

Post graduation (M.D. - Biochemistry) University Theory Examination
Government Medical College , Bhavnagar
Paper-2 (Metabolism , Bioenergetics, Nutrition , Vitamins and Hormones)

Date : 24/09/2025

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 its complication.
- Explain Pathogenesis of non-ketotic hyper-osmolar coma and coma due to ketoacidosis with its differentiation.

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

- Organo-phosphorus poisoning - Biochemical explanation behind its systemic effect , clinical feature, diagnosis and management.

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

1. Define chaperon. Explain pathogenesis of prion disease with an example of amyloidosis.
2. Molecular basis of pathogenesis and diagnosis of sickle cell anemia.

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

1. Thermogenesis in brown adipose tissue
2. Regulation of gluconeogenesis
3. Type, cause and biochemical pathogenesis of congenital jaundice.
4. Mechanism of action of the hormones
5. Draw flow chart of pathogenesis of Von-Gierke's disease pathogenesis.
6. Structure, component and function of HDL-cholesterol.
7. G6PD deficiency and its clinical significance with treatment of malaria..
8. Effect of chronic pancreatitis on metabolism and digestion – absorption