



JAR-003-0011010 Seat No. _____

B. Sc. (Sem. I) (CBCS) (W.E.F. 2016) Examination

December - 2019

BT - 101 : Biotechnology

(Introduction to Biotechnology & Cell Biology)

(Old Course)

Faculty Code : 003

Subject Code : 0011010

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) Objective type of questions are compulsory
(2) Figures on the right indicate marks of individual questions.

- 1 (A) Answer the following : 4
- (1) What is r-DNA technology?
 - (2) The vaccine was discovered by _____
 - (3) Define: Biotechnology
 - (4) Write examples of vectors.
- (B) Answer the following : (Any One) 2
- (1) Define: agriculture biotechnology
 - (2) Enlist the application of biotechnology in the field of medicine
- (C) Answer the following : (Any One) 3
- (1) What are the impacts of biotechnology in society? Explain in brief.
 - (2) Short note : Application of biotechnology in environment

- (D) Answer the following : (Any **One**) **5**
- (1) Explain briefly about history of biotechnology
 - (2) Short note: Future and development of biotechnology
- 2** (A) Answer the following : **4**
- (1) Cell wall is not found in animal cell. True or False
 - (2) Write examples of virus
 - (3) Write formula to find Numerical aperture
 - (4) Enlist types of electron microscope
- (B) Answer the following : (Any **One**) **2**
- (1) Explain dark field microscope
 - (2) What is microscopy?
- (C) Answer the following : (Any **One**) **3**
- (1) Write about diversity in shape of bacteria
 - (2) Short note: cell theory
- (D) Answer the following : (Any **One**) **5**
- (1) Explain in detail about structure and function of prokaryotic cell
 - (2) Explain in detail about animal cell
- 3** (A) Answer the following : **4**
- (1) Lysosome is rich with hydrolytic enzymes. True or false
 - (2) Write the function of chloroplast
 - (3) Give full form: RER and SER
 - (4) Write function of glyoxisomes

- (B) Answer the following : (Any **One**) **2**
- (1) Write a note on ribosomes
 - (2) Enlist the functions of mitochondria
- (C) Answer the following : (Any **One**) **3**
- (1) Explain: Lysosome and Peroxisome
 - (2) Short note: chloroplast
- (D) Answer the following : (Any **One**) **5**
- (1) Describe briefly: Cell wall
 - (2) Explain: Endoplasmic reticulum
- 4 (A) Answer the following : **4**
- (1) What is chromosome?
 - (2) The DNA is replicate in S phase of cell cycle. True or false ?
 - (3) Write a function of spindle fiber
 - (4) What is M phase in cell cycle?
- (B) Answer the following : (Any **One**) **2**
- (1) What is cell division?
 - (2) Write the importance of regulation of cell cycle
- (C) Answer the following : (Any **One**) **3**
- (1) Short note: phases of cell cycle
 - (2) Draw the different phases of mitosis
- (D) Answer the following : (Any **One**) **5**
- (1) Explain meiotic cell division
 - (2) Short note: structure and function of Nucleus

- 5 (A) Answer the following : 4
- (1) What is stem cell?
 - (2) What is leukemia?
 - (3) Uncontrolled growth of cell will lead to _____
(tumor or organogenesis)
 - (4) Adult stem cell is found in bone marrow. True or False
- (B) Answer the following : (Any One) 2
- (1) What is cancer?
 - (2) Define: cell-cell interaction
- (C) Answer the following : (Any One) 3
- (1) Short note: flagella
 - (2) Short note: cilia and cytoplasmic streaming
- (D) Answer the following : (Any One) 5
- (1) Write a note on microtubules and microfilaments
 - (2) Short note: stem cell and its importance
-