



# SAIVA BHANU KSHATRIYA COLLEGE

(AruppukottaiNadargalUravinmuraiPothu Abi ViruthiTrustukuPathiyapattathu)

## ARUPPUKOTTAI QUESTION BANK

Name of the Department :	Zoology	UG / PG :	UG
Semester (UG - III & V; PG - III) :	V	Subject Code :	SZYJC51
Name of the Subject :	Biochemistry		

### Section A (Multiple Choice Questions)ss

#### Unit I

1. Identify the Sugar, is sweet in taste and soluble in water.  
a) Fructose b) Glycogen c) Starch d) Cellulose
2. Two sugars which differ from one another only in the configuration around one specific carbon atom are called  
a) Anomers b) Epimers c) Chiral center d) Enantiomers
3. Mono molecules of carbohydrates  
a) Glucose b) Amino acid c) Fatty acid d) Starch
4. The polysaccharides function as intercellular cementing substance.  
a) Inulin b) pectin c) Chitin d) Hyaluronic acid
5. Citric acid cycle occur in -----  
a) Cytoplasm b) Golgi body c) Mitochondria d) None of these

#### Unit II

6. The amino acid which do not contain any amino or carboxyl group in the side chain are called  
a) Aliphatic b) alpha amino acid c) Heterocyclic amino acid d) Neutral amino acid
7. In proteins amino acids are linked together by a bond called-----  
a) Covalent bond b) Glycosidic bond c) peptide bond d) Ionic bond
8. The regular appearance of hydrogen bonds between every first and fourth peptide group  
Determines the regularity of turns in the polypeptide chain.  
a) Primary structure b) Secondary structure c) Tertiary structures d) None of these.
9. Collagen is synthesized by-----of connective tissue.  
a) Fibroblasts b) Glycoprotein c) Myoglobin d) Cytochromes.
10. The removal of amino group from the amino acid is called-----  
a) Deamination b) Transamination c) Decarboxlation d) Transmethylation.

#### Unit III

11. Lipid linked to no lipids-----  
a) Simple lipid b) compound lipid c) Derived lipid d) Homolipid
12. The process of formation of soap is called  
a) Rancidity b) Saponification c) Neutral fat d) Emulsification.



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13. The phospholipid maintains the fluidity of plasma membrane.  
a) Lecithins b) Cephalin c) Phosphingosides d) plasmologens.
- 14 The oxidation of fatty acid is carried out in  
a) Heart b) Liver c) Kidney d) all of these
15. Beta oxidation occurs in  
a) Cytoplasm b) Mitochondria c) Lysosome d) None of these

Unit IV

16. Enzymes contain a protein part and a nonprotein part  
a) Endoenzyme b) Exoenzyme c) Holoenzyme d) Isoenzyme
17. When an enzyme act on only one substrate the specificity is  
a) Reversibility b) Catalysts c) Optical specificity d) absolute specificity.
18. The substance bringing about reversible inactivation is called  
a) Competitive inhibition b) Noncompetitive inhibition c) Allosteric inhibition d) None of these
19. The enzymes which catalyze the transfer of a group between two substances are called  
a) Hydrolases b) Lyases c) Isomerase d) Transferases .
20. A substance that speed up a chemical reaction outside the cells.  
a) Enzymes b) Catalysts c) Hormones d) None of these

Unit V

21. The components of a mixture are separated based on their differential migration.  
a) Chromatography b) Electrophoresis c) pH meter d) Spectrophotometer.
22. Paper chromatography is a biochemical technique used to separate  
a) Glucose b) Protein c) Amino acid d)None of these
23. A solution whose pH is not alter to any great extent by the addition of small quantities of either an acid or base is called  
a) Acid b) Base c) Buffer d) PH
24. The migration of charged particles under the influence of an electric field  
a) Chromatography b) Electrophoresis c) pH meter d) Spectrophotometer
25. PAGE is used to separate ----- and for molecular determination.  
A) Glucose b) Amino acid c) Protein d) Fatty acid



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**Section B (7 mark Questions)**

Unit- I

26. Explain the general classification of carbohydrates
- 27 List out the biological significance of carbohydrates.
28. Sucrose is a non reducing sugar –Justify.
29. Mention the properties of carbohydrates
30. Mention the steps involved in the process of glycogenolysis.

Unit-II

31. Explain the structure of amino acid.
32. Discuss the formation of secondary structure of protein.
33. List out the functions of protein.
34. Differentiate between essential and non essential amino acids.
35. What are all the chemical bond is involved in protein formation –Explain?

Unit-III

36. Explain the structure of lipid.
37. Write about the classification of fatty acid.
38. Discuss the types of simple lipids.
39. Differentiate between the animal fats and plant fats.
40. List out the biological significance of lipids.

Unit-IV

41. Explain the properties of enzyme.
42. Discuss the chemistry of enzyme.
43. Write about the classification of enzyme based on Enzyme-Commission.
44. Explain the enzyme based on Enzyme commission number.
45. List out the factors affecting enzyme action.

Unit- V

46. List out the application chromatography.
47. How the paper chromatography separate the amino acids.
48. Write about the methods of measuring pH in a solution.
49. Explain the principles of chromatography.
50. Explain the supporting mediums of electrophoresis.



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**Section C (10 mark Questions)**

Unit-I

51. Discuss the structures of Monosaccharide and its importance.
52. Analysis the steps involved in citric acid cycle and energetic in glucose metabolism.

Unit-II

53. Explain the structure, function and significance of collagen.
54. Discuss the importance of ornithine cycle and urea formation.

Unit-III

55. Explain the formation of derived lipids and its biological importance.
56. How fatty acid oxidized in mitochondria and energetic in lipid metabolism.

Unit -IV

57. Write an account on mechanism of enzyme action.
58. What is enzyme inhibition? And explain its types with suitable examples.

Unit- V

59. Discuss the principle and application of spectrophotometer.
60. Explain the working mechanism and principle of poly acrylamide gel electrophoresis.