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

I B.Sc Microbiology

SEMESTER – II

Title of the paper: ALLIED BIO CHEMISTRY-II

Subject Code :15CABC2A

SECTION- A 2 MARKS

1. Define glycolysis
2. What is transamination
3. State the diagnostic importance of SGOT and SGPT
4. What are saturated fatty acids
5. What is the end product of protein metaboliosm
6. What are unsaturated fatty acids
7. What is aerobic glycolysis
8. What is anaerobic glycolysis
9. Define P^H
10. What is buffer capacity
11. Define Normality
12. Define Osmosis
13. what is osmolarity
14. Define osmotic pressure
15. Isotonic solution
16. Define molarity
17. Hypertonic solution
18. What are buffers
19. What is buffer capacity
20. What are enzymes
21. Define active site
22. What is stero specificity
23. What are isoenzymes? Give examples?
24. Define optimum temperature of enzymes
25. What is the effect of product concentration on enzymes
26. What are oxidoreductases
27. Define optimum temperature
28. What is the effect of product concentration on enzyme activity
29. Define optimum P^H

30. Define enzyme inhibition
31. Give an example for competitive enzyme inhibition
32. What is the central dogma of the cell
33. Name the enzymes that participate in DNA replication
34. What is leading strand
35. What is lagging strand
36. What are okasaki fragments
37. What are termination codons
38. What is wobble hypothesis
39. State any two functions of vitamin C
40. How are vitamins classified?
41. What are fat soluble vitamins
42. What are water soluble vitamins

SECTION B 5 MARKS

1. Outline the reactions of TCA cycle
2. Give an account on Energetic of glycolysis
3. Give an account on transamination reaction
4. Explain the β-oxidation of fatty acid
5. Give an account on deamination reaction
6. Explain the reactions of urea cycle
7. Derive Henderson -Hasselbalch equation for the dissociation of week acid
8. Give an account on the applications of oxygen electrode
9. Explain the applications of osmosis
10. Explain the mechanism of enzyme action with suitable illustration
11. Discuss the properties of active site of an enzyme
12. Explain isoenzymes with suitable example
13. Explain the factors affecting enzyme action
14. Explain competitive inhibition with suitable example
15. Explain non-competitive enzyme inhibition with an example
16. Give an account on uncompetitive enzyme inhibition
17. Explain semi conservative mode of replication
18. Discuss the bidirectional replication
19. Write short notes on translation
20. Explain the activation of amino acids in protein synthesis
21. Explain the transcription events in prokaryotes
22. Explain the biological functions of sodium and calcium

SECTION-C 10 MARKS

1. Explain the pathway of glycolysis and add a note on its regulation

2. Explain the reaction of TCA cycle
3. Discuss the beta oxidation of fatty acids
4. Explain the following
    a) Transamination (5)
    b) Deamination (5)
5. Explain the principle,applications and working of oxygen electrode
6. Explain the following
    a) Applications of osmosis(4)
    b) Isoenzymes (4)
    c) Hypertonic and hypotonic solution (2)
7. Derive MM Equation for an enzyme catalysed reaction
8. Explain the IUB classification of enzymes
9. Discuss enzyme specificity and its types in detail
10. Explain the Mechanism of protein synthesis
11. Explain DNA as genetic material in detail
12. Explain the characteristics of genetic code
13. Explain the transcription events in prokaryotes
14. Explain the sources, biochemical functions of calcium and sodium.
15. Classify vitamins and discuss the biological functions of vitamin A
16. Discuss the biological functions of vitamin C