

Pharmaceutical Analysis-III Sem 7 CBCS ATKT

- 1 Which method below is not preferred to perform the multi-component analysis?
 - A Derivative Spectroscopy
 - B Simultaneous Equation Method
 - C Use of calibration graph
 - D Absorption Ratio Method
- 2 What is the order of plot of $d^2A/d\lambda^2$ Vs. Wavelength in a derivative spectroscopy?
 - A Zero order Spectrum
 - B First order Spectrum
 - C Second order Spectrum
 - D Third order Spectrum
- 3 Which one of the following radiations has the longer wavelength?
 - A Infra Red
 - B Visible Spectroscopy
 - C X-Ray
 - D UV
- 4 In mass spectrometry, the atomic mass unit, amu, is defined as ...
 - A 1/12 of the mass of one neutral C-12 atom
 - B the mass of any individual atom expressed in grams
 - C the mass of a deuterium atom
 - D the mass of one mole of hydrogen atoms expressed in Daltons
- 5 In infrared spectroscopy which frequency range is known as the fingerprint region?
 - A 400 - 1400 cm^{-1}
 - B 1400 - 900 cm^{-1}
 - C 900 - 600 cm^{-1}
 - D 600 - 250 cm^{-1}
- 6 Which of the following techniques would be most useful to identify and quantify the presence of a known impurity in a drug substance?
 - A NMR
 - B IR
 - C HPLC
 - D MS
- 7 Which of the following assays could not be performed by gas chromatography?
 - A Characterisation of volatile oils
 - B Measurement of drugs and metabolites in biological fluids
 - C Characterisation of raw materials for drug synthesis
 - D Analysis of intravenous sodium chloride infusion
- 8 In a chromatographic separation, which of the following indices is most appropriate for the qualitative identification of a substance?
 - A Relative retention factor R_{rel}
 - B Retention factor R_f
 - C Retention time
 - D Resolution
- 9 What is the base value of P-Chlorobenzaldehyde as per Woodward Fieser Rule?

- A 230nm
 - B 250nm
 - C 246nm
 - D 217nm
- 10 MALDI stands for?
- A Matrix-assisted laser dissolution/ionization
 - B Matrix-assisted light desorption/ionization
 - C Matrix-assisted laser desorption/ionization
 - D Matrix-assisted laser desorption/isolation
- 11 Which of the following is the most commonly used interface?
- A Chopper
 - B Nebulizer
 - C Filter
 - D Vaporising chamber
- 12 Reversed phase HPLC is the technique in which...
- A Stationary phase is solid and mobile phase is liquid
 - B The stationary phase is made of very fine particles.
 - C The stationary phase is non polar and the mobile phase is relatively polar.
 - D The stationary phase has been silinized with dimethyldichlorosilane.
- Considering high performance liquid chromatography HPLC, which one of the
- 13 Following statements is INCORRECT
- A The stationary phase used in the HPLC column could be relatively polar or nonpolar liquid.
 - B HPLC is suitable for the separation and determination of the non-volatile species.
 - C Very long columns have been used here to increase the efficiency of separation.
 - D The separation efficiency has been increased by decreasing the particle size of the solid support for the stationary phase.
- 14 In chromatography, the stationary phase can be _____supported on a solid.
- A Liquid only
 - B Liquid or gas
 - C Solid or liquid
 - D Solid only
- 15 Which of the following types of spectroscopy can tell us the most about the carbon framework of an organic compound?
- A Mass spectrometry
 - B NMR spectroscopy
 - C Infra-red spectroscopy
 - D UV-visible spectroscopy
- 16 Column efficiency is measured in terms of no. of plates (in HPLC) which is.....
- A Inversely related to the cube root of the peak width
 - B Directly related to the cube root of the peak width
 - C Inversely related to the square of the peak width
 - D Directly related to the square of the peak width
- 17 Thickness of adsorbent in HPTLC plate

- A 100 μm
 - B 300 μm
 - C 250 μm
 - D 200 μm
- 18 The process of passing a mobile phase through a chromatography column is called which one of the following?
- A Elution
 - B Flushing
 - C Partitioning
 - D Washing
- 19 In cation exchange chromatography,
The column contains negatively charged beads where positively charged
- A proteins bind
The column contains positively charged beads where negatively charged
 - B proteins bind
The column contains both positively & negatively charged beads where proteins
 - C bind depending on their net charge
 - D Having neutral beads
- 20 In Gel Permeation Chromatography which molecules will be eluted last?
- A Intermediate molecules
 - B Larger molecules
 - C All the molecules
 - D Small molecules
- The closeness of agreement between the conventional true value or an accepted
- 21 reference value and the value found is called...
- A Accuracy
 - B Precision
 - C Specificity
 - D LOD
- 22 How many spin states are possible for ^1H nucleus
- A 1
 - B 2
 - C 3
 - D 4
- 23 Rheodyne injector is used for....
- A Sample Separation
 - B Sample Injection
 - C Sample measurement
 - D Sample purification
- 24 How many NMR signals are possible in a 1,2-Dichloropropane
- A 1
 - B 2
 - C 3
 - D 4
- 25 In which of the following type of paper, chromatography does the mobile phase move horizontally over a circular sheet of paper?
- A Descending paper chromatography

- B Radial paper chromatography
- C Ascending – descending chromatography
- D Ascending paper chromatography

Answer Key

- 1 c
- 2 c
- 3 a
- 4 a
- 5 b
- 6 c
- 7 d
- 8 a
- 9 b
- 10 c
- 11 b
- 12 c
- 13 c
- 14 c
- 15 b
- 16 c
- 17 d
- 18 a
- 19 a
- 20 d
- 21 a
- 22 b
- 23 b
- 24 d
- 25 b