



**INDIAN SCHOOL MUSCAT**  
**SENIOR SECTION**  
**DEPARTMENT OF BIOLOGY**  
**CLASS XI**  
**CELL CYCLE AND CELL DIVISION**  
**WORKSHEET- 13**

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- 1 Which tissue of animals and plants exhibits meiosis? 1
- 2 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? 1
- 3 At what stage of cell cycle does DNA synthesis take place? 1
- 4 It is said that the one cycle of cell division in human cells (eukaryotic cells) takes 24 hours. Which phase of the cycle, do you think occupies the maximum part of cell cycle? 1
- 5 It is observed that heart cells do not exhibit cell division. Such cells do not divide further and exit \_\_\_\_\_ phase to enter an inactive stage called \_\_\_\_\_ of cell cycle. 2
- 6 The following events occur during the various phases of the cell cycle, Name the phase against each of the events. 2
  - a. Disintegration of nuclear membrane \_\_\_\_\_
  - b. Appearance of nucleolus \_\_\_\_\_
  - c. Division of centromere \_\_\_\_\_
  - d. Replication of DNA \_\_\_\_\_
- 7 How does movement of chromosome occur during mitotic phase? 2
- 8 How does cytokinesis in plant cells differ from that in animal cells? 3
- 9 Comment on the statement – Telophase is reverse of prophase. 3
- 10 What are the various stages of meiotic prophase-I? Enumerate the chromosomal events during each stage? 3
- 11 Write brief note on the following 3
  - a. Synaptonemal complex
  - b. Metaphase plate
- 12 Give reason for the following statements: 3
  - a) Mitosis is equational division
  - b) Meiosis is reduction division
- 13 Write the significance of mitosis. 3
- 14 List the significance of meiosis. 3
- 15 Enumerate the processes occurring during the four stages of mitosis. 3