

**Class: 11**

**Subject: Biology**

**Topic: Cell cycle and Cell division**

**No. of Questions: 25**

- Q1. At which stage of meiosis crossing over of genetic material takes place?
- Q2. What is  $G_0$  phase?
- Q3. Name the cell division concerned with cancer?
- Q4. Why is meiosis called reductional division & mitosis called equational division?
- Q5. Write three processes which take place in interphase?
- Q6. Enumerate the significance of mitosis?
- Q7. Write six differences between mitosis & meiosis?
- Q8. What are homologous chromosomes? What happens to homologous chromosomes during meiosis?
- Q9. What is mitosis? Give a brief account of mitosis in animal cell?
- Q10. Name the stage of cell division in which paired homologous chromosomes get shortened & thickened?
- Q11. Which structure of animal cell forms the asters of spindle?
- Q12. Name the cells in which meiosis occurs?
- Q13. What is the importance of chromosomes replication during interphase?

- Q14. Distinguish between metaphase of mitosis & metaphase I of meiosis?
- Q15. How does duration affect the cell cycle in organism?
- Q16. What is the significance of meiosis?
- Q17. Differentiate between animal cell mitosis & plant cell mitosis?
- Q18. Explain the various phases of meiosis II division?
- Q19. What are mitogens?
- Q20. Write one point of difference between chromatin and chromatid.
- Q21. Cell division cannot be stopped in which phase of the cell cycle?  
(a) G<sub>1</sub>-phase  
(b) G<sub>2</sub> – phase  
(c) S-phase  
(d) Prophase
- Q22. What type of plant is formed when colchicine is used in the process of development of *Raphano brassica*?  
(a) Autotetraploid  
(b) Haploid  
(c) Triploid  
(d) Allotetraploid
- Q23. Synapsis occurs between  
(a) mRNA and ribosomes  
(b) A male and a female gamete  
(c) Two homologous chromosomes  
(d) Spindle fibers and centromere

- Q24. If you are provided with root-tips of onion in your class and are asked to count the chromosomes which of the following stages can you most conveniently look into:
- (a) Prophase
  - (b) Anaphase
  - (c) Telophase
  - (d) Metaphase
- Q25. In the somatic cell cycle:
- (a) In  $G_1$  phase DNA content is double the amount of DNA present in the original cell
  - (b) A short interphase is followed by a long mitotic phase
  - (c) DNA replication takes place in S-phase
  - (d)  $G_2$  phase follows mitotic phase