

CLASS : XI

SUBJECT : BIOLOGY

- Q.1. What are mitogens? Name one.
- Q.2. Name the scientist who coined the term Mitosis.
- Q.3. When does chromosome replication occur in interphase?
- Q.4. What are intranuclear mitosis? Give an example.
- Q.5. What is bouquet stage? Where do we find it?
- Q.6. Name the stain commonly used to study cell .
- Q.7. Which tissue of animals and plants exhibits meiosis?
- Q.8. Name the pathological condition when uncontrolled cell division occurs. Explain in brief.
- Q.9. Name a cell that is arrested in diplotene stage for months and years. Comment in two-three lines how it completes cell cycle.
- Q.10. How does cytokinesis in plant cells differ from that in animal cells?
- Q.11. What are the various stages of meiotic prophase-I. Enumerate the chromosomal events during each stage.
- Q.12. Comment on the statement "Telophase is Reverse of prophase".
- Q.13. State the role of centriole other than spindle formation.
- Q.14. A cell has 32 chromosomes. It undergoes mitotic division. What will be the chromosome number(N) during metaphase? What would be the DNA content (C) during anaphase?
- Q.15. Why is mitosis called equational division?
- Q.16. Define chromomere and centromere.
- Q.17. What do you mean by sister chromatids and non sister chromatids?
- Q.18. Name the stage when homologous chromosomes undergoes synapsis.
- Q.19. What is dyad?
- Q.20. Name the stage of cell division when crossing over occurs.

Q.21. Name the types of fibres found in spindle apparatus.

Q.22. Supply a scientific term for each of the following

- a) The period between two successive mitotic divisions.
- b) Process of cell division by which the chromosome number is halved.
- c) Point at which two sister chromatids are held together.

Q.23. Comment on the statement “meiosis enables the conservation of specific chromosome number of each species even though the process results in reduction of chromosome number”.

Q.24. Write brief note on synaptonemal complex and metaphase plate.

Q.25. Write briefly the significance of mitosis and meiosis in multicellular organisms.

Q.26. What would be the consequences if centromeres do not divide?

Q.27. It is said that one cycle of cell division in human cells takes 24 hours. Which phase of the cycle do you think occupies the maximum part of the cell cycle?

Q.28. An anther has 1200 pollen grains. How many Pollen mother cell must have been there to produce them?

Q.29. Given that the average duplication time of E. Coli is 20 minutes. How much time will two E. Coli cells take to become 32 cells?

Q.30. Find examples where the four daughter cells from meiosis are equal in size and where they are unequal in size?
