Seat No.	

Set P

B.Sc. (Semester - I) (Old) (CBCS) Examination Oct/Nov-2019
Entrepreneurship
Industrial Biotechnology (Paper - I)
CELL BIOLOGY

Day & Date: Saturday, 16-11-2019 Max. Marks: 70
Time: 03:00 PM To 05:30 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw neat labeled diagrams wherever necessary.

Q.1 Fill in the blanks by choosing correct alternatives given below. **14**

1) DNA is 'mainly' found in _____.
   a) Nucleus and cytoplasm b) Nucleus only
   c) Lysosome d) Cytoplasm

2) During meiosis chiasmata are observed at _____.
   a) Pachytene b) Diplotene
   c) Leptotene d) Diakinesis

3) The programmed cell death of a cell is also known as _____.
   a) Apoptosis b) Osmosis
   c) Cancer d) Mitosis

4) Prokaryotic genetic system has _____.
   a) DNA but no histones b) Both DNA and histones
   c) Neither DNA nor histones d) Either DNA or histones

5) Mitochondria was first seen by _____.
   a) Robert Hooke b) Robert Brown
   c) Lipmann d) Altmann

6) _____ helps in protein synthesis.
   a) Ribosomes b) Nucleus
   c) Mitochondria d) Endoplasmic reticulum

7) DNA replication occurs in _____.
   a) S phase b) G phase
   c) G2 phase d) M phase

8) Cell sap is a _____.
   a) Living content of the cell
   b) Non living content of the vacuole
   c) Non-living content of the protoplasm
   d) Living content of the cytoplasm

9) The Cell wall of plants mainly contain _____.
   a) Starch b) Lipids
   c) Cellulose d) Glucose

10) Vesicles that fuse to form a cell plate during cytokinesis in plant cells come from the _____.
   a) Golgi apparatus b) Mitochondrion
   c) None of these d) nucleus

11) The type of cell division that occurs in Germ cell is _____.
a) Meiosis b) Mitosis
c) Equal d) Endocytosis

12) Tightly packed form of DNA is called _____.
a) supercoiling b) compressed state
c) euchromatin d) heterochromatin

13) Golgi bodies are related with _____.
a) Excretion b) Energy liberation
c) Pinocytosis d) Secretion

14) The _____ is genetically an active chromatin with genes.
a) Heterochromatin b) Euchromatin
c) Plasmid d) Chromosome arm

Q.2 A) Answer the following questions. (Any Four) **08**

1) Define Apoptosis and explain in short how programmed cell death occurs.
2) Draw a neat and labeled diagram of Mitochondria.
3) Explain functions of heterochromatin and Euchromatin.
4) Define Pinocytosis with suitable example.
5) Define Active transport and give a suitable example of it.

B) Answer the following questions. (Any Two) **06**

1) Enlist functions of Lysosome.
2) Enlist in detail, characteristics of Eukaryotic cell.
3) Describe in brief about Ribosomes.

Q.3 A) Answer the following questions. (Any Two) **08**

1) Explain Structure and functions of DNA.
2) Add a note on lipid bilayer membrane.
3) Define Phagocytosis with suitable example.

B) Answer the following questions. (Any One) **06**

1) Explain the Ultra structure and types of cell membrane.
2) Add a note on Biochemical composition of cell.

Q.4 A) Answer the following questions. (Any Two) **10**

1) Write a detail account on Endoplasmic Reticulum.
2) Describe Meiosis in detail.
3) Add a detailed note cell differentiation.

B) Answer the following questions. (Any One) **04**

1) Define Chromosome and Explain types of chromosomes based on centromere.
2) Write a detail note on Lysosome.

Q.5 Answer the following questions. (Any Two) **14**

a) Explain structure and function of Golgi complex.
b) Describe Mitosis in detail and add a note on its significance.
c) Explain Cell theory and add a note on Significant event in Cell Biology.