

QB365 Question Bank Software Study Materials

Bio - Botany - Cell Cycle 50 Important 1 Marks Questions With Answers (Book Back and Creative)

11th Standard

Biology

Total Marks : 50

Multiple Choice Question

50 x 1 = 50

- 1) The correct sequence in cell cycle is _____.
(a) S-M-G1-G2 (b) S-G1-G2-M (c) **G1-S-G2-M** (d) M-G-G2-S
- 2) If mitotic division is restricted in G1 phase of the cell cycle then the condition is known as _____.
(a) S Phase (b) G2 Phase (c) M Phase (d) **G0 Phase**
- 3) Anaphase promoting complex APC is a protein degradation machinery necessary for proper mitosis of animal cells. If APC is defective in human cell, which of the following is expected to occur?
(a) Chromosomes will be fragmented (b) Chromosomes will not condense (c) **Chromosomes will not segregate**
(d) Recombination of Chromosomes will occur
- 4) In S phase of the cell cycle _____.
(a) **Amount of DNA doubles in each cell** (b) Amount of DNA remains same in each cell
(c) Chromosome number is increased (d) Amount of DNA is reduced to half in each cell
- 5) Centromere is required for _____.
(a) transcription (b) crossing over (c) cytoplasmic cleavage (d) **movement of chromosome towards pole**
- 6) Synapsis occur between _____.
(a) mRNA and ribosomes (b) spindle fibres and centromeres (c) **two homologous Chromosomes**
(d) a male and a female gamete
- 7) In meiosis crossing over is initiated at _____.
(a) Diplotene (b) Leptotene (c) **Pachytene** (d) Zygotene
- 8) Colchicine prevents the mitosis of the cells at which of the following stage _____.
(a) Anaphase (b) **Metaphase** (c) Prophase (d) Interphase
- 9) The pairing of homologous Chromosomes on meiosis is known as _____.
(a) Bivalent (b) **Synapsis** (c) Disjunction (d) Synergids
- 10) Which of the following is present in maximum number in an adult person?
(a) Zygote (b) Gamete (c) Reproductive cell (d) **Somatic cell**
- 11) Synthesis of RNA and protein takes place in which phase of the cell cycle?
(a) S-phase (b) M-phase (c) **G₁ - phase** (d) Metaphase
- 12) The stage of mitosis during which the nucleolus disintegrates and chromosomes appear is known as _____.
(a) Interphase (b) Metaphase (c) **Prophase** (d) Anaphase

- 13) The minimum number of meiotic divisions required to produce 400 seeds in a pea plant is.
(a) 200 (b) 700 (c) 500 **(d) 400**
- 14) Which is a true statement for mitosis?
(a) Cell formed by it performs diverse functions i.e. show division of labour
(b) The number of chromosomes in the new cells are half than that of the parent cell
(c) Two cells formed as a result of this division are identical in all aspects.
(d) Cells formed as a result of mitosis have different genetic characters.
- 15) How many times is the genetic material replicated during meiosis?
(a) Twice **(b) Once** (c) Four times (d) None of the above
- 16) During Prophase-I of meiosis homologous chromosomes pair with each other to form bivalent. A bivalent is an association of:
(a) Two chromatids and two centromeres (b) Four chromatids and four centromeres
(c) Four chromatids and two centromeres (d) Two chromatids and one centromere
- 17) Phase of cell cycle unique for DNA replication is:
(a) S (b) G₁ (c) G₂ (d) M
- 18) _____ chromosome has middle centromere forming two equal arms of the chromosome.
(a) Acrocentric (b) Sub-metacentric **(c) Metacentric** (d) Telocentric
- 19) Pick the incorrect statement of significance of meiosis _____
(a) maintain definite constant number of chromosome (b) Adaption of organism to various stress
(c) crossing over takes place **(d) The chromosome number increases in the organism.**
- 20) Which one of the following is not a mitotic poisons?
(a) Cyanide (b) Azide (c) 2, 4, dinitrophenol (d) Polyamines
- 21) Insulin and steroid hormones are the examples of _____
(a) Inhibiting factors **(b) Growth factors** (c) Limiting factors (d) Synthetic factors
- 22) Mitosis cell division occurs during _____
(a) Oogenesis (b) Gametogenesis **(c) Somatic growth** (d) Spermatogenesis
- 23) In cell cycle _____ is spent for interphase.
(a) 95% (b) An hour (c) 11 hours (d) 8 hours
- 24) _____ longest phase of the cell cycle.
(a) 4 hours (b) 1hour **(c) Interphase** (d) C-Value
- 25) Protein molecules called _____ are synthesised and attach to the DNA.
(a) Kinases (b) Cyclins (c) GD phase **(d) Histones**
- 26) _____ causes unequal distribution of chromosomes.
(a) Amitosis (b) Mitosis (c) Closed Mitosis (d) Open Mitosis
- 27) Chromosomes are attached to the spindle fibres by kinetochore in _____ .
(a) Prophase **(b) Metaphase** (c) Anaphase (d) Telophase
- 28) _____ the spindle assembly checkpoint which decides the cell to enter anaphase.

- (a) Prophase **(b) Metaphase** (c) Anaphase (d) Telophase
- 29) _____ each chromosome split simultaneously and two daughter chromatids begins to migrate.
 (a) Prophase (b) Metaphase **(c) Anaphase** (d) Telophase
- 30) In plants, phragmoplast are formed between the daughter cells in _____ .
 (a) Prophase (b) Metaphase (c) Anaphase **(d) Telophase**
- 31) Reconstruction of cell wall takes place in _____ .
 (a) Prophase (b) Metaphase (c) Anaphase **(d) Telophase**
- 32) _____ takes place in the reproductive organs.
(a) Meiosis (b) Microsporogenesis (c) Megasporogenesis (d) Genetic variation
- 33) In flowering plants meiosis occurs during _____ in ovule.
 (a) Meiosis (b) Microsporogenesis **(c) Megasporogenesis** (d) Genetic variation
- 34) Spindle fibres assemble in _____ .
 (a) Chiasmata (b) Lampbrush chromosome **(c) Diakinesis** (d) Metaphase plate
- 35) _____ division is otherwise called mitotic meiosis.
 (a) Independent assortment (b) Anaphase I (c) Telophase I **(d) Meiosis II**
- 36) Nuclear membrane and nucleolus disappear in _____ .
(a) Prophase II (b) Metaphase II (c) Anaphase II (d) Telophase II
- 37) Adaptation of organisms to various environmental stress in _____ .
(a) Meiosis (b) Mitogen (c) Mitotic poisons (d) Endomitosis
- 38) _____ is found in animal cells.
 (a) Anastral **(b) Amphiastral** (c) Mitosis (d) Meiosis
- 39) Most of the neurons in the brain are in _____ stage.
 (a) G₁ (b) S (c) G₂ **(d) G₀**
- 40) Condensation of chromosome occurs in _____
(a) Prophase I (b) Prophase II (c) Anaphase (d) Metaphase
- 41) The common mitogen is _____
 (a) Temperature **(b) cytokinin** (c) both 1 and 2 (d) None
- 42) Amitosis is also called _____
 (a) Spindle formation (b) Synthesis phase **(c) Incipient cell division** (d) Maturation
- 43) In plants, phragmoplast are formed between the _____
 (a) Parent cells **(b) Daughter cells** (c) Sister chromatids (d) Spindle fibres
- 44) Number of DNA Strands present in chromosome during G₂ phase is _____
 (a) One **(b) Two** (c) Four (d) Eight
- 45) In which phase proteins for spindle fibre formation are synthesized?
 (a) G₁ phase **(b) G₂ phase** (c) S phase (d) Anaphase

- 46) Microtubule is involved in the _____
(a) Cell division (b) Muscle contraction (c) Membrane architecture (d) DNA recognition
- 47) Which of the following statement is correct?
(a) DNA is synthesized through out the cell cycle (b) Cell division is inhibited by cytokinin
(c) Chromosome are condensed at S-Stage **(d) Only extra chromosomal DNA is replicated at any stage of cell cycle.**
- 48) Which does not occurs in prophase?
(a) Hydration of Chromatin (b) Dehydration of chromatin (c) Appearance of chromatin
(d) Disappearance of nuclear membrane and nucleolus
- 49) Higher plants differ from animals in having _____
(a) spindle microtubule **(b) anastral mitosis** (c) kinetochores (d) disappearance of nucleolus during prophase
- 50) Which is most active and longest duration?
(a) Diplotene (b) Leptotene (c) Zygotene (d) Pachytene