**Biochemistry Question Bank sem-2 B Pharmacy**

**10 marks long eassy**

1. Describe the reactions involved in the de novo biosynthesis of fatty acids.
2. Explain the Biosynthesis of proteins in the body.
3. Define gluconeogenesis and explain the reactions involved and Significance.
4. Mention the types of RNA. Explain their role in protein synthesis.
5. Explain TCA cycle and give its significance with energies.
6. Explain the degradation of heme and add a note on different types of jaundice.
7. Explain the biosynthesis of pyrimidine nucleotides in the body.
8. Describe the ß-Oxidation of palmitic acid along with the energetics.
9. Explain glycolysis and it’s energetics.
10. Describe the de novo biosynthesis of purine nucleotides.
11. Define and explain the reaction séquences of glycosis and its energitics.
12. Explain the semiconservative replication of DNA in detail.
13. Explain the process of ß-Oxidation of fatty acids with energitics. Considering palmitic acid as example..
14. Explain the various reactions involved in the Citric acid cycle .
15. What are requisites for protein synthesis? Explain the steps involved inProtein synthesis.
16. Explain the de novo biosynthesis of fatty acids along with the enzyme System involved.
17. Explain the general reactions involved in the metabolism of amino acids.
18. Explain the various reactions involved in the Krebs cycle with energitics.

**5 marks short essay**

1. Explain the different types of RNA.
2. Explain the synthesis of bile acids.
3. What is substrate level phosphorylation and oxidative phosphorylation?
4. Give the Amphibolic Nature and energetics of TCA cycle.
5. Explain the double helical structure of DNA.
6. Explain glycogen storage disease.
7. Describe the biosynthesis of pyrimidine bases.
8. Give the reaction sequence in HMP shunt.
9. Write the metabolism of purine nucleotides.
10. Write the formation of ketone bodies in the body.
11. Explain ketolysis with significance.
12. Explain the electron transport chain.
13. Describe the structure and functions of tRNA.
14. Define enzyme inhibition and discuss any one type of enzyme inhibition.
15. Define energy rich compounds and classify with suitable examples.
16. Explain the energy investing reactions of glycolysis.
17. Give the salient features of Genetic code.
18. Define enzymes, classify them according to IUB.
19. Define coenzymes discuss different types of coenzymes.
20. Explain the semi conservative mode of replication of DNA.
21. Explain the chemi osmatic theory of oxidative phosphorylation.
22. Explain the competitive enzyme inhibition with examples.
23. How ketone bodies formed.
24. Describe the hormonal regulation of blood glucose level.
25. Give Structure and biological significance of ATP and Cyclic AMP.
26. Give significance of cholesterol, How it gets converted to bile acids
27. Explain Glycogenesis and Glycogenolysis.
28. Define coenzymes, Give the structure and biological role of coenzyme NAD and FAD.
29. Describe HMP pathway and its significance.
30. Write the formation of ketone bodies in the body.
31. Explain the biological important compounds obtained from the cholesterol.
32. Describe the process of transcription.
33. Explain the structure and functions of t-RNA.
34. Define carbohydrates classify them with example and their biological significance.
35. Explain glycogen storage disease.
36. Write the catabolism of purine Nucleotides.
37. Define genetic code and give its salient futures.
38. Explain the competitive enzyme inhibition with examples.
39. Define oxidative and substrate level phosphorylation.
40. Define coenzymes; Give the structure and functions of NAD And FAD.
41. Define enzyme? Give IUB classification of enzymes with examples.
42. Givè chemical classification of amino acids.
43. Explain gluconeogenesis with reactions involved in it and write its Importance.
44. Describe the double helical structure of DNA.
45. Explain disorders of lipid metabolism.
46. Define Enthalpy and entropy? Explain the relation between them.

**2 marks short essay**

1. Define isoenzyme with examples.
2. What is the role of carnitine in fatty acid metabolism?
3. What is denaturation and renaturation of proteins?
4. Name chain terminating codons.
5. What are isoenzymes? Give examples.
6. Name the essential amino acids
7. What is the B-Oxidation of fatty acids?
8. Write the uncouplers of ETC.
9. Write four differences between DNA and RNA.
10. Define energy rich compounds with examples.
11. What is ketosis.
12. What are cofactors? Give examples.
13. Name bile pigments, bile salts. What is galactosuria ? Name the enzyme involved in it.
14. Give the structures of any two essential fatty acids.
15. What are holoenzymes? Give examples.
16. What is atherosclerosis?
17. Write the inhibitors of ETC.
18. Name the different types of jaundice.
19. Write any two biochemical functions of cholesterol.
20. What are lipotropic factors? Name them.
21. Give the therapeutic importancs of enzymes.
22. Write the types of diabetic mellitus.
23. Name different types of porphyrias
24. Define nucleosides and nucleotides.
25. What is Gout?
26. Name the glucogenic amino acids.
27. Define Km and write its significance.
28. Mention the bases of DNA and RNA
29. Name the enzymes and coenzymes present in pyruvate dehydrogenase Complex.
30. What are okazaki fragments.
31. What is alkaptonuria
32. Write the biological significance of proteins.
33. Define enzyme induction and repression
34. Give the Amphibolic Nature of Krebs cycle.
35. Name the essential amino acids.
36. What is hyperbilirubinemia?
37. Define nucleosides and nucleotides
38. Write the significance of line weaver burk plot.
39. What is isoelectric point?
40. Define free energy and redox potential.
41. Write four differences between DNA and RNA.
42. Write the structure and biochemical functions of cyclic AMP.
43. Define essential fatty acids with examples.
44. Give the physicochemical functions of serotonin.
45. What is phenyl ketonuria?
46. What are the functions of t-RNA
47. Write the biological functions of proteins.
48. Name the bile salts and give their significance
49. Name the ketogenic amino acids.
50. Amphibolic Nature of TCA cycle.
51. Write the biological significance of proteins.
52. Define V max and write its significance.