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Total No. of Printed Pages: [01]

Total No. of Questions: [09]

B.Sc. (MLS) (Semester – 1st)
CELL BIOLOGY & HUMAN GENETICS
Subject Code: BMLS1101
Paper ID: [130501]

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A

(2 marks each)

Q1. Attempt the following:

- a. Explain Cell as a Basic Unit of life.
- b. Define Tissue, Nucleoplasm.
- c. Discuss about Endoplasmic Reticulum and Ribosome.
- d. What are the differences between Interference and Coincidence
- e. What is the function of Mitochondria and Lysosomes?
- f. What is the significance of meiosis?
- g. Write about Polytene and Lampbrush Chromosomes.
- h. What do you mean by mutation at phenotypic level?
- i. What are the Physical Mutagens? Explain with examples.
- j. Draw a well labeled diagram of Eukaryotic Cell.

Section – B

(5 marks each)

- Q2. Describe in detail the Cell Theory.
- Q3. Write a note on Cell Cycle.
- Q4. Describe the Mendelian Laws of Inheritance.
- Q5. What do you mean by Mutations? Differentiate between Spontaneous and Induced mutation.
- Q6. Explain the extra-chromosomal inheritance and sex-linked inheritance.

Section – C

(10 marks each)

- Q7. Write a note on Hardy-Weinberg Law with example.
- Q8. Write down in detail the mechanism of DNA Replication.
- Q9. Write a note classification of Cell Types within an organism with example.