Q.20 Explain Beer-Lambert's law.

Q.21 Write a short note on Mass Spectroscopy.

Q.22 Differentiate b/w AAS and FTIR spectroscopy.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Define Chromatography. Classify it and explain gas chromatography in detail.

Q.24 What do you mean by spectroscopic analysis. Explain AAS in detail.

Q.25 What is PH? Explain different types of electrodes used for PH Measurement.

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4th Semester/Instrumentation & Control
Subject : Analytical Instrumentation

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 What is principle behind AAS?

a) Measurement of absorbance of Radiation by atoms.

b) Measurement of emission of Radiation of atoms.

c) Measurement of Scattering of Radiation by atoms

d) Measurement of fluorescence of atoms

Q.2 Define Range of Ph is

a) 0-20 b) 0-14

c) 7-14 d) 0-7

Q.3 What is the Beer-Lambert Law?

a) A = Ebc b) A=E/bc

c) A=Eb/c d) A=Ec/b

Q.4 What is the Principle behind GC Separation?

a) Fragmentation of analytes

b) Absorption of analytes onto a stationary phase.

c) Ionization of analytes

d) Portioning of analytes between a stationary & mobile phase

Q.5 Which is the primary function of a UV-Spectrophotometer.

a) To Measure the absorbance of Radiation by molecules in the UV range

b) To Measure the emission of Radiation by molecules in the UV range.

c) To Measure the reflection of Radiation by molecules in the UV range.

d) To Measure the scattering of Radiation by molecules in the UV range.

Q.6 Which of the following is a component of a Gas chromatography.

a) Column b) Detector

c) Injector d) All of the above

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

\Q.7 AI stands for _____.

Q.8 Expand FTIR.

Q.9 Define Instrument.

Q.10 Define Chromatography.

Q.11 What is Detector?

Q.12 What is transducer?

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Write a short note on electro chemical Analyzer.

Q.14 Explain the detector used in Gas chromatography.

Q.15 Write the Principle of Ph Measurement.

Q.16 Describe the various block of Analytical Instruments.

Q.17 Give the brief idea about Injector.

Q.18 Write the various applications of Liquid chromatography.

Q.19 Write at least four uses of PH Meter.