

## List of Model Justification

### **General**

1. Oral rehydration solution is made up of glucose and sodium both.
2. Hyperkalemia can occur in Metabolic acidosis.
3. Proteolytic enzymes are released in zymogen form.
4. "TCA cycle is amphibolic in nature"
- 5. Cigarette smokes is injuries to health of lungs**
6. Blood Buffers act quickly but not permanently.
7. 2,4 - dinitrophenol (uncoupler ) leads to thermogenesis.
8. Brown adipose tissue promotes thermogenesis.
9. Diarrhea cause normal anion gap acidosis.
10. Carbohydrate are essential for the metabolism of fat.

### **Carbohydrate**

11. Flouride is used as preservative for blood sample for glucose estimation.
12. In absence of O<sub>2</sub>, glycolysis can not continue if there is no formation lactic acid.
13. Uncontrolled diabetes mellitus leads to neuropathy and retinopathy.
14. To maintain blood glucose after meal,Glucokinase play important role than hexokinase.
15. Glycerol is used in enema.
16. Acarbose is used in treatment of diabetes mellitus.
17. Structure of proteoglycan is well suited for its function.
18. During sprint there is extra yeild of ATP from anaerobic acid glycolysis.
19. In acute myocardial infarction,there is elevation of lactic acid in cardiac myocyte.
20. Lactase enzyme deficiency cause diarrhea after milk ingestion.
21. Human can not digest cellulose.
- 22. Pancreatitis leads to steatorrhea.**
23. Sucrose is non- reducing.
24. Diabetic patients are more prone to Atherosclerotic disease.
25. Fasting blood sample is require for complete lipid profile evaluation.
26. Sucrose is called "invert sugar".
27. Erythrocytes transketolase enzyme activity is an indicator of thiamine status.
- 28. Although no ATPs are formed in HMP shunt pathway, it is important for RBCs.**
29. "Alcohol inhibit gluconeogenesis,so it causes hypoglycemia,if person is on starvation." explain it.
30. Acute alcoholism can trigger gouty arthritis.
31. Muscle glycogen cannot be utilized directly for energy purpose
32. Dextran is used as plasma volume expander.

33. Muscle glycogen cannot contribute to blood glucose.
- 34. G6PD deficiency causes hemolysis**
35. G6PD deficient patient are resistant to falciparum malaria.
36. Primaquine administration in G6PD deficient patient can precipitate Hemolytic anaemia.
37. Insulin is use to correct hyperkalemia.
38. Patient of IDDM have more risk of diabetic ketocidosis than NIDDM.
39. Cataract is more common in diabetes mellitus.
40. Estimation of C-Peptide is better parameter to differentiate IDDM & NIDDM.
41. Although no ATPs are formed in HMP shunt pathway, it is important for RBCs.
42. For esimation of blood sugar, blood is collected in flouride bulb.
- 43. Hyaluronidase is called as spreading factor.**

**Protein & Amino acid**

44. HbS move slower than HbA in alkaline gel electrophoresis.
45. 2,3 BPG decrease affinity of oxygen for hemoglobin.
46. Phenobarbitone precipitate acute intermittent porphyria.
47. Lead inhibit heme synthesis.
48. Photosensitivity does not occur in acute intermittent porphyria.
49. Glucose is given in treatment of acute intermittent porphyria.
50. Blue fluoroscent light is useful in treatment of neonatal jaundice.
51. Histidine & Arginine is semi-essential amino acid.
52. Zwitter ions has no mobility in electrical field.
53. Zwitter ions has minimum buffering & solubility capacity
54. Ammonia is toxic to brain.
55. Albumin/Globulin ratio is reversed in liver disease.
56. Tyrosine becomes an essential amino acid for patients of phenylketoneuria.
57. Fibrinogen estimation cannot be done in serum.
58. Hepatic failure leads to coma.
59. Peptide bond is called semi double bond.
60. Glycine is optically inactive.
- 61. Creatine is use to improve athletic performance.**
62. Increase level of Homocysteine increases risk of atherosclerosis
63. MAO inhibitor are use in patient of depression
64. In Carcinoid syndrome, patient may suffer from pellegra.
65. Glutamate is use in management hepatic- uremic coma (hepatic encephalopathy).
66. Vitamine B12 deficiency cause methy-melonic aciduria.
67. Alpha 1 anti-trypsin deficiency cause emphysema.
68. "Haemoglobin is good blood buffer".
69. 2-3 BPG concentration is higher in patient of COPD and cyanotic heart disease.

70. Excess use of barbiturate cause anemia.  
71. Lead poisoning leads to anaemia.  
72. Tyrosine becomes an essential amino acid for patients of phenylketoneuria.

**73. Proline does not allow to form alpha helix.**

### **Lipid**

74. Oxidized LDL is important in pathogenesis of atherosclerosis.  
75. In cystic fibrosis, Malabsorption of long chain fatty acid occurs, but not short chain and medium chain fatty acids.  
76. Eicosanoids are not true hormone.  
**77. The inhibition of COX-1 can be overcome in endothelial cells but not in platelets while patient is taking low dose Aspirin.**  
**78. Anti-inflammatory action of aspirin is reversible, but anti-platelet action is irreversible.**  
79. LDL is metabolised via the LDL receptor.  
80. Liver plays a central role in lipid transport & metabolism.  
81. Triacylglycerol is a substrate for gluconeogenesis.  
82. HDL is involved in "Reverse Cholesterol Transport"  
83. Deficiency of Lipoprotein lipase results in hypertriglyceridemia  
84. Cystic fibrosis causes deficiency of lipid soluble vitamin.  
85. Lingual lipase is important in lipid digestion in neonate.  
86. Orlistat (pancreatic and hepatic lipase inhibitor) treatment is supplemented with lipid soluble vitamins.  
87. Unsaturated cis-fatty acids decrease fluidity of membrane.  
88. In a patient with lipoprotein lipase deficiency, creamy layer is seen on the top of serum.  
89. High HDL level is decrease risk of coronary heart disease.  
90. Linoic acid and linolenic acid are essential fatty acid.  
91. Sunflower oil (Omega-3 & Omega-6 fatty acid) decrease risk of atherosclerosis.  
92. LDL increase risk of atherosclerosis.  
93. Rancidity of fatty acid increase risk of atherosclerosis.  
94. Snake bite causes severe haemolysis of RBCs.  
95. Carnitine deficient are advised to take diet, containing medium chain fatty acid.  
96. Carnitine deficient can suffer from severe hypoglycemia.  
97. Pre-mature baby can suffer from Acute Respiratory Distress Syndrome.  
**98. Orlistat is use as Anti-Obesity agent.**  
99. Heparin is known as clearing factor  
100. Bile salts are detected in the urine of obstructed jaundice  
**101. Explain "Statin is use in treatment of hypercholesterolemia"**  
**102. Eicosapentaenic acid and docosahexaenoic acids in food are good for health.**

### **Enzyme**

103. "CK-MB is more significant marker than LDH & S.GOT for diagnosis of Myocardial infarction" explain it.
104. Sudden withdrawal of statin drugs can cause hypercholesterolemia.
- 105. Aspirin cause suicide inhibition.**
106. Ethanol is use as antidote in methanol poisoning.
107. Explain "Allopurinol use in gouty arthritis"

### **Nutrition & Vitamins**

108. Folic acid supplementation is essential in pregnancy.
109. Vitamin- D deficiency does not cause Tetany.
110. Oral iron tablets are advised to take along with glass of lemon water.
111. Iron is conserved in our body.
112. Copper is necessary for iron absorption.
113. Vitamin B12 deficiency cause pernicious anemia
114. A single intramuscular dose of Vitamin K is given to All newborns.
115. Folic acid and Vitamin b12 are given together in treatment of megaloblastic anemia
116. Pellagra can occur in carcinoid syndrome..
- 117. Oedema occurs in Kwashiorkor.**
118. "Vitamin C deficiency cause Scurvey" Explain it.
119. Pyridoxal phosphate deficiency can cause pellagra.
120. Vitamin D is consider as hormone.
121. Niacin deficiency alone can not cause pellagra.
122. Vitamin C increases iron absorption.
123. Vitamin B 12 deficiency leads to folate trap.
124. Pellagra can occur due Tryptophan or pyridoxine (Vitamin B6) deficiency.
125. Iodine deficiency in diet leads to goiter.
126. Vitamin B 12 deficiency leads to folate trap.
127. Haemolysed blood sample is not suitable for potassium estimation.

### **Molecular**

- 128. "Mutations are always harmful." True or Flase, Explain it.**
- 129. Genetic code is degenerate.**
130. Decrease activity Telomerase can be a one of the reason of aging.
131. Telomerase inhibitors can be use in treatment of malignancy.
132. UV radiation can cause Xeroderma pigmentosum (skin cancer).
133. HGPRT deficiency (Lesch – Nyhan Syndrome) cause hyperuricemia.
134. Replication is semi-conservative.
135. RNA can function as a genetic material.

136. Genetic code is universal.
137. Allopurinol is use to prevent re-perfusion injury .
138. Methotrexate (Folic acid analogues) is used to treat neoplastic disease.
139. Adenosine deaminase deficiency cause severe immuno-deficiency disorder.
- 140. 5-flurouracil cause suicide inhibition.**
141. Lactase enzyme gene is not transcribed in presence of both glucose & lactose, in prokaryotes.
142. Low iron concentration increase synthesis of transferritin and decrease synthesis of ferritin.