

Q.2. Attempt any seven of the following

2x7=14

- a. What are informational biomolecules?
- b. What are 'chiral centers'?
- c. Define: 'Electron motive force'.
- d. What is the fate of pyruvate in low-oxygen conditions?
- e. The standard free energy change is related to the equilibrium constant: Justify.
- f. Give one letter symbol for Glycine, Aspartic acid, Arginine and Glutamic acid.
- g. Define: Entropy, Free energy change, Enthalpy and Standard free energy
- h. Give the significance of Hasselbalch equation.
- i. Enlist the name of amino acids synthesized from Chorismate.

Q. 3. a. Write a note on: TCA cycle

[06]

b. Discuss glycogen synthesis and its utilization.

[06]

OR

b. Explain glyoxylate cycle.

[06]

Q. 4. a. Define aerobic respiration. How electron flow during oxidative pathway.

[06]

b. Write a detailed note on iron sulphur proteins and cytochromes.

[06]

OR

b. Draw well labeled diagram of ATPase. Explain binding-change model for ATP synthase.

[06]

Q. 5. a. Explain the role of the enzymes in fatty acid synthesis.

[06]

b. Write a note on membrane lipids.

[06]

OR

b. Comment: Fatty acid oxidation is tightly regulated.

[06]

Q.6. a. Describe transamination and deamination steps of amino acid catabolism.

[06]

b. Explain Ramachandran plot.

[06]

OR

b. Discuss purine nucleotide synthesis and its regulation.

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