S.No. 1766 **12UBT05**

(For the candidates admitted from 2012–2013 onwards)

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

Fifth Semester

Biotechnology

MOLECULAR BIOLOGY

Time : Three hours Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. DNA Ligase.
2. Photoreactivation.
3. RNA polymerase.
4. Exons.
5. Chaperones.
6. Thylakoids.
7. Apoptosis.
8. Homologous recombination.
9. Physical maps.
10. Nucleic acid hybridization.

PART B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Briefly explain the steps involved in prokaryotic DNA replication.

Or

(b) What is DNA repair? Give a short note on photolyase.

12. (a) Write a short note on RNA polymerase.

Or

(b) Explain post transcriptional modification.

13. (a) Describe the significance of post translational modification of proteins.

Or

(b) What are the steps involved in the transport of proteins in to mitochondria? Explain .

14. (a) Give a short note on Oncogenes.

Or

(b) Comment on holiday junction of recombination.

15. (a) Explain genome mapping.

Or

(b) Briefly explain southern hybridization.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions out of Five questions.

16. Elucidate the mechanism of eukaryotic DNA replication.

17. Give a general account on gene silencing.

18. Write a detailed account note on the steps involved in protein folding.

19. Explain the role of tumor suppressor genes in humans.

20. Elaborate the mechanism of genetic maps in identifying genetic disorders.

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