

B.Sc. Semester - 1 (CBCS) Examination
Nov/Dec - 2022 (OLD COURSE)
BIO-TECHNOLOGY(CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Q.1** (a) Answer the following (Any **One** out of Two) : (07)
1. Discuss Current status and future of Biotechnology in Developing World.
 2. Give an account of Recombinant DNA Technology.
- (b) Attempt Any **One** (Out of Two) : (04)
1. Write application of biotechnology in agriculture and environment.
 2. Explain ethical impacts of biotechnology.
- (c) Attempt Any **Three** (Out of Five) : (03)
1. True or false : Biotechnology plays important role in medical field.
 2. True or false : There are no social impacts of biotechnology.
 3. What is biotechnology?
 4. Name two scientists who have contributed significantly in the field of biotechnology.
 5. True or false: Discovery of restriction enzymes has played an important role in RDT.
- Q.2** (a) Answer the following (Any **One** out of Two) : (07)
1. Explain ultrastructure of a bacterial cell.
 2. Discuss viral ultrastructure.
- (b) Attempt Any **One** (Out of Two) : (04)
1. Differentiate between a plant cell and an animal cell.
 2. Write on cell theory.
- (c) Attempt Any **Three** (Out of Five) : (03)
1.microscope is must to study size and shape of a virus.
 2. Name the types of bacteria based on their morphology/shape.
 3. True or false : Prokaryotic and eukaryotic cell boundaries are always same chemically.
 4. True or false : Oil immersion lens is important while studying a prokaryotic cell.
 5. What is a cell?
- Q.3** (a) Answer the following (Any **One** out of Two) : (07)
1. Explain structure and function of prokaryotic cell wall.
 2. Structure and functions of lysosomes.
- (b) Attempt Any **One** (Out of Two) : (04)
1. Write on types of endoplasmic reticulum.
 2. What are glyoxisomes and peroxisomes?
- (c) Attempt Any **Three** (Out of Five) : (03)
1. What is the function of mitochondria?
 2. The ribosomal subunits in a prokaryotic cell are andS.
 3. Who discovered the golgi bodies?
 4. What is plasma membrane made of?
 5. What is ribosome made of?

- Q.4** **(a)** Answer the following (Any **One** out of Two) : (07)
1. Explain cell cycle.
 2. Discuss ultra structure of chromosome.
- (b)** Attempt Any **One** (Out of Two) : (04)
1. Explain : Mitosis
 2. Discuss in brief regulation of cell cycle.
- (c)** Attempt Any **Three** (Out of Five) : (03)
1. True or false: Bacterial cells may sometimes have well developed nucleus.
 2. Whether meiosis produce haploid or diploid cells?
 3. What happens during cytokinesis?
 4. What is the main function of nucleus?
 5. State two main components of a chromosome.
- Q.5** **(a)** Answer the following (Any **One** out of Two) : (07)
1. Discuss cell-cell interaction.
 2. Explain cytoskeleton.
- (b)** Attempt Any **One** (Out of Two) : (04)
1. Write a note on stem cells.
 2. Explain cytoplasmic streaming.
- (c)** Attempt Any **Three** (Out of Five) : (03)
1. What is the function of flagella?
 2. True or false: In certain cells cilia plays important role in locomotion.
 3. What is cancer?
 4. True or false : Cytoskeleton could be proteinaceous or carbohydrates.
 5. What is amoeboid movement?
