

OCTOBER 2011

P/ID 40321/PZLC

---

Time : Three hours

Maximum : 100 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

All questions carry equal marks.

Each answer should not exceed 50 words.

Define/Explain the following :

1. Unit membrane.
2. Heterochromatin.
3. Spindle fibre.
4. Metatasis.
5. Map unit.
6. Regulator gene.
7. Lysogenic cycle.
8. B-DNA.
9. Initiation codon.
10. Radio isotope.

PART B — (5 × 6 = 30 marks)

Answer ALL questions.

All questions carry equal marks.

Each answer should not exceed 250 words.

11. (a) What is active transport? Explain.

Or

(b) Illustrate the ultra structure of mitochondria.

12. (a) What is a Cell cycle? Explain the molecular events.

Or

(b) List any six characteristics of a cancer cells.

13. (a) Describe any two oncogenic viruses.

Or

(b) Discuss one gene one polypeptide concept.

14. (a) Give an account of DNA repair mechanism.

Or

(b) Write on the Trimming of introns.

15. (a) Explain GAL operon system.

Or

- (b) Describe the radiation sources.

PART C — (5 × 10 = 50 marks)

Answer ALL questions.

All questions carry equal marks.

Each answer should not exceed 500 words.

16. (a) Explain Nuclear transplantation experiments and their significance.

Or

- (b) Illustrate and explain the structure and functions of lamp-brush and polytene chromosome.

17. (a) Write an account on spindle organization and chromosome movements.

Or

- (b) Discuss the Theories of Carcinogenesis.

18. (a) Illustrate and explain Bacterial conjugation and its importance.

Or

- (b) Explain chromosome mapping in Eukaryotes.

19. (a) What is Transcription, explain the molecular events of this process.

Or

- (b) Describe any two evidences of regulation of gene action.

20. (a) Write an account on Inborn-errors of Metabolism with reference to Phenylketoneuria.

Or

- (b) Discuss the radiational hazards to genetic material and its origin.
-