low & high valve

b) Low value

c) High value

d) Difference between high & low value

SECTION-B

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

Q.11 Write difference between accutacy & precision.

Q.12 Convert 760mm into torr.

Q.13 Define speed of response

Q.14 Define PH.

Q.15 Define reproducibility.

Q.16 Define static errors.

Q.17 Define repeatability

Q.18 Define calibration

Q.19 Define primary element.

Q.20 Name any two electrical temperature instruments.

SECTION-C

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

Q.21 Explain with neat sketch working of capacitance level indicator.

Q.22 Describe U-tube manometer.

Q.23 Describe with neat diagram air purge methods for level measurement

Q.24 Define with neat diagram open loop control systems.

Q.25 Explain with neat sketch the working of micro manometer

Q.26 Explain or sat analyser.