



7. In electron microscope the object is illuminated with .....
- i) uv-light
  - ii) x-rays
  - iii) electron beam
  - iv) visible light
8. .... the data base contains information of catalogue og human genetics and genetic disorder.
- i) OMIN
  - ii) DDBI
  - iii)EMBL
  - iv) PDB
9. .... the type of entrapping of catalogue of human genetics and genetic disorder.
- i) cross – linking
  - ii) physical
  - iii) ceel
  - iv) carrier binding
- 10.The anionic detergent sodium dodesyl suphate is used in .....
- i) TLC
  - ii) ceel filtration
  - iii) electrophoresis
  - iv) immobilization
11. In chromatography technique the detection of amino acid is done.....reagent.
- i) Ninhydrin
  - ii) Sciff`s
  - ii) Molisch`s
  - iv) Barfoed`s
- 12.Resin is used in ..... Chromatography.
- i) Ion exchange
  - ii) Affinity
  - iii) Paper
  - iv) TLC
13. Qualitative analysis is done in ..... chromatography.
- i) Paper
  - ii) Affinity
  - iii) Ion exchange
  - iv) All of these

14. Protein has equal mass of ratio in ..... electrophoresis.

- i) SDS
- ii) Gel
- iii) Isoelectric focussing
- iv) All of these

15. .... Is a method of analysis based on comparing the colour intensity of unknown with that of standard solution.

- i) Colorimetry
- ii) Photometer
- iii) Spectrophotometer
- iv) none of these

16. .... Is defined as the migration of charged particles through the solution between the electrodes under the influence of electric field.

- i) chromatography
- ii) Electrophoresis
- iii) immobilization
- iv) None of these

17. .... is the basic local Alignment Search tool.

- i) BLAST
- ii) RasMol
- iii) EMBOSS
- iv) PROSPECT

18. Which of the following are the applications of bioinformatics?

- i) Processing raw information
- ii) Phylogenetic relationships
- iii) Reconstruction of metabolic pathway
- iv) All of these

19. Which of the following are the buffer is used for cation exchange chromatography?

- i) Acetate
- ii) Barbiturate
- ii) Phosphate
- iv) All of these

20. .... is the type of size exclusion chromatography.

- i) TLC
- ii) Gel permeation

iii) Paper

iv) Ion exchange

21. What is Eluent?

- i) is a liquid solution
- ii) is a liquid solution that is a result from elution
- iii) it is a solvent that used for separation of absorbed material from stationary phase.
- iv) None of the above

22. .... is one of the integrated information data base retrieval tool of NCBI.

- i) OMIM
- ii) BLAST
- iii) ENTREZ
- iv) None of these

23. .... Is used to break disulphide bridges in the protein molecules.

- i) Sodium dodocyl sulphate
- ii)  $\beta$  mercaptoethenol
- iii) Urea
- iv) Sulphate

24. .... is the symbol of valine.

- i) G
- ii) R
- iii) V
- iv) N

25. Which of the following are the application of chromatography.

- i) Amino acid analysis
- ii) Separation of lanthanides
- iii) Separation of Actinides
- iv) All of these

26. Which of the following are the buffer is used for Anion exchange chromatography?

- i) Acetate
- ii) Barbiturate
- ii) Tris
- iv) Phosphate

27. Gel permeation is also know as.....chromatography.

- i) Gel filtration
- ii) paper

iii) Affinity

iv) column

28. Which compounds are held by stationary phase?

i) Polar compound

ii) Non polar compound

iii) A and B

iv) none of the Above

29. Chromatogram is?

i) Solute concentration vs Elution time

ii) Solute concentration vs Elution time

iii) (i) and (ii)

iv) None of the above

30. What is the Analyte?

i) Substance for separation

ii) substance for impurity

iii) (i) and (ii)

iv) None of the above

Q.2) Brief Questions:

- 1) Write in detail technique of Ion-exchange chromatography.
- 2) Write in detail technique of TLC.
- 3) Write in detail technique of Paper chromatography.
- 4) Describe in detail technique of SDS-PAGE electrophoresis.
- 5) Describe in detail structure of antibody.
- 6) Write in detail gel permeation chromatography.
- 7) Describe in detail technique of Paper electrophoresis.
- 8) Rewrite in detail the types of enzyme immobilization.

- 9) Describe in detail construction and working of colorimeter.
- 10) Describe in detail construction and working of spectrophotometer.
- 11) Describe in detail T cells and B cells.

Q.3) Short notes:

- 1) Applications of Paper chromatography.
- 2) Applications of thin layer chromatography
- 3) Factors affecting electrophoretic mobility
- 4) Beer Lambert's law, limitations of Beer Lambert's law
- 5) Advantages of spectrophotometer over colorimeter
- 6) Industrial applications of immobilization
- 7) ELISA
- 8) ENTREZ
- 9) OMIM
- 10) BLAST
- 11) Phagocytosis by macrophages