

**University of Mumbai**  
**Semester Theory Examination Second Half 2020**  
**Question Bank**

**Section I: Multiple Choice Question (MCQ's)**

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**Year/ Semester:** Fourth year B.Pharmacy /VII semester

**Subject:** Pharmaceutical Analysis-III

**Subject Code:** BPH\_C\_703\_T

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1. The capacity factor is the ratio of \_\_\_\_\_.
  - a) Adjusted retention volume/ Void volume
  - b) Adjusted retention volume/ Retention volume
  - c) Retention volume/ Adjusted void volume
  - d) Void volume/ Adjusted retention volume
  
2. Regression coefficient value is between \_\_\_\_\_.
  - a) 0 to 1
  - b) 0 to -1
  - c) -1 to +1
  - d) 0 to 2
  
3. The ratio of absorbance at two wavelength is constant and is independent of its concentration or pathlength in \_\_\_\_\_.
  - a) Simultaneous equation method
  - b) Absorbance ratio method
  - c) Difference spectroscopy
  - d) Derivative spectroscopy
  
4. The dynamic equilibrium of separation in chromatography is explained by \_\_\_\_\_.
  - a) Craig's theory
  - b) Mooley's theory
  - c) Van deemter theory
  - d) Kovat's theory
  
5. In Gas-liquid phase chromatography, the stationary phase is composed of \_\_\_\_\_ and the mobile phase is made of \_\_\_\_\_.
  - a) Solid, liquid
  - b) Liquid, liquid
  - c) Liquid, gas
  - d) Solid, gas

6. The difference between the absorption position of a proton in the test compound and the absorption position of the protons of a reference compound is known as\_\_\_\_\_.

- a) Chemical shift
- b) Spin-spin relaxation
- c) Relaxation process
- d) Spin lattice relaxation

7. The ability to detect the analyte of interest in the presence of interfering substances .....

- a) Linearity
- b) Accuracy
- c) Specificity
- d) Precision

8. In Paper chromatography, Dragendroff's reagent is used for the detection of \_\_\_\_\_.

- a) Phenolic compounds
- b) Alkaloids
- c) Amino acids
- d) Cardiac glycosides

9. Which of the following is the most commonly used interface?

- a) Nebulizer
- b) Chopper
- c) Filter
- d) Vapourising chamber

10. Headspace Analysis is used to carried out analysis of volatile sample from solid and liquid in \_\_\_\_\_?

- a) High Pressure Liquid Chromatography
- b) Planar Chromatography
- c) Column Chromatography
- d) Gas Chromatography

11. Give the order of elution in Reverse Phase –High Pressure Liquid Chromatography if compound A is more polar, compound B is less polar and compound C is non-polar.

- a)  $A > B > C$
- b)  $C > A > B$
- c)  $B > C > A$
- d)  $A > C > B$

12. Which of the following is not true about High pressure liquid chromatography (HPLC)?

- a) It requires high pressure for the separation of the species
- b) There is no need to vaporise the samples

- c) It is performed in columns
- d) It has high sensitivity

13. Which of the following is the type of separator used in commercial Gas Chromatography – Mass Spectroscopy systems?

- a) Jet type molecular separator
- b) Porous tube
- c) Teflon tube
- d) Flow type separator

14. Which is less in NMR. due to presence of electronegative group / atom.

- a) deshielding
- b) Shielding
- c) nucleus
- d) bond

15. Which of the following ions pass through the slit and reach the collecting plate in mass spectroscopy ?

- a) Negative ions of all masses
- b) Positive ions of all masses
- c) Negative ions of specific mass
- d) Positive ions of specific mass

16. Capillary columns are open tubular columns constructed from which of the following materials?

- a) Glass
- b) Metal
- c) Stainless steel
- d) Fused silica

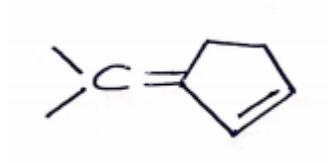
17. In Thin Layer Chromatography , initially the sample is \_\_\_\_\_.

- a) In contact with the mobile Phase
- b) Not in contact with the mobile phase
- c) Coated at the level of mobile phase
- d) Coated below the level of mobile phase.

18. Fourier transform can be accomplished by using which of the following components?

- a) Spin decoder
- b) Detector
- c) Spectrum analyser
- d) Oscilloscope

19. Predict the absorption maximum for the given compound.



- a) 223
- b) 215
- c) 242
- d) 211

20. The exhausted cation exchange column is regenerated by passing a solution of \_\_\_\_\_.

- a) Dilute NaCl
- b) Dilute HCl
- c) Concentrated HCl
- d) Concentrated NaCl