

List of Model Short Question For MBBS

General

1. Fluidic Model of Cell membrane
2. Type and Example of Transport mechanism.
3. Chemi-osmotic hypothesis
4. Electro-transport Chain
5. Blood Buffers
6. Renal mechanism for Acid Base balance
7. Amphibolic role of TCA cycle
8. Principle, Type and utility of Electrophoresis.
9. Principle, Type and utility of ELISA.
10. Principle and utility of Colorimeter
11. Tumour Markers
12. Biochemical changes in Liver, Adipose tissue and muscle in fasting.
13. Biochemical changes in Liver, Adipose tissue and muscle in well fed state.

Carbohydrate

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

Lipid

30. Lipid digestion –absorption.
31. Rancidity of Fatty acid
32. Liposome & Micelle
33. Digestion and absorption of lipid
34. Role of Phospholipase A2 of Snake venom in RBC lysis.
35. Function of Phospholipids
36. Role of phospholipid in signal transmission
37. Ecosanoids

38. Formation of eicosanoids and explain its inhibitor with significance.
39. Significant and Regulation of Cholesterol.
40. Risk factor for Atherosclerosis
41. Type and Function Lipoproteins
42. Type and function of Apo- lipoproteins
43. Pathogenesis of atherosclerosis in context of Oxidized LDL
44. Interference of "Lipoprotein a" in Coagulation.
45. Cause of Fatty liver
46. Name the Lipotropic Factor. Explain it's effect.
47. Type and differentiation of Oxidation of Fatty acid.
48. Beta Oxidation of Long Chain Saturated fatty acid.
49. Energy production of saturated even chain fatty acid
50. Metabolism of HDL
51. Metabolism of LDL
52. Carnitine shuttle

Protein and Amino acid

53. Zwitter ion
54. Type of Structure of Protein
55. Protein structural -functional relationship.
56. Define Chaperon & Prion protein.
57. Define Protein Denaturation. Give It's significant & causative factor.
58. Digestion & Absorption of Protein
59. Fates of Tyrosine & Phenylalanine & it's related disorder.
60. Biochemical explanation of Phenylketonuria.
61. Biochemical explanation of Albinism & Alkaptonuria.
62. Fates of Tryptophan & it's related disorder.
63. Role of Glutathione & NADPH for maintain RBC membrane
64. Functional classification of protein.
65. Collagen-Homocystineuria-Ectopia lentis
66. Nitrogen disposal through GDH and Alpha ketoglutarate
67. Role of 2-3 BPG on oxygen diffusion-dissociation and effect during hypoxia
68. Molecular and Biochemical explanation for pathogenesis of Sickle cell disease
69. Molecular and Biochemical bases of Thalassemia.
70. Define and explain cause & effect of Met-haemoglobinemia
71. Define Porphyria. Explain Causes, Clinical Feature and diagnosis of Acute intermittent porphyria and Congenital erythropoietic porphyria.
72. Developmental changes in Hemoglobin gene expression from intrauterine life to adult.
73. Mechanism of the Bohr effect
74. Transport and Detoxification of Ammonia
75. Types , Causes and differentiation by serum and urine examination of Jaundice.

Enzyme

76. Define Co-Enzyme & Co-Factor. Give Example.
77. Diagnostic importance of isoenzyme

78. Enumerate Liver Function Test & Write it's significant.
79. Enumerate Cardiac Function Test & Write it's significant.
80. Write and Explain Factor affecting enzyme activity with example.
81. Type of Enzyme Inhibition. Explain with example.
82. Difference between Competitive inhibition and Non- Competitive inhibition.
83. Explain Difference in Function of Glucokinase and Hexokinase on bases of it's Vmax and Km.

Nutrition & Vitamin

84. Assessment of obesity.
85. Difference between Kwashiorkor & Marasmus
86. Factor affecting Basal Metabolic Rate
87. Clinical significance of Dietary fibre
88. Metabolism, Function and Clinical significance of Vitamin D
89. Folate trap
90. Mucosal block theory of iron absorption.
91. Name and write clinical manifestation occur in Vitamin A deficiency.
92. Type and clinical features of Beriberi.
93. Pernicious anaemia.
94. Function of Vitamin B12.
95. Effect of Warfarin & Dicoumarol on Vitamin K metabolism

Molecular

96. Type and Watson & Crick Model of DNA
97. Molecular basis of Sickle cell anaemia.
98. Name & role of the component of the DNA replication fork
99. DNA repair mechanism.
100. Define Telomere & Telomerase. It's significant
101. t-RNA.
102. Degeneracy & wobbling phenomena
103. Effect and Type of Mutation with example.
104. Initiation of Transcription
105. Post-transcription modification.
106. Post translation modification.
107. Genetic codon
108. Lac operon
109. Procedure & Significant of PCR
110. Significant of RFLP in diagnosis of Sickle cell disease
111. Microarray
112. Salvage pathway of Purine synthesis
113. Lysch Nyhan Syndrome
114. Primary & Secondary cause of Hyperuricemia (Gout)