

Post graduation (M.D. - Biochemistry) Preliminary Theory Examination
Government Medical College , Bhavnagar

Paper-2 (Metabolism , Bioenergetics, Nutrition , Vitamins and Hormones)

Date : 12/08/2025

Marks : 100

Q-1 Write detailed notes on the following. (20 Marks)

- Etiology and pathogenesis of each type of diabetes mellitus. Impact of the AGEs and polyol pathway in occurrence of it's complication. Explain Pathogenesis of non-ketotic hyper-osmolar coma and coma due to ketoacidosis with it's differentiation.

Q-2 Write detailed notes on the following. (20 Marks)

- Type of haemoglobinopathies and haemoglobin variants. Molecular basis of pathogenesis and diagnosis of sickle cell anemia. Give biochemical explanation of each clinical feature and medical management of sickle cell anemia.

Q-3 Write short notes on following. (20 Marks)

1. Define chaperon. Explain pathogenesis of prion disease with example of amyloidosis.
2. Type of alcohol as per its filtration process. Physiological difference in different ethnics for it's metabolism. Biochemical mechanism of management of acute and chronic alcoholism.

Q-4 Write short notes on following. (40 Marks)

1. Type, cause and biochemical pathogenesis of congenital jaundice.
2. Name of Multi enzyme protein and write it's component with role
3. Hormonal and Metabolic changes during intermittent fasting.
4. Biochemical mechanism of Organo-phosphorus poisoning
5. Draw flow chart of pathogenesis of Von-Gierke's disease pathogenesis.
6. Impact of hyperhomocysteinemia and its management..
7. Structure, component and function of HDL-cholesterol. its function
8. G6PD deficiency and its clinical significance with treatment of malaria..
9. Effect of chronic pancreatitis on metabolism and digestion – absorption