



JAR-003-2011014 Seat No. _____

B. Sc. (Sem. I) (CBCS) (W.E.F. 2019) Examination

December - 2019

**BT - 101 : Introduction of Biotechnology and
Cell Biology
(New Course)**

Faculty Code : 003

Subject Code : 2011014

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

[Total Marks : 70

Instructions : (1) Objective types of questions are compulsory
(2) Figures on the right indicate marks of individual questions

- 1 (A) Answer the following : 4
- (1) Give the examples of agriculture biotechnology products
 - (2) Insulin can be produced by r-DNA technology. True or False
 - (3) Write the name of vectors used in genetic engineering
 - (4) Define biotechnology
- (B) Answer the following : (Any One) 2
- (1) Illustrate r-DNA technology
 - (2) Write briefly about social impact of biotechnology
- (C) Answer the following : (Any One) 3
- (1) Write a note on ethical issues in biotechnology
 - (2) Short note: history of biotechnology

- (D) Answer the following : (Any **One**) **5**
- (1) Explain medical application of biotechnology
 - (2) Explain environmental application of biotechnology
- 2** (A) Answer the following : **4**
- (1) Chloroplast is only found in plant cell. True or False
 - (2) Give full form: SEM
 - (3) HIV is an example of eukaryotic cell. True of False
 - (4) Define: Cell
- (B) Answer the following : (Any **One**) **2**
- (1) Write about numerical aperture
 - (2) Describe briefly about size of different types of cell
- (C) Answer the following : (Any **One**) **3**
- (1) Short note: light microscopy
 - (2) Short note: shape of different cells
- (D) Answer the following : (Any **One**) **5**
- (1) Explain in detail about origin and evolution of life
 - (2) Explain : Structure and function of Plant cell
- 3** (A) Answer the following : **4**
- (1) Cell wall is mainly made of _____ in plant cell.
 - (2) Write the function of mitochondria
 - (3) Enlist types of ER
 - (4) Peroxisome is rich with peroxidase enzyme. True or False
- (B) Answer the following : (Any **One**) **2**
- (1) Write a note on golgibody
 - (2) Write about lysosome and its function

- (C) Answer the following : (Any **One**) **3**
- (1) Explain briefly about ribosomes
 - (2) Short note: function of plasma membrane
- (D) Answer the following : (Any **One**) **5**
- (1) Explain : Chloroplast
 - (2) Explain : Mitochondria
- 4 (A) Answer the following : **4**
- (1) DNA is **ONLY** present in nucleus in animal cell.
True or False
 - (2) What is Cell division?
 - (3) There are total _____ chromosome present in
a cell of human
 - (4) Sperm cell and ova cell is dividing by _____
(Mitosis / Meiosis)
- (B) Answer the following : (Any **One**) **2**
- (1) What is cell cycle?
 - (2) Write importance of mitosis and meiosis
- (C) Answer the following : (Any **One**) **3**
- (1) Write a note on function of nucleus
 - (2) Figure out mitosis phases
- (D) Answer the following : (Any **One**) **5**
- (1) Explain in detail about meiosis
 - (2) Short note: regulation of cell cycle

- 5 (A) Answer the following : 4
- (1) Enlist types of stem cells
 - (2) Enlist types of cancer
 - (3) What is cytoskeleton?
 - (4) Cancer can cause by virus. True or False
- (B) Answer the following : (Any One) 2
- (1) What is tumor?
 - (2) Define : cytoplasmic streaming
- (C) Answer the following : (Any One) 3
- (1) Write a note on amoeboid and ciliary locomotion
 - (2) Short note : structure and function of flagella
- (D) Answer the following : (Any One) 5
- (1) Explain in detail about microtubules
 - (2) Short note: cell-cell interaction
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