

**Sardar Bhagwan Singh University**  
**M.Sc Chemistry**  
**Molecular Spectroscopy**

1. Chromatography is a physical method that is used to separate and analyse \_\_\_\_\_

- a) Simple mixtures
- b) Complex mixtures
- c) Viscous mixtures
- d) Metals

2. In which type of chromatography, the stationary phase held in a narrow tube and the mobile phase is forced through it under pressure?

- a) Column chromatography
- b) Planar chromatography
- c) Liquid chromatography
- d) Gas chromatography

3. In chromatography, the stationary phase can be \_\_\_\_\_ supported on a solid.

- a) Solid or liquid
- b) Liquid or gas
- c) Solid only
- d) Liquid only

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4. In chromatography, which of the following can the mobile phase be made of?

- a) Solid or liquid
- b) Liquid or gas
- c) Gas only
- d) Liquid only

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5. Which of the following cannot be used as an adsorbent in Column adsorption chromatography?

- a) Magnesium oxide
- b) Silica gel
- c) Activated alumina
- d) Potassium permanganate

6. Which of the following types of chromatography involves the separation of substances in a mixture over a 0.2mm thick layer of an adsorbent?

- a) Gas liquid
- b) Column
- c) Thin layer
- d) Paper

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7. Chromatography cannot be used to purify volatile substances.

- a) True
- b) False

8. In Column chromatography, the stationary phase is made of \_\_\_\_\_ and the mobile phase is made of \_\_\_\_\_

- a) Solid, liquid
- b) Liquid, liquid
- c) Liquid, gas

d) Solid, gas

9. Chromatography cannot be used to separate delicate products.

- a) True
- b) False

10. In Thin layer chromatography, the stationary phase is made of \_\_\_\_\_ and the mobile phase is made of \_\_\_\_\_

- a) Solid, liquid
- b) Liquid, liquid
- c) Liquid, gas
- d) Solid, gas

11. In which of the following type of paper, chromatography does the mobile phase move horizontally over a circular sheet of paper?

- a) Ascending paper chromatography
- b) Descending paper chromatography
- c) Radial paper chromatography
- d) Ascending – descending chromatography

12. Liquid chromatography can be performed in which of the following ways?

- a) Only in columns
- b) Only on plane surfaces
- c) Either in columns or on plane surfaces
- d) Neither in columns nor on plane surfaces

13. Gas chromatography can be performed in which of the following ways?

- a) Only in columns
- b) Only on plane surfaces
- c) Either in columns or on plane surfaces
- d) Neither in columns nor on plane surfaces

14. 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

15. Which of the following types of chromatography involves the process, where the mobile phase moves through the stationary phase by the influence of gravity or capillary action?

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