



BIOLOGY

BOOKS - PSEB

CELL CYCLE AND CELL DIVISION

Exercise

1. What is the average cell cycle span for a mammalian cell?



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2. Distinguish cytokinesis from karyokinesis.



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3. Describe the events taking place during interphase.



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4. What is G_0 (quiescent phase) of cell cycle?



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5. Why is mitosis called equational division?



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6. Name the stage of cell cycle at which one of the following events occur: Chromosomes are moved



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7. Name the stage of cell cycle at which one of the following events occur: Centromere splits and chromatids separate.



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8. Name the stage of cell cycle at which one of the following events occur: Pairing between homologous chromosomes takes place.



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9. Name the stage of cell cycle at which one of the following events occur: Crossing over between homologous chromosomes takes place.



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10. Describe the following : Draw a diagram to illustrate your answer: synapsis



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11. Describe the following: Draw a diagram to illustrate your answer: chiasmata



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12. How does cytokinesis in plant cells differ from that in animal cells?



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13. Find examples where the four daughter cells from meiosis are equal in size and where they are found unequal in size.



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14. Distinguish anaphase of mitosis from anaphase I of meiosis.



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15. List the main differences between mitosis and meiosis.



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16. What is the significance of meiosis?



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17. Discuss with your teacher about: haploid insects and lower plants where cell-division

occurs.



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18. Discuss with your teacher about: some haploid cells in higher plants where cell-division does not occur.



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19. Can there be mitosis without DNA replication in 'S' phase?



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20. Can there be DNA replication without cell division?



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21. Analyse the events during every stage of cell cycle and notice how the following two parameters change: number of chromosomes (N) per cell



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22. Analyse the events during every stage of cell cycle and notice how the following two parameters change: amount of DNA content (C) per cell



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