

B.Sc. Semester - 1 (CBCS) Examination
Nov./Dec. -2018 (Old Course)
BIO-TECHNOLOGY (CORE)

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

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

Que-1 Answer the following question.

- (A) Answer the following question. (04)
- (1) **True/False:** Fermentation technique was discovered by Louise Pasteur.
 - (2) What is Plasmid?
 - (3) What is use of selectable marker in r-DNA technology?
 - (4) Give example of any improved Nutrition genetically modified Crop.
- (B) Answer the following question. (Any One) (02)
- (1) What are Restriction endonuclease? Give their use in r-DNA technology.
 - (2) Give any one application of Biotechnology in field of environment.
- (C) Answer the following question. (Any One) (03)
- (1) What is Cloning vector? Give its use in genetic engineering.
 - (2) How Bt toxin kills pest? Explain in brief.
- (D) Answer the following question. (Any One) (05)
- (1) Write a note: Application of Biotechnology in Medicine.
 - (2) Define Biotechnology. What are its ethical and social impacts?

Que-2 Answer the following question.

- (A) Answer the following question. (04)
- (1) **True or False:** Pili is used during the process of conjugation.
 - (2) Bacterial cell wall is made up of _____.
 - (3) What is Capsid?
 - (4) Which microscope is used to study ultra structure of cell?
- (B) Answer the following question. (Any One) (02)
- (1) Give different shapes of a prokaryotic cell.
 - (2) Give differences between Cilia and Flagella.
- (C) Answer the following question. (Any One) (03)
- (1) Write differences between Prokaryotic and Eukaryotic Cell.
 - (2) Explain briefly about: Structure of Virus.
- (D) Answer the following question. (Any One) (05)
- (1) Explain Miller's experiment in detail.
 - (2) Explain: Animal cell structure.

Que-3 Answer the following question.

- (A) Answer the following question. (04)
- (1) Plant cell wall is made up of _____.
 - (2) **True/False:** Plasma membrane is impermeable membrane.
 - (3) _____ organelle of cell is also known as Suicidal bag.
 - (4) Which organelle is used as site of protein synthesis?
- (B) Answer the following question. (Any One) (02)
- (1) Draw a well-labelled diagram of Chloroplast.
 - (2) Describe the functions of Lysosomes.
- (C) Answer the following question. (Any One) (03)
- (1) Explain structure of Golgi body in Brief.
 - (2) Write a short note: Endoplasmic reticulum.
- (D) Answer the following question. (Any One) (05)
- (1) Describe Fluid mosaic model of plasma membrane.
 - (2) Describe in detail: Structure and functions of Mitochondria.

- Que-4 Answer the following question.
- (A) Answer the following question. (04)
- (1) **True or False:** Crossing over occurs during Meiosis.
 - (2) Spindle fibres are made up of _____ proteins.
 - (3) What is composition of a Chromosome?
 - (4) Define: Cytokinesis.
- (B) Answer the following question. (Any One) (02)
- (1) What is function of Nuclear pore?
 - (2) What is function of Nucleolus?
- (C) Answer the following question. (Any One) (03)
- (1) What is importance of Meiosis?
 - (2) Give differences between: Mitosis and Meiosis.
- (D) Answer the following question. (Any One) (05)
- (1) Describe structure and types of Chromosomes.
 - (2) Explain the process of Mitosis in detail.
- Que-5 Answer the following question.
- (A) Answer the following question. (04)
- (1) **True/False:** Cytoskeleton is made up of Proteins.
 - (2) Define: Cancer
 - (3) Name any microorganism having flagella.
 - (4) Which cells of animal do amoeboid locomotion?
- (B) Answer the following question. (Any One) (02)
- (1) Write any two functions of Microfilaments.
 - (2) What are Stem cells? Mention the types of stem cell.
- (C) Answer the following question. (Any One) (03)
- (1) Explain Amoeboid locomotion in brief.
 - (2) Write a brief note on: Cancer and its types.
- (D) Answer the following question. (Any One) (05)
- (1) Explain in detail: Cytoskeleton and its functions.
 - (2) Explain Ciliary and Flagellar locomotion in detail.
