



K24U 3551

Reg. No. :

Name :

**III Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/
Improvement) Examination, November 2024**

(2020 to 2023 Admissions)

**GENERAL AWARENESS COURSE IN LIFE SCIENCES (ZOOLOGY) AND
COMPUTATIONAL BIOLOGY**

3A11 ZCB : Cell Biology and Genetics

Time : 3 Hours

Max. Marks : 40

PART – A (Short Answer)

Answer **all** questions.

(6×1=6)

1. Lysosomes
2. MN Blood Group
3. Histones
4. Mutagens
5. Eugenics
6. Cytokinesis.

PART – B (Short Essay)

Answer **any 6** questions.

(6×2=12)

7. Give a short note on cell junctions.
8. Summarize the mutation theory of De Vries.
9. Explain the homozygous and heterozygous conditions of alleles.
10. Write on Endoplasmic Reticulum and its functions.

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11. Explain Lyon hypothesis.
12. What are Clathrin coated vesicles ? Give their functions.
13. Write down the significance of crossing over.
14. What is Pharmacogenetics ? Mention its applications.

PART – C (Essay)

Answer **any 4** questions.

(4×3=12)

15. Illustrate the Fluid Mosaic model of plasma membrane structure.
16. Explain Epistasis and polygenetic inheritance.
17. Outline pedigree construction and write on its uses.
18. Write a note on linkage maps.
19. Give an account on microtubules and microfilaments.
20. Discuss the molecular basis of gene mutations.

PART – D (Long Essay)

Answer **any 2** questions.

(2×5=10)

21. Describe structural and numerical aberrations of chromosomes.
 22. Explain active, passive and bulk transport systems with suitable diagrams.
 23. What is cell cycle ? Discuss in detail about meiosis and its significances.
 24. Elaborate the structure and components of chromatin with illustrations.
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