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Name.....

Reg. No.....

**FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2024**

Biotechnology

BTY 5B 07—MOLECULAR BIOLOGY

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

*Draw Diagrams wherever necessary***Section A (Short Answers)***All questions can be answered.**Each question carries 2 marks.**Ceiling 20 marks.*

1. What is Z DNA ?
2. What is Chargaff's rule ?
3. Name the nucleotide bases of RNA.
4. What is the central Dogma of molecular Biology ?
5. What are chaperones ?
6. What is the function of DNA gyrase ?
7. What is SOS repair ?
8. What are composite transposons ?
9. What is Shine Delgarno sequence ?
10. What are transversion mutations ?
11. What are Interns ?
12. What is an Operon ?

Turn over

Section B (Paragraph)

*All questions can be attended.
Each question carries 5 marks.
Ceiling 30 marks.*

13. Narrate the enzymology of prokaryotic replication ?
14. Compare prokaryotic and eukaryotic ribosomes ?
15. Narrate the structural organization of eukaryotic chromosomes.
16. Narrate the splicing of introns in eukaryotic mRNA ?
17. What are the properties of genetic code ?
18. Narrate the different excision repair systems ?
19. Narrate an experiment to prove DNA as genetic material ?

Section C (Essay Type)

*Answer any **one** question.
The question carries 10 marks.*

20. What are the different steps in prokaryotic transcription ?
21. What are C value paradox ? What are the different types of repetitive DNA found in eukaryotic genome ?

(1 × 10 = 10 marks)