

MAY 2015

P/ID 40227/PBTG

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Time : Three hours

Maximum : 100 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions each in 50 words.

Write short notes on :

1. Magnification.
2. Freeze fracturing.
3. Procaryotic cell.
4. Thylakoids.
5. Plasmodesmata.
6. G-protein.
7. Synopsis.
8. Tautomers.
9. Hybrid vigour.
10. Colchicine.

PART B — (5 × 6 = 30 marks)

Answer ALL questions each in 250 words.

11. (a) Write a short account on ultracentrifugation.

Or

- (b) Explain Autoradiography techniques and its uses.

12. (a) Differentiate Glyoxysomes and Peroxysomes.

Or

- (b) Write a brief account on the structure and functions of Dictyosomes.

13. (a) Describe the ultrastructure of Nuclear pore complex.

Or

- (b) Write a short account on the Cell cycle.

14. (a) Describe the structure of Polytene chromosome.

Or

- (b) Write a brief account on Isochromosomes.

15. (a) Give an account of the chemical mutagens.

Or

- (b) Write short notes on the significance of polyploidy.

PART C — (5 × 10 = 50 marks)

Answer ALL questions, each in 500 words.

16. (a) Describe the structure of Transmission electron microscope with illustration.

Or

- (b) Explain the structure and uses of Phase contrast microscope.

17. (a) Describe the ultrastructure and chemical composition of Chloroplast.

Or

- (b) Write an essay on the ultrastructure of plasma membrane.

18. (a) Describe the ultrastructure of nucleus with neat diagram.

Or

- (b) Write an essay on mitosis and its significance.

19. (a) Describe the structure of chromosome in detail.

Or

- (b) Write an account on euchromatin.

20. (a) Write an essay on the achievements of mutation breeding.

Or

(b) Describe phenotypic consequences of polyploidy.

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