

OCTOBER 2012

P/ID 40227/PBTG

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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.

Write short notes on:

1. Freeze fracturing.
2. Centrifugal force.
3. Electron gun.
4. Lysosome.
5. Cristae.
6. Astral microtubule.
7. Chiasmata.
8. Chromosome Puff.
9. Carcinogens.
10. Base analogs.

PART B — (5 × 6 = 30 marks)

Answer ALL questions.

All questions carry equal marks.

Each answer should not exceed 250 words.

11. (a) Write an account on the Phase contrast Microscope.

Or

- (b) Write brief account on the Auto radiography technique.

12. (a) Describe chemical composition and functions of Endoplasmic reticulum.

Or

- (b) Write an account on the ultra structure and chemical composition of Chloroplast.

13. (a) Describe the complex structure of nuclear envelope.

Or

- (b) Describe the general structure of Nucleolus.

14. (a) Describe the structure of lamp brush chromosome.

Or

- (b) Write brief notes on Chromosome banding.

15. (a) Write brief notes on chemical mutagens.

Or

- (b) Explain tautomeric shift.

PART C — (5 × 10 = 50 marks)

Answer ALL questions.

All questions carry equal marks.

Each answer should not exceed 500 words.

16. (a) Describe the structure of SEM and its biological applications.

Or

- (b) Write the principle and uses of Dark field microscope.

17. (a) Write an essay on the ultra structure and chemical composition of plasma membrane.

Or

- (b) Write an essay on the functions of Mitochondria.

18. (a) Write an essay on the first Meiotic division.

Or

(b) Write an account on the Cytochemistry of Nucleus.

19. (a) Write an essay on the kinds and functions of heterochromatin.

Or

(b) Describe the fine structure of Chromosome.

20. (a) Write an essay on the types of Polyploidy

Or

(b) Write an essay on the Induced Mutation.

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