

DECEMBER 2015

P/ID 40321/PZLC

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Time : Three hours

Maximum : 100 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions each in 50 words.

1. Heterochromatin.
2. Haploid.
3. Mitotic apparatus.
4. Oncogene.
5. Nucleotide.
6. Morgan unit.
7. A-DNA.
8. Sexduction.
9. Termination codon.
10. UV-radiation.

PART B — (5 × 6 = 30 marks)

Answer ALL questions each in 250 words.

11. (a) Describe the functions of peroxisomes.

Or

- (b) Describe the basic structure and function of chromatin.

12. (a) Write an account on chromosome movements.

Or

- (b) Write the differences between normal and cancer cell.

13. (a) Briefly explain gene concept.

Or

- (b) Illustrate and explain the molecular structure of DNA.

14. (a) Describe in detail the polymorphism of DNA.

Or

- (b) Write a short note on the mechanism of DNA replication.

15. (a) Write a short note on radiation in cancer treatment.

Or

- (b) Give an account of Operon concept.

PART C — (5 × 10 = 50 marks)

Answer ALL questions each in 500 words.

16. (a) Describe various models of plasma membrane and differentiate their dynamics.

Or

- (b) Describe in detail the role of mitochondria in cellular respiration.

17. (a) Illustrate and explain the cell cycle events and its importance.

Or

- (b) Describe the tumor viruses and environmental factors inducing cancer.

18. (a) Describe the classical experiments which demonstrated DNA as the genetic material.

Or

- (b) Explain the method of chromosome mapping in *Drosophila*.

19. (a) Discuss the types of RNA, their structure and functions.

Or

- (b) Write an account of DNA repair mechanism.

20. (a) Describe the regulation of gene action.

Or

- (b) Write a detailed account on inborn errors of metabolism in man.
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