



K22U 3774

Reg. No. :

Name :

**Third Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/
Improvement) Examination, November 2022**

(2020 Admission Onwards)

**CORE COURSE IN LIFE SCIENCES (ZOOLOGY) AND COMPUTATIONAL
BIOLOGY**

3B03 ZCB : Molecular Biology

Time : 3 Hours

Max. Marks : 40

**PART – A
(Short Answer)**

Answer **all** questions :

(6×1=6)

1. BAC.
2. Southern blot.
3. Photo reactivation.
4. Stop codons.
5. Cistron.
6. SOS repair.

**PART – B
(Short Essay)**

Answer **any 6** questions :

(6×2=12)

7. What are the different types of bonds formed during translation ?
8. What are the different forms of DNA ?
9. What are the different types of genes ?

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10. Notes eukaryotic transcription factors.
11. Role of mitochondrial genome in phylogeny.
12. What are the classical concepts of genes ?
13. Ribozyme with an example.
14. Notes on modern concepts of genes.

PART – C
(Essay)

Answer **any 4** questions :

(4×3=12)

15. Notes on regulation of transcription in prokaryotes.
16. What are the eukaryotic DNA repair mechanisms ?
17. Give a detailed account on packaging of DNA.
18. Detailed notes on condensins and cohesins.
19. Mechanism of prokaryotic translation.
20. Explain the experiment with a semiconservative model of replication.

PART – D
(Long Essay)

Answer **any 2** questions :

(2×5=10)

21. Write an essay on Watson and Crick model of DNA and different forms of DNA.
 22. Explain the mechanism of eukaryotic transcription and translation.
 23. Describe the different types of epigenetic regulations with examples.
 24. What are the different enzymes involved in rDNA technology with suitable examples ?
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