



10. Which of the following statements is true about the ends of the chromosome?
- a. The ends of the chromosome are called Satellites
  - b. The ends of the chromosome are called Centromeres
  - c. The ends of the chromosome are called Telomeres
  - d. The ends of the chromosome are called Kinetochore

**( Descriptive )**

Time : 1 hr. 15 mins.

Marks : 25

[ Answer question no.1 & any two (2) from the rest ]

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| 1. Discuss the working principle of Fluorescence microscope with illustrations.  | 5        |
| 2. What is a checkpoint in a cell cycle and how many checkpoints are in the eukaryotic cell cycle? Elaborate the role of these checkpoints.  | 2+1+7=10 |
| 3. What are GPCRs? Explain how the binding of a ligand initiates signal transduction throughout a cell with a suitable example of GPCRs and the role of secondary messenger for cellular response. | 1+9=10   |
| 4. Describe the Fluid Mosaic Model of plasma membrane. Mention the functions of plasma membrane.   | 7+3=10   |
| 5. Discuss the working principle of Phase contrast microscope with illustrations.  | 10       |

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