Q.27 Write a short note on spectroscopy with at least one example.

Q.28 What are the detectors used in gas chromatograhpy.

Q.29 What do you mean by electrodes explain in brief.

Q.30 Discuss the role of column used in chromatography.

Q.31 What are the analyzer explain in brief.

Q.32 Write a short note on water pollution.

Q.33 How air quality system can be monitored using IOT.

Q.34 What do you mean by gas analysis?

Q.35 What is chromatography and give their name of types of chromatography?

SECTION-D

Note : Long Answer type question. Attempt any two questions. (2x10=20)

Q.36 What is Ph and also explain Ph measurement technique in detail.

Q.37 Explain block diagram of Analytical Instrument.

Q.38 Explain absorption spectroscopy method in detail.

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5th Sem / Instrumentation & Control
Subject : Analytical & Environmental Instruments

Time : 3 Hrs. **M.M. : 100**

SECTION-A

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

Q.1 In mass spectrometer, the sample that has to be analyzed is bombarded with which of the following.

a) Protons b) Electrons

c) Neutrons d) Alpha particles

Q.2 Which of the following is not used for detection in gas chromatography

a) Infrared spectroscopy

b) NMR

c) Flame ionization

d) Electrical Conductivity

Q.3 Determination of flow increase is used for the monitoring of

a) Sea pollution b) River pollution

c) Lake pollution d) Tank pollution

Q.4 Cell is a primary cell.

a) True b) False

Q.5 Range of PH scale is

a) 7 to 10 b) 0 to 14

c) 0 to 10 d) 7 to 14

Q.6 Pure water is known to be which of the following.

a) Weak electrolyte

b) Strong electrolyte

c) Neither weak nor strong

d) Non an electrolyte

Q.7 Noise is undesirable & unwanted signed.

a) True b) False

Q.8 Which of the following is the formula of PH calculation?

a) Log 10 (H^+) b) - Log 10 (H^+)

c) Log 2 (H^+) d) - Log 2 (H^+)

Q.9 Electrolytes conduct electric current

a) By the movement of ions

b) By the movement of atoms

c) By the movement of electrons from the cathode to anode

d) By the movement of electrons from the cathode to anode

Q.10 Mass spectrometer are used to determine relative mass of atoms.

a) True b) False

SECTION-B

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

Q.11 Chromatography.

Q.12 Write the full form of NMR.

Q.13 Injector.

Q.14 What is the unit of noise?

Q.15 Expand AEI.

Q.16 Oven.

Q.17 Write the formula of Ph.

Q.18 Noise.

Q.19 LCD.

Q.20 Column.

SECTION-C

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

Q.21 Discuss electrochemical analyzer.

Q.22 Explain noise pollution monitoring instruments.

Q.23 Explain electro - chemical cell.

Q.24 Write a short note on paramagnetic oxygen analyzer.

Q.25 What is air quality standards?

Q.26 Explain electrodes used for electrochemical instruments.