Chapter 3
Analytical Chemistry

1. Which polymers are used for matrix material in Affinity Chromatography?
   (A) Agarose
   (B) Resin
   (C) Cellulose
   (D) Dextrose

2. The combination of paper chromatography and electrophoresis involves
   (A) partition chromatography
   (B) column chromatography
   (C) electric mobility of the ionic species
   (D) absorption

3. In gas filtration chromatography, separation of protein is based on
   (A) size
   (B) specific Affinity
   (C) net charge
   (D) shape

4. The applications of demineralized water are
   (A) conductance Experiment
   (B) sterilization of equipment and containers
   (C) elimination of inorganic material
   (D) biological Studies

5. The dissolved substance can be removed by Permutit's process are
   (A) oxygen
   (B) nitrogen
   (C) carbon dioxide
   (D) chlorine

6. What does the electrophoresis apparatus consist of?
   (A) Power pack
   (B) Electrophoresis unit
   (C) Buffer chamber
   (D) Fire Pack

7. When does electrophoresis use?
   (A) Separation of proteins
   (B) Separation of amino acids
   (C) Separation of Lipids
   (D) Separation of nucleic acids

8. Which of the following are limitation of Beer Lambert's law, which gives the relation between absorption, thickness, and concentration?
   (A) Concentration must be lower
   (B) Radiation must have higher bandwidth
   (C) Radiation source must be monochromatic
   (D) Does not consider factors other than thickness and concentration that affect

9. In X-ray fluorescence spectrometer, the relationship between the excitation intensity and the intensity of fluorescence depend on which of the following?
(A) Spectrum of the incident radiation
(B) Angle of radiance
(C) Molecular weight
(D) Incident angle

10. If the absorption of electromagnetic radiation by matter results in the emission of radiation of the same or longer wavelengths for a long time, is which of the following?
(A) Luminescence
(B) Fluorescence
(C) Phosphorescence
(D) Spontaneous emission

Answer Key
1. **(A) (C), (D)**
2. **(A), (C)**
3. **(A), (D)**
4. **(A), (B), (D)**
5. **(A), (B), (D)**
6. **(A), (B)**
7. **(A), (B), (D)**
8. **(A), (C), (D)**
9. **(A), (B), (C)**
10. **(A), (D)**