THE GULF SAHODAYA EXAMINATION (SAUDI CHAPTER)

Class : XI M.Marks: 70

Subject: Biotechnology Duration: 3 Hrs

General Instructions:

Paper is divided into four sections viz. A,B,C,D.

Section A contains five questions each carries one mark.

Section B contains ten questions each carries two marks.

Section C contains ten questions each carries three marks.

Section D contains three questions each carries five marks.

SET A

SECTION A

1. Expand TIFAC.
2. What are ampholytes.
3. What is the change caused by Intercalating agents in DNA sequence.
4. Define Allele.
5. What is karyotype.

SECTION B

1. What are the four pillers of GLP?
2. Write about the temperature control mechanism in a fermenter ?
3. Define Buffer.
4. Define International Unit of Enzyme activity.
5. What is Mass Spectrometer ?
6. How the addition of salt in a protein solution brings about the precipitation of proteins?
7. What are compatible solutes?
8. Name any four methods by which the cell growth is measured ?
9. Draw a labelled diagram of Mitochondria.
10. Define secondary metabolism.

SECTION- C

1. Write any three ethical issues in agriculture and healthcare.
2. Give a brief account on the chemical properties of Amino acids.
3. Define a) Gene Pool . b) Genetic Drift. c) Gene Flow.
4. Write a note on the defence mechanisms in insects.
5. Explain how temperature is regulated in mammals and birds?
6. What is a) Velocity Sedementation b) Equilibrium Sedimentation?
7. Explain with a flow chart the mechanism of cytoplasmic in heritance in Mirabilis jalapa.
8. With a diagrammatic sketch explain Nucleotide Excision repair pathway.
9. What are the significance of genetic recombination in bacteria?
10. Explain Q-banding and C- banding techniques.

SECTION - D

1. Describe the three phase of CO2 assimilation in calvin cycle.

2. Name one protein and indicate its location for each of the following groups.
   a) structural protein b)hormone c)enzyme d) defence e)neuro regulation.

3. " Cell cytoplasm has a profound effect on the expression of genes involved in development."
   Illustrate this point with a suitable example.