

## List of Model Full Question for Physiotherapy 2017

1. Write Haemoglobin degradation pathway. Explain Types and Causes of Jaundice. Explain how to differentiate type of Jaundice by serum and urine examination.
2. Explain Transportation – Detoxification of Ammonia with urea cycle. And Explain “why increase ammonia is toxic to brain?”
3. Enumerate factor affecting Enzyme activity. Explain type of enzyme inhibitions with examples in detail. Explain Difference in Function of Glucokinase and Hexokinase on bases of it's Vmax and Km.
4. Describe different type of Protein structure. Explain primary structure's functional relationship with relevant examples (e.g.Haemoglobin, Insulin, Enzyme,).
5. Write type, difference and diagnosis diabetes mellitus. Enumerate complication of Diabetes mellitus and Explain biochemical reason and effect of diabetes ketoacidosis.
6. Write type of oxidation of fatty acid. Give it's difference. Write pathway for beta oxidation of palmitic acid (16 carbon-Saturated fatty acid) and it's energy production.
7. Write types of Acid Base Balance. Explain Renal buffer mechanism in detail. Enumerate causes of Acidosis and Alkalosis.
8. Overview of Tyrosine & Phenylalanine metabolism. Biochemical explanation of Phenylketonuria , Alkaptonuria and albinism.

## List of Model Short Question For Physiotherapy 2017

### General

1. Fluidic Model of Cell membrane
2. Type and Example of Transport mechanism.
3. Chemi-osmotic hypothesis
4. Blood Buffers
5. Renal mechanism for Acid Base balance

### Carbohydrate

6. Mucopolysaccharide (Glycosamino glycans)
7. Digestion & absorption of Carbohydrate
8. Lactose intolerance
9. Diagnosis of Diabetes Mellitus
10. Metabolic alteration in Diabetes Mellitus
11. Acute and Chronic complication of Diabetes Mellitus
12. Biochemical explanation of Diabetic Ketoacidosis
13. Define and significant of Glycated (HbA1c) haemoglobin
14. Energy production of Glycolysis
15. Von Gierke's Disease
16. Significant of HMP Shunt pathway
17. Significant of NADPH
18. Regulation of Gluconeogenesis
19. Effect of Alcoholism on gluconeogenesis as well as on beta oxidation of fatty acid.
20. Polyol pathway and it's significant
21. Advance Glycated End product

### Lipid

22. Lipid digestion –absorption.
23. Rancidity of Fatty acid
24. Liposome & Micelle
25. Digestion and absorption of lipid

26. Function of Phospholipids
27. Eicosanoids
28. Formation of eicosanoids and explain its inhibitor with significance.
29. Significant and Regulation of Cholesterol.
30. Risk factor for Atherosclerosis
31. Type and Function Lipoproteins
32. Type and function of Apo- lipoproteins
33. Pathogenesis of atherosclerosis in context of Oxidized LDL
34. Type and differentiation of Oxidation of Fatty acid.
35. Beta Oxidation of Long Chain Saturated fatty acid.
36. Energy production of saturated even chain fatty acid
37. Carnitine shuttle

### **Protein and Amino acid**

38. Zwitter ion
39. Type of Structure of Protein
40. Protein structural –functional relationship.
41. Define Chaperon & Prion protein.
42. Define Protein Denaturation. Give It's significant & causative factor.
43. Digestion & Absorption of Protein
44. Fates of Tyrosine & Phenylalanine & it's related disorder.
45. Biochemical explanation of Phenylketonuria.
46. Biochemical explanation of Albinism & Alkaptonuria.
47. Fates of Tryptophan & it's related disorder.
48. Role of Glutathione & NADPH for maintain RBC membrane
49. Functional classification of protein.
50. Nitrogen disposal through GDH and Alpha ketoglutarate
51. Role of 2-3 BPG on oxygen diffusion-dissociation and effect during hypoxia
52. Molecular and Biochemical explanation for pathogenesis of Sick cell disease
53. Molecular and Biochemical bases of Thalassemia.
54. Define Porphyria. Explain Causes, Clinical Feature and diagnosis of Acute intermittent porphyria and Congenital erythropoietic porphyria.
55. Transport and Detoxification of Ammonia
56. Haemoglobin degradation pathway . Type and Cause of Jaundice.
57. Types , Causes and differentiation by serum and urine examination of Jaundice.

### **Enzyme**

58. Define Co-Enzyme & Co-Factor. Give Example.
59. Diagnostic importance of isoenzyme
60. Enumerate Liver Function Test & Write it's significant.
61. Enumerate Cardiac Function Test & Write it's significant.
62. Write and Explain Factor affecting enzyme activity with example.
63. Type of Enzyme Inhibition. Explain with example.
64. Difference between Competitive inhibition and Non- Competitive inhibition.
65. Explain Difference in Function of Glucokinase and Hexokinase on bases of it's Vmax and Km.

### **Nutrition & Vitamin**

66. Difference between Kwashiorkor & Marasmus
67. Factor affecting Basal Metabolic Rate
68. Clinical significance of Dietary fibre
69. Metabolism, Function and Clinical significance of Vitamin D
70. Folate trap

71. Function of Vitamin B12.
72. Effect of Warfarin & Dicoumarol on Vitamin K metabolism
- Molecular**
73. Type and Watson & Crick Model of DNA
74. Molecular basis of Sickle cell anaemia.
75. Name & role of the component of the DNA replication fork
76. DNA repair mechanism.
77. Define Telomer & Telomerase. It's significant
78. t-RNA.
79. Degeneracy & wobbling phenomena
80. Effect and Type of Mutation with example.
81. Initiation of Transcription
82. Post-transcription modification.
83. Post translation modification.
84. Genetic codon
85. Salvage pathway of Purine synthesis
86. Lysch Nyhan Syndrome
87. Primary & Secondary cause of Hyperuricemia (Gout)