

- Q-3** a What is ATP synthase? Explain its working mechanism with suitable diagram. 7
b Explain the steps of Krebs's cycle. 7

SECTION – II

- Q-4** Attempt the Following questions 7

- a. Mitochondria contain a small DNA chromosome. True/False
- b. What is symport?
- c. Pinocytosis is also known as cell drinking. True/False
- d. What is clathrin?
- e. Cisternae is a part of ER. True/False
- f. Write the full form of AHLs.
- g. How many stages of sporulation are present in *Bacillus subtilis*.

- Q-5** Write short notes on-

- a Transport into chloroplast 7
- b Chemical signaling 7

OR

- Q-5** a Activation energy 7
b HSPs 7

- Q-6** Write short notes on-

- a Membrane proteins 7
- b Explain the structure of histidine kinase with suitable diagram. 7

OR

- Q-6** Attempt all Questions

- a What is G-Protein? Explain how G-coupled signals work in cell. 2+5
- b What active transport? Briefly explain the process of active transport with suitable diagram. 2+5

