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JAR-003-001110 Seat No. _____

B. Sc. (Sem. I) (CBCS) Examination

December - 2019

BT - 101 : Introduction to Biotechnology & Cell Biology

(Old Course)

Faculty Code : 003

Subject Code : 001110

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

Instructions : (1) All Questions are Compulsory

(2) Figures on right side indicates marks

(3) Draw the figure wherever necessary

(4) Write answers of all the questions in main answer sheet

1 All questions compulsory : (1 mark each) **20**

(1) In term rDNA, r stands for _____.

(2) Watson and Crick are known for which discovery?

(3) Azotobacter is used as _____ in agriculture.

(4) Who postulated cell theory?

(5) 1 micrometer = _____ meter.

(6) _____ stains the gram positive cell wall.

(7) Peptidoglycan content is _____ than lipid in gram negative organism.

(8) _____ and _____ are types of electron microscopy.

(9) Plasma membrane is made up of _____ and _____.

(10) Suicidal bags of cell are _____.

(11) Power house of cell is _____.

(12) Which enzymes are present in peroxisomes?

(13) At the end of mitosis _____ number of daughter cells are produced.

(14) Linker protein in nucleosome is _____.

(15) State phases of cell cycle.

(16) Crossing over occurs in which stage of cell division?

(17) Pseudopods function for _____.

(18) In an adult humun being stem cells are found in which part of body?

(19) Lymphoma is the cancer of _____.

(20) Uncontrolled growth of cell is known as _____.

2 (A) Answer any **three** : (2 marks each) **6**

(1) Define Agriculture biotechnology

(2) Define the term cell?

(3) What is function of chlorophyll?

(4) Define histones.

(5) What are oncogenes?

(6) Define the term gamete?

(B) Answer any **three** : (3 marks each) **9**

(1) Write a note on social impacts of biotechnology.

(2) Enlist various morphology of cells with examples.

(3) Give an account on rough endoplasmic reticulum.

(4) Explain nucleosome.

(5) Write details of polytene chromosome.

(6) Write a note on stem cells.

(C) Answer any **two** : (5 marks each) **10**

(1) Applications of Biotechnology in the field of medicine.

(2) Write a note on functions of plasma membrane.

(3) Write a note on Electron microscopy.

(4) Give details of Cell-cell interaction.

(5) Draw detail labeled diagram of meiosis.

3 (A) Answer any **three** : (2 marks each) **6**

(1) What is metastasis?

(2) Define synapsis.

(3) What happens in G1 phase?

(4) Write functions of peroxisomes.

(5) Explain monochrome staining.

(6) What is recombinant DNA technology?

(B) Answer any **three** : (3 marks each) **9**

(1) Define biotechnology and write its future status.

(2) Explain cell theory.

(3) Write functions of nucleus.

(4) Explain mitosis.

(5) Write a note on glyoxisomes.

(6) Write a note on cell cell interactions.

(C) Answer any **two** : (5 marks each) **10**

(1) Applications of biotechnology in the field of environment.

(2) Detailed structure of eukaryotic cell cell.

(3) Give details of mitochondria.

(4) Explain Ultrastructure of chromosome.

(5) Write about types of cancer.
