

D.K.M.COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1.

I B.Sc Microbiology SEMESTER – I

Title of the paper: ALLIED BIO CHEMISTRY-I

Subject Code : 15CABC1A

SECTION-A 2 MARKS

1. What is Mutarotation
2. Write the difference between reducing and non reducing sugars.
3. Define carbohydrates.
4. What is asymmetric Carbon atom?
5. What are Disaccharides? give example
6. Give the Haworth structure of glucose
7. What are Polysaccharides?
8. What are Anomers?
9. What are Epimers?
10. Define amino acids.
11. What are essential amino acids
12. What are nonessential aminoacids
13. Give two examples for sulphur containing aminoacids
14. What are standard amino acids
15. Define Isoelectric point.
16. Define Zwitter ion.
17. Give the general structure of amino acid.
18. Define peptide bond? give example for biologically important peptides
19. Define protein.
20. What are the elemental composition of proteins.
21. What are fibrous proteins.
22. Explain globular proteins.
23. Define conjugated proteins.
24. What is salting in.

25. What is salting out.
26. Define Denaturation.
27. What are the four levels of protein structure.
28. Define lipids.
29. What are phospholipids.
30. What are compound lipids
31. What are steroids. give example
32. Define saturated fatty acids.
33. Define saponification.
34. What is emulsification?
35. Define rancidity.
36. Define acid number.
37. Define iodine number.
38. What is RM number?
39. What are bile acids.
40. What are the functions of bile acids?
41. Explain unsaturated fatty acids.
42. What is PUFA? Give Example
43. Define nucleic acid.
44. What is nucleoside.
45. Define nucleotides.
46. Bring out the differences between nucleoside and nucleotide
47. What is Erwin Chargaff's rule?

SECTION-B 5 MARKS

1. Write the occurrence, structure and biological importance of cellulose.
2. Write the structure and biological functions of starch.
3. Explain the Osazone formation of glucose.
4. Explain the reaction of amino acid with FDNB
5. Describe the structure and biological importance of sucrose.
6. Give an account on Disaccharides.

7. Explain the physical properties of amino acids.
8. Explain classification of amino acid based on nutritional requirements.
9. Give an account on fibrous and globular proteins.
10. How proteins are classified based on their biological function.
11. Explain the nutritional classification of proteins.
12. Explain salting in and salting out of proteins.
13. Describe physical properties of proteins.
14. Explain the denaturation of proteins
15. Write short note on renaturation of proteins.
16. Write short note on peptide bond.
17. Describe derived lipids.
18. Write short notes on phospholipids.
19. Write short note on physical properties of lipids.
20. Write any three physical properties of lipids.
21. Write short notes on bile acids and its functions
22. Explain the structure and functions of t.RNA

SECTION-C

10 Marks

1. Write in detail about Classification of Carbohydrates.
2. Explain in detail about osazone formation of Monosaccharide.
3. Discuss the structure and functions of Disaccharides.
4. Discuss the occurrence, structure and functions of Starch.
5. Explain in detail the classification of amino acid.
6. Explain in detail about classification of proteins.
7. Write in detail about structure of proteins.
8. Explain in detail about classification of lipids.
9. Write in detail about fatty acids.
10. Discuss in detail about phospholipids
11. Bring out the differences between DNA from RNA.
12. Write in detail about structures of t.RNA and m.RNA.
13. Explain the Watson and Crick model of DNA