

**C. ABDUL HAKEEM COLLEGE (AUTONOMOUS),**  
**MELVISHARAM - 632 509.**  
**SEMESTER EXAMINATIONS, NOVEMBER - 2018**  
**B.Sc., ZOOLOGY**  
**SEMESTER III**  
**U15MZL301 – CELL AND MOLECULAR BIOLOGY**

Time: Three Hours

Maximum: 75 Marks

**SECTION - A (10 X 2 = 20 Marks)**

Answer **ALL** Questions.

Define the Following:

1. Homogenization.
2. Centrifugation.
3. Eukaryotic cell.
4. Endoplasmic reticulum.
5. RNA.
6. Nucleolus.
7. Amitosis.
8. Homologous chromosome.
9. tRNA.
10. Replication.

**SECTION - B (5 X 5 = 25 Marks)**

Answer **ALL** Questions.

11. a) Write a short note on the principles of Electron Microscope.  
(Or)

b) Discuss briefly Cell fractionation.

12. a) Write an essay on Cell theory.

(Or)

b) Explain the structure and functions of Mitochondria.

13. a) Explain the composition and functions of Nuclear Membrane.

(Or)

b) Explain the composition and functions of Chromosomes.

14. a) Explain the Meiotic Cell Division.

(Or)

b) Write down the significance of Amitosis.

15. a) Explain the structure and functions of DNA.

(Or)

b) Explain the process of replication.

**SECTION - C (3 X10 = 30 Marks)**

Answer **ANY THREE** Questions.

16. Give an account on electrophoresis and its applications.
17. Explain the ultrastructure and functions of Animal cell.
18. Give an account on Protein synthesis.
19. Write an essay on Cell division.
20. Explain the structure and functions of RNAs.

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