

Biochemistry Structured viva sessional III

<https://forms.gle/76JkZUB8f2TWMeuy8>

- 1. Reference values of (1)**
 - 1. Urea**
 - 2. Fasting glucose**
- 2. Biochemical defect in(1 mark)**
 - 1. Phenylketonuria**
 - 2. Von Gierkes disease**
- 3. Mechanism of action of any aspirin(1)**
- 4. Diagnostic significance of HbA1c (1)**
- 5. Describe the functions of NAD(1)**
- 6. Give reasons for ketoacidosis as a complication in type 1 diabetes mellites(1)**
- 7. Justify Lysosome is involved in autophagy.(2)**
- 8. Justify: pyridoxine deficiency causes anemia (2)**

- 1. Reference values of (1)**
 - 1. HbA1c**
 - 2. Creatinine(adult male)**
- 2. Biochemical defect in(1 mark)**
 - Porphyria cutanea tarda**
 - Hereditary fructose intolerance**
- 3. Mechanism of action of allopurinol drug(1)**
- 4. Diagnostic significance of Bence Jones protein in urine(1)**
- 5. Describe the functions of S adenosyl methionine(1)**
- 6. Give reasons ascites in cases of hypoproteinemia(1)**
- 7. Justify Trans fatty acid is atherogenic.(2)**
- 8. Justify hyperkalemia is seen in patients with diabetic ketoacidosis.
(2)**

- 1. Reference values of (1)**
 - 1. Serum Creatinine of adult female**
 - 2. Fasting blood glucose**
- 2. Biochemical defect in(1 mark)**
 - 1. Pompe's Disease**
 - 2. Hartnup's disease**
- 3. Mechanism of action of dicoumarol (1)**
- 4. Diagnostic significance of Troponin I (1)**
- 5. Describe the functions of Heme(1)**
- 6. Give reasons for anemia in pyridoxin deficiency(1)**
- 7. Justify Ketone bodies can be synthesized by liver but cannot be utilized by liver..(2)**
- 8. Justify thiamine deficiency can cause lactic acidosis. (2)**

- 1. Reference values of (1)**
 - 1. Serum HDL**
 - 2. Serum albumin**
- 2. Biochemical defect in(1 mark)**
 - 1. Gaucher disease**
 - 2. Maple Syrup urine disease**
- 3. Mechanism of action of penicillin drug(1)**
- 4. Diagnostic significance of Ca125 (1)**
- 5. Describe the functions of creatine(1)**
- 6. Give reasons for hyperbilirubinemia in cholelithiasis (1)**
- 7. Justify Hyperammonemia causes brain toxicity. .(2)**
- 8. Justify: pyridoxine deficiency causes neuronal symptoms. (2)**

- 1. Reference values of (1)**
 - 1. Serum total protein**
 - 2. Random blood glucose**
- 2. Biochemical defect in(1 mark)**
 - 1. Acute intermittent porphyria**
 - 2. Steatorrhea**
- 3. Mechanism of action of glycine in hyperammonaemia (1)**
- 4. Diagnostic significance of prostate specific antigen (1)**
- 5. Describe the functions of epinephrine(1)**
- 6. Give reasons for ascites in kwashiorkor (1)**
- 7. Justify Hepatic encephalopathy is seen in liver cirrhosis.(2)**
- 8. Justify: vitamin A deficiency causes nyctalopia. (2)**

- 1. Reference values of (1)**
 - 1. Serum uric acid**
 - 2. Serum sodium**
- 2. Biochemical defect in(1 mark)**
 - 1. Albinism**
 - 2. Lesch-Nyhan Syndrome**
- 3. Mechanism of action of nitro-glycerine (1)**
- 4. Diagnostic significance of gamma glutamyl transferase(GGT) (1)**
- 5. Describe the functions of thyroxine(1)**
- 6. Give reasons lactic acidosis in hypoxia(1)**
- 7. Justify Chronic alcoholics may present with hypoglycemia.(2)**
- 8. Justify calcium deficiency causes tetany. (2)**

- 1. Reference values of (1)**
 - 1. Serum LDL**
 - 2. Serum HDL**
- 2. Biochemical defect in(1 mark)**
 - 1. Alkaptonuria**
 - 2. scurvy**
- 3. Mechanism of action of sildenafil citrate (1)**
- 4. Diagnostic significance of OGCT(oral glucose challenge test)(1)**
- 5. Describe the functions of tetrahydrobiopterin(1)**
- 6. Give reasons for respiratory distress syndrome in premature newborn.(1)**
- 7. Justify Early diagnosis and treatment of phenylketonuria prevents occurrence of mental retardation. (2)**
- 8. Justify vitamin B12 deficiency causes peripheral neuropathy. (2)**

- 1. Reference values of (1)**
 - 1. Serum phosphate**
 - 2. Serum Creatinine**
- 2. Biochemical defect in(1 mark)**
 - 1. Phenylketonuria**
 - 2. Pellagra**
- 3. Mechanism of action of aspirin(1)**
- 4. Diagnostic significance of fat in stool (1)**
- 5. Describe the functions of cytochrome oxidase(1)**
- 6. Give reasons for neuropsychiatric symptoms in acute intermittent porphyria (1)**
- 7. Justify Oxidized LDL is atherogenic .(2)**
- 8. Justify: hypoalbuminemia patients also have hypocalcemia . (2)**

- 1. Reference values of (1)**
 - 1. Serum Alkaline phosphatase**
 - 2. Serum potassium**
- 2. Biochemical defect in(1 mark)**
 - 1. Gaucher disease**
 - 2. Nyctalopia**
- 3. Mechanism of action of allopurinol drug(1)**
- 4. Diagnostic significance of TSH (1)**
- 5. Describe the functions of ALA synthase(1)**
- 6. Give reasons for skin damage in porphyria cutanea tarda(1)**
- 7. Justify Arachidonic acid is not essential fatty acid.(2)**
- 8. Justify premature newborn is more prone to develop kernicterus . (2)**

- 1. Reference values of (1)**
 - 1. Post prandial blood glucose**
 - 2. Serum Total cholesterol**
- 2. Biochemical defect in(1 mark)**
 - 1. Essential fructosuria**
 - 2. Homocystinuria- Type I**
- 3. Mechanism of action of methotrexate drug(1)**
- 4. Diagnostic significance of Cortisol (1)**
- 5. Describe the functions of Nitric oxide (1)**
- 6. Give reasons frequency of micturition in diabetes mellites (1)**
- 7. Justify Prolonged cortisone therapy leads to minerals imbalance .(2)**
- 8. Justify vitamin D deficiency causes rickets. (2)**

- 1. Reference values of (1)**
 - 1. Serum sodium**
 - 2. HCO₃**
- 2. Biochemical defect in(1 mark)**
 - 1. Hyperammonemia-Type I**
 - 2. Respiratory Distress Syndrome in newborn**
- 3. Mechanism of action of dicoumarol (1)**
- 4. Diagnostic significance of ferric chloride test in urine (1)**
- 5. Describe the functions of glutathione (1)**
- 6. Give reasons for cataract in diabetes mellites (1)**
- 7. Justify primary hypothyroidism has elevated TSH levels (2)**
- 8. Justify vitamin A deficiency causes keratomalacia . (2)**

- 1. Reference values of (1)**
 - 1. Urea**
 - 2. Fasting glucose**

- 2. Biochemical defect in(1 mark)**
 - 1. Niemann pick disease**
 - 2. Tetany**

- 3. Mechanism of action of sulfonamide (1)**

- 4. Diagnostic significance of Vitamin D levels (1)**

- 5. Describe the functions of phenylalanine hydroxylase(1)**

- 6. Give reasons pedal edema in patients with renal failure(1)**

- 7. Justify Pyridoxine deficiency causes peripheral neuropathy (2)**

- 8. Justify classical galactosemia causes cataract. (2)**

- 1. Reference values of (1)**
 - 1. Serum total protein**
 - 2. Serum Creatinine in adult male**
- 2. Biochemical defect in(1 mark)**
 - 1. Niemann pick disease**
 - 2. Multiple myeloma**
- 3. Mechanism of action of penicillin (1)**
- 4. Diagnostic significance of CK-MB(1)**
- 5. Describe the functions of phosphofructokinase(1)**
- 6. Give reasons for hemolysis in patients with sickle cell anemia(1)**
- 7. Justify Hepatic encephalopathy is seen in liver cirrhosis.(2)**
- 8. Justify diabetes mellitus patients are more prone to develop cataract. (2)**

- 1. Reference values of (1)**
 - 1. Blood pH**
 - 2. Blood PCO₂**
- 2. Biochemical defect in(1 mark)**
 - 1. Lactose intolerance**
 - 2. Galactosemia**
- 3. Mechanism of action of 5 fluorouracil (1)**
- 4. Diagnostic significance of adenosine deaminase (ADA) (1)**
- 5. Describe the functions of insulin(1)**
- 6. Give reasons for anemia in G-6PD deficiency(1)**
- 7. Justify: Urea levels are elevated during starvation.(2)**
- 8. Justify: central Indian population has higher incidence of pellagra . (2)**

- 1. Reference values of (1)**
 - 1. Serum calcium**
 - 2. Random blood glucose**
- 2. Biochemical defect in(1 mark)**
 - 1. Burning feet syndrome**
 - 2. Pheochromocytoma**
- 3. Mechanism of action of sulfonamide (1)**
- 4. Diagnostic significance of alkaline phosphatase (1)**
- 5. Describe the functions of glucagon(1)**
- 6. Give reasons for elevation of amylase levels in pancreatitis(1)**
- 7. Justify Digestive enzymes are secreted as zymogens.(2)**
- 8. Justify folic acid is supplemented in pregnant women. (2)**

- 1. Reference values of (1)**
 - 1. Post prandial blood glucose**
 - 2. Serum Total cholesterol**
- 2. Biochemical defect in(1 mark)**
 - 1. Gilberts syndrome**
 - 2. Hartnups disease**
- 3. Mechanism of action of methotrexate (1)**
- 4. Diagnostic significance of troponin T(1)**
- 5. Describe the functions of cholesterol (1)**
- 6. Give reasons cataract is seen in patients with classical galactosemia(1)**
- 7. Justify: oxidised LDL is atherogenic(2)**
- 8. Justify: hyperbilirubinemia is seen in patients with hemolysis. (2)**

- 1. Reference values of (1)**
 - 1. Serum Alkaline phosphatase**
 - 2. Serum calcium**
- 2. Biochemical defect in(1 mark)**
 - 1. Lactose intolerance**
 - 2. Respiratory distress syndrome in newborn**
- 3. Mechanism of action of 5 fluorouracil (1)**
- 4. Diagnostic significance of VMA in urine (1)**
- 5. Describe the functions of melanin(1)**
- 6. Give reasons for conjugated hyperbilirubinemia in cases of obstructive jaundice (1)**
- 7. Justify-prolonged starvation leads to ketoacidosis(2)**
- 8. Justify- diabetic patients are advised against consuming foods with high glycemic index. (2)**

- 1. Reference values of (1)**
 - 1. Serum HDL**
 - 2. Serum albumin**
- 2. Biochemical defect in(1 mark)**
 - 1. Galactosemia**
 - 2. Refsums disease**
- 3. Mechanism of action of statin (1)**
- 4. Diagnostic significance of 5-HIAA in urine (1)**
- 5. Describe the functions of carnitine (1)**
- 6. Give rationale for use of oral rehydration (ORS) therapy on dehydration (1)**
- 7. Justify Early diagnosis and treatment of phenylketonuria prevents occurrence of mental retardation.(2)**
- 8. Justify high fiber diet is considered good for health. (2)**

- 1. Reference values of (1)**
 - 1. Serum uric acid**
 - 2. Serum sodium**
- 2. Biochemical defect in(1 mark)**
 - 1. Pernicious anemia**
 - 2. Lesch nyhans syndrome**
- 3. Mechanism of action of glycine in hyperammonemia (1)**
- 4. Diagnostic significance of lipase(1)**
- 5. Describe the functions of histidine (1)**
- 6. Give reasons skin sensitivity in porphyria cutanea tarda (1)**
- 7. Justify-Glycerol cannot be converted to glycerol 3 phosphate in adipose tissue.(2)**
- 8. Justify- vitamin E has anti-oxidant properties (2)**

- 1. Reference values of (1)**
 - 1. HbA1c**
 - 2. Creatinine(adult male)**
- 2. Biochemical defect in(1 mark)**
 - 1. Hurtnups disease**
 - 2. Von Geirkes disease**
- 3. Mechanism of action of nitroglycerine drug(1)**
- 4. Diagnostic significance of amylase(1)**
- 5. Describe the functions of LCAT(1)**
- 6. Give reasons for hyperuricemia in Von Geirk's disease (1)**
- 7. JustifyKetone bodies can be synthesized by liver but cannot be utilized by liver.(2)**
- 8. Justify vitamin B12 is always supplemented with folic acid . (2)**

- 1. Reference values of (1)**
 - 1. Serum Alkaline phosphatase**
 - 2. Serum uric acid**
- 2. Biochemical defect in(1 mark)**
 - 1. Gaucher's disease**
 - 2. Albinism**
- 3. Mechanism of action of sildenafil citrate (1)**
- 4. Diagnostic significance of acid phosphatase(1)**
- 5. Describe the functions of PAPS(1)**
- 6. Give reasons for any clinical feature of any disease (1)**
- 7. Justify Oxidized LDL is atherogenic .(2)**
- 8. Justify copper deficiency causes anemia. (2)**