Yashwantrao Chavan College of Science, Karad. Department of Chemistry & B.Sc. II Biochemistry Subject:Biochemistry Paper III-Biochemical techniques and Bioinformatics Question bank

Q.1) MCQ's

| 1. | is act or used as a l | binder in the thin layer chromatography. |
|----|-----------------------|--|
| | i) Silical gel | ii) Magnesium sulphate |

- iii) Calcium sulphate iv) Ninhydrin
- 2. In electrophoresis the mobility of molecule is affected by.

| i) Charge on molecule | ii) Molecular weight of molecule |
|----------------------------|----------------------------------|
| iii) Shape of the molecule | iv) All of these |

3. In Beer lambert's law intensity of the absorbed light is directly proportional

| to the | |
|--------------------|-----------------------------|
| i) Path length | ii) concentration of solute |
| iii) Both (i)&(ii) | iv) None of these |

- 4. Is used as marker or tracking dye in electrophoresis.
 - i) Bromophenol Blueii) Methylene Blueiii) Comassive Brillient Blueiv) methylone Red
- 5. The cation exchanger in the ion exchange chromatography are
 - i) + vely charged ii) vely charged
 - iii) Having both charges iv) Neutral in nature
- 6. During filtration chromatography molecular takes place.
 - i) Exchange ii) Adsorption iii) Sieving iv) Partition

| 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) Ninhydrinii) Sciff`sii) Molisch`siv) 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) Paperii) Affinityiii) Ion exchangeiv) All of these

- i) SDS
- iii) Isoelectric focussing iv) All of these
 - 15...... Is a method of analysis based on compairing the colour intensity of unknown with that of standard solution.

ii) Gel

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

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

i) chromatographyii) Electrophoresisiii) immobilizationiv) 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 informationii) Phylogenetic relationshipsiii) Reconstruction of metabolic pathwayiv) All of these
- 19. Which of the following are the buffer is used for cation exchange chromatography?
 - i) Acetateii) Barbiturateii) Phosphateiv) All of these
- 20. is the type of size exclusion chromatography.i) TLCii) Gel permeation

| iii) Paper | iv) Ion exchange |
|--|--|
| 21. What is Eluent? | |
| i) is a liquid solutio | n ii) is a liquid solution that is a result from elution |
| iii) it is a solvent tha stationary phase. | t used for separation of absorbed material from |
| iv) None of the abov | 'e |
| 22 is one of the i | ntegrated information data base retrieval tool of NCBI. |
| i) OMIM | ii) BLAST |
| iii) ENTREZ | iv) None of these |
| 23 Is used to bre | eak disulphide bridges in the protein molecules. |
| i) Sodium dodocyl s | sulphate ii) β mercaptoethenol |
| iii) Urea | iv) Sulphate |
| 24 is the symbol | of valine. |
| i) G | ii) R |
| iii) V | iv) N |
| 25. Which of the follow | ing are the application of chromatography. |
| i) Amino acid analy | sis ii) Separation of lanthanides |
| iii) Separation of Act | inides iv) All of these |
| 26. Which of the follow chromatography? | ring are the buffer is used for Anion exchange |
| i) Acetate | ii) Barbiturate |
| ii) Tris | iv) Phosphate |
| | |
| 27. Gel permeation is a | also know aschromatography. |

Gel permeation is also know as.....chromatograph
i) Gel filtration
ii) paper

iii) Affinity

28. Which compound are hold by stationary phase?

i) Polar compound

ii) Non polar compound

iv) column

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
 - iii) (i) and (ii)

ii) substance for impurityiv) None of the above

Q.2) Breif 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 electrophorectic 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