



Date: 31-10-2018  
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

**PART – A**

Answer the following, each within 50 words.

(10 x 2 = 20 marks)

1. Comment on cell theory.
2. Give any two properties of cytoplasm?
3. What is plasmalemma?
4. What is lysosome?
5. What is histone?
6. What is karyotype?
7. What is amitosis?
8. Draw cell cycle?
9. What is coacervate?
10. What is meant by speciation?

**PART – B**

Answer the following, each within 500 words. Draw diagrams wherever necessary.

(5 x 7 = 35 marks)

- 11.a. Distinguish between prokaryotic and eukaryotic cell.  
(or)  
b. Write short notes on TEM. Add a note on its applications.
- 12.a. Write about the structure and function of nucleus.  
(or)  
b. Write an account on the structure of plasma membrane.
- 13.a. Give a brief account on giant chromosomes.  
(or)  
b. Briefly describe the types of chromosomal aberrations.
- 14.a. Describe the events in prophase I of meiosis.  
(or)

b. Briefly describe the various mitotic abnormalities.

15.a. Write an account on origin of life.

(or)

b. How speciation occurs? Describe the mechanisms.

### PART – C

Answer any three of the following, each within 1200 words. Draw diagrams wherever necessary.

(3 x 15 = 45 marks)

16. Write an essay on the principle and working mechanism of phase contrast microscope.

17. Describe the structure and function of mitochondria.

18. Give the fine structure of a chromosome.

19. Describe the events in mitosis.

20. Describe the laws put forth by Lamarck.

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