

SECTION – II

- Q-4** **Briefly explain the following-** **7**
- a. fermentation is also described as a 'closed system. (Batch /continuous/fed batch)
 - b. A metabolic pathway is an independent series of chemical reactions occurring within a cell. True/False
 - c. Freezing is a good way to store bacteria. True/False
 - d.cellular respiration takes place in the mitochondria of cells. (Aerobic/Anaerobic)
 - e. What is known as milk protein?
 - f. Cryogenics is a method of strain improvement. True/False
 - g. Immobilized enzymes can provide increased resistance to changes in conditions such as pH or temperature. True/False

- Q-5** **Write short notes on-**
- a Properties of industrial strain **7**
 - b Insulin production by rDNA technology **7**

OR

- Q-5** a What is bio fertilizer? Explain advantages of bio fertilizer over synthetic fertilizers. **7**
- b What is solid state fermentation? Explain where solid state fermentation process is used at industrial scale. **7**

- Q-6** **Write short notes on-**
- a Enzyme immobilization **7**
 - b Cell growth kinetics **7**

OR

- Q-6** **Attempt all Questions**
- a What do you mean by downstream processing? Explain the methods used for downstream processing at industrial scale. **7**
 - b Write difference between batch and continuous culture. **7**

