

B.Pharm. (CBCS Pattern) Semester-VII
BP701T - Instrumental Methods of Analysis

P. Pages : 3

Time : Three Hours



GUG/S/25/14143

Max. Marks : 75

Notes : 1. All questions are compulsory.

1. Multiple choice questions. 20

- i) Shift of wavelength to a longer wave length is called -----
 - a) Blue shift
 - b) Red shift
 - c) Hyper chromic effect
 - d) Hydrochromic effect
- ii) Dispersing Device is-----
 - a) Slit
 - b) Filter
 - c) Cuvette
 - d) Prism
- iii) When concentration increases, fluorescence intensity does not increase proportionately this phenomenon is called as -----
 - a) Self Quenching
 - b) Chemical Quenching
 - c) Static Quenching
 - d) Collisional Quenching
- iv) ----- is commonly used as mulling agent
 - a) Butane
 - b) Nujol
 - c) Hexane
 - d) Chloroform
- v) ----- detector consist of tiny slab at crystalline material whose molecules have permanent dipole movement.
 - a) Thermocouple
 - b) Thermistor
 - c) Golay Detector
 - d) Pyroelectric
- vi) To get higher temperature in burner in flame photometer the following combination is used -----
 - a) Hydrogen/Air
 - b) Hydrogen/Oxygen
 - c) Acetylene/Air
 - d) Acetylene/Oxygen
- vii) Which among this is not type of pneumatic nebulizer?
 - a) Concentric tubes
 - b) Fritted disc
 - c) Cross flow
 - d) Electro thermal
- viii) In atomic absorption spectroscopy, with what material is the anode hollow cathode lamp constructed?
 - a) Tungsten
 - b) Quartz
 - c) Glass
 - d) Silver
- ix) Turbidity is the official assay method for -----
 - a) Vit. B12
 - b) Vit. A
 - c) Vit. B1
 - d) Vit. B6

- x) The eluting power is high for which solvent?
 a) CCl_4 b) Benzene
 c) Acetone d) Ethanol
- xi) ----- is a weak adsorbent.
 a) Silico gel b) Alumina
 c) Starch d) Fullers Earth
- xii) A universal spraying agent in TLC for all organic compound is ----
 a) 50% H_2SO_4 b) Aniline oxalate
 c) Silver Nitrate d) Ninhydrin
- xiii) Which is the easy and convenient method to prepare the TLC glass plate?
 a) Pouring b) Dipping
 c) Spraying d) Spreading
- xiv) All the following are Ashless Whatman filter papers except -----
 a) 40 b) 43
 c) 44 d) 41
- xv) The main obstacle with every method of electrophoresis is -----
 a) Osmosis b) Dithesion
 c) Agglutination d) Precipitation
- xvi) Head space sampling prevents the ----- of the injection port and column with non-volatile components.
 a) Blocking b) Polishing
 c) Contamination d) Washing
- xvii) The particle size used in HPLC should be range from
 a) 1 to 10μ b) 1 to 20μ
 c) 1 to 30μ d) 1 to 40μ
- xviii) To regenerate an union exchange column we can use -----
 a) Strong Acid b) Strong Alkali
 c) Weak acid d) Weak alkali
- xix) Which of the following is the rigid gel?
 a) Resins b) Polyvinyl Acetate
 c) Silica d) Sephadex
- xx) ----- is used to improve binding between ligand and target molecule.
 a) Ligand b) Spacer arm
 c) Matrix d) Ligand coupling

2. Long Answer questions solve **any two**.

20

- i) Give detail account of instrumentation of U.V. Visible spectrophotometer.
- ii) Give in detail source and detectors use in I.R. Spectroscopy.
- iii) Give detail account on HPLC.

3. Short answer questions solve any seven.

35

- i) Draw a well labelled diagram of flame photometer and note on Nebulizers.
- ii) Note on factor affecting on fluorescence.
- iii) Note on sampling techniques in I.R.
- iv) Write applications of Nephelo-Turbidometry.
- v) Write in short Development techniques use in chromatography.
- vi) Note on factor affecting column efficiency.
- vii) Write a note on detection and visualization Techniques used in TLC.
- viii) Write application of gel electro phoresies.
- ix) Note on Derivatization in Gas chromatography.
