

- Q2. Answer the following (any ten):** [20]
1. What are enantiomers? Briefly explain with examples.
 2. Discuss about optical activity in carbohydrates.
 3. Draw structure of: (i) α -D-glucopyranose (ii) β -D-fructofuranose
 4. Briefly discuss stereoisomerism in amino acids.
 5. Draw structure of: (i) Histidine (ii) Tyrosine
 6. Briefly discuss reaction of amino acids with Sanger's reagent.
 7. What is Chargaff's rule?
 8. What is T_m value with reference to DNA?
 9. Write about Z-DNA.
 10. Give classification of minerals with examples.
 11. Write food sources and functions of iodine.
 12. What are the functions of chlorine in body?

- Q3. A. Write a note on structure and importance of Lactose.** [05]
B. Discuss mutarotation in carbohydrates with example. [05]

OR

- Q3. A. Write a note on structure and importance of Sucrose.** [05]
B. Discuss reaction of carbohydrates with dilute alkali. [05]

- Q4. A. Discuss amphoteric nature and isoelectric pH of amino acids.** [05]
B. Discuss classification of amino acids based on polarity. [05]

OR

- Q4. A. Draw titration curve of Glycine and write its main features.** [05]
B. Write short notes on: (i) Essential amino acids (ii) Amide formation [05]

- Q5. A. Write a note on pyrimidine nitrogenous bases.** [05]
B. How is phosphodiester bond formed? [05]

OR

- Q5. A. Draw double helical structure of DNA and write its characteristics.** [05]
B. What is meant by COT value? Explain. [05]

- Q6. A. Discuss biochemical functions of calcium.** [05]
B. Write a note on food sources, RDA and functions of Iron. [05]

OR

- Q6. A. Write a note on food sources, RDA and functions of sodium.** [05]
B. Write a note on RDA and biochemical functions of Phosphorus. [05]

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