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**Max Time : 1 hr** **Class = 11th Biology Test Max Marks : 30**

**Topic: Cell Cycle & Cell Division**

1. Multiple choice questions : [ 1 X 10 = 10]
2. Meiosis in diploid organisms results in :

|  |  |
| --- | --- |
| a) Production of gametes | b) Reduction in number of chromosomes |
| c) Introduction of variation | d) all of the above |

1. Cells which are not dividing are likely to be at :

|  |  |  |  |
| --- | --- | --- | --- |
| a) G1 | b) G2 | c) G0 | d) S phase |

1. Identify the wrong statement about meiosis :

|  |  |
| --- | --- |
| a) Pairing of homologous chromosomes | b) Four haploid cells are formed |
| c) At the ends of meiosis the chromosome number are reduced to half | d) Two cycle of DNA replication occurs |

1. A chemical commonly used in inducing polyploidy is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Colchicine | b) Exonucleases | c) Ephedrine | d) Reserpine |

1. Interkinesis is period between :

|  |  |  |  |
| --- | --- | --- | --- |
| a) G1 and S | b) S and G2 | c) G2 and M | d) meiosis I and II |

1. During meiosis I , in which stage synapsis takes place:

|  |  |  |  |
| --- | --- | --- | --- |
| a) Zygotene | b) Diplotene | c) Leptotene | d) Pachytene |

1. Which of the following stages of meiosis involves division of centromere

|  |  |  |  |
| --- | --- | --- | --- |
| a) Telophase II | b) Metaphase I | c) Metaphase II | d) Anaphase II |

1. The centriole undergoes duplication during

|  |  |  |  |
| --- | --- | --- | --- |
| a) G2 phase | b) S phase | c) Prophase | d) Metaphase |

1. The stage during which separation of paired homologous chromosomes begin is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Diakinesis | b) Diplotene | c) Pachytene | d) Zygotene |

1. Cells in GO phase :

|  |  |  |  |
| --- | --- | --- | --- |
| a) Exit cell cycle | b) Enter cell cycle | c) suspend cell cycle | d) Terminate cell cycle |

1. What is the average cell cycle life span for an mammalian cell? **[ 1 ]**
2. Why mitosis is called equational division? **[ 1 ]**
3. What is GO (Quiescent phase) of cell cycle? **[ 2 ]**
4. Name the stage of cell cycle at which following events takes place : **[ 2 ]**

(i) Chromosome are moved to spindle equator (ii) Centromere splits and chromatids separated.

1. Distinguish Anaphase of mitosis from Anaphase I of meiosis. **[ 2 ]**
2. What is the significance of meiosis? **[ 2 ]**
3. What marks the transition between (i) Zygotene and Pachytene (ii) mitotic Metaphase and Anaphase

**[ 3 ]**

1. Describe the events take place during interphase with well labelled diagram. **[ 3 ]**
2. Describe the following : (i) Synapsis (ii) Bivalent (iii) Chiasmata (iv) Crossing over **[ 4 ]**