

cell cycle

Q. 1 The cell undergoes a sequence of changes called as

- a) Interphase
- b) metaphase
- c) cell cycle
- d) mitosis.

Ans: c) cell cycle

Q. 2 which of these events is not a part of karyokinesis

- a) metaphase
- b) prophase
- c) Interphase
- d) Anaphase.

Ans: c) Interphase.

Q. 3 In which phase is chromosome condensation initiated.

- a) ~~prophase~~ prophase
- b) Telophase
- c) metaphase
- d) Anaphase.

Ans: a) Prophase.

Q. 4. How many hours does the M-phase take to complete a cycle?

- a) 11 hrs.
- b) 8 hr.
- c) 4 hrs.
- d) 1 hrs.

Ans: d) 1 hrs.

Q.5 Name state the where never dividing cells of neurons & skeletal muscle present?

- a) G0
- b) G1
- c) G2
- d) M

Ans. a) G0

Q.6 mitosis can occur both in — & — cells.

- a) diploid & haploid cells
- b) Prophase & metaphase
- c) Anaphase & Telophase
- d) Interphase & Anaphase

Ans. a) diploid & haploid cells.

Q.7 In cell cycle DNA synthesis take place during

- a) G1 phase
- b) G2 phase
- c) S phase
- d) Prophase

Ans. c) S phase

Q.8 zygoti zygotic meiosis occurs in

- a) Chlamydomonas
- b) Pteris
- c) Puccinia
- d) Marchantia

Ans. a) Chlamydomonas

Q.9 synapsis occurs between

- a) a male & a female gamete
- b) mRNA & ribosomes
- c) spindle fibres & centromere
- d) two homologous chromosomes

Ans. d) two homologous chromosomes

Q.10 In a somatic cell cycle, DNA synthesis take place

- a) G₁ phase
- b) G₂ Prophase
- c) S phase
- d) Prophase of mitosis

Ans: c) S - phase

Q.11 Which typical stage is known for DNA replication

- a) S - phase
- b) G₁ phase
- c) G₂ phase
- d) metaphase

Ans: a) S - phase

Q.12 Cell plate formation is present in

- a) bacterial cell
- b) viruses
- c) animal cell
- d) plant cell

Q.13 Microtubule is involved in the

- a) membrane concentration.
- b) DNA recognition.
- c) cell division
- d) muscle concentration

Ans: c) cell division

Q.14 In which phase of cell cycle is DNA replicated?

- a) G₁ phase
- b) S - phase
- c) G₂ phase
- d) M - phase

Ans: b) S - phase

Q.15 There are — major phase in a cell cycle.

- a) 1
- b) 2
- c) 3
- d) 4

Ans. b) 2

Q.16 DNA replication can be monitored by incorporation of —

- a) tyrosine
- b) thymidine.
- c) cytosine
- d) nitrite.

Ans. b) thymidine.

Q.17 Which of the following cell do not lack the ability to divide?

- a) skin cells.
- b) nerve cells.
- c) muscle cells.
- d) red blood cells.

Ans. a) skin cells.

Q.18 Which of the following cells do not usually divide but can be induced to divide?

- a) red blood cells.
- b) liver cells.
- c) hair cells.
- d) hair follicles.

Ans. b) liver cells.

Q.19 Which of the following cells are capable of asymmetric cell division?

- a) Hepatocytes.
- b) Epithelial cells.
- c) stem cells
- d) neurons.

Ans. c) stem cells.

Q.20) Duplication of centrosomes takes place in which of the following phase?

- a) S phase
- c) G1 phase

- b) G0 phase
- d) None of these

Ans: a) S-Phase

Q.21) Division of the cytoplasm is considered as the

- a) mitosis
- c) synapsis

- b) cytokinesis
- d) None of these

Ans: b) cytokinesis

Q.22) The characteristic of which of the following stage of mitosis is the separation of sister chromatids?

- a) metaphase
- c) Anaphase

- b) Telophase
- d) None of these

Ans: c) Anaphase

Q.23) What triggers apoptosis?

- a) ~~ent~~ DNA damage
- c) developmental signals

- b) cell stress
- d) All of the above

Ans: d) All of the above

Q.24) What is the role of mitochondria in apoptosis?

- a) To promote cell growth
- b) To produce ATP
- c) To regulate apoptosis through the release of pro-apoptotic factors
- d) None of the above.

Ans. c) To regulate apoptosis through the release of pro-apoptotic factors.

Q.25) What is apoptosis?

- a) A type of cell growth
- b) A type of cell death
- c) A type of cell division
- d) A type of cell communication.

Ans. b) A type of cell death.

Q.26) Apoptotic cells detach due to the inactivation of this

- a) PKC
- b) PKB
- c) RAF1
- d) FAK

Ans. d) FAK

Q.27) This is an active cell death process

- a) necrosis
- b) Lysis
- c) apoptosis
- d) senescence

Ans. c) apoptosis

Q.28) This cell organelle participates actively in animal apoptosis?

a) nucleus.

c) mitochondria

b) vacuoles.

d) chloroplast.

Ans. c) mitochondria.

Q.29) This cannot be killed by apoptosis.

a) immune cells.

c) cancer cells.

b) cells with DNA damage.

d) cell infected with virus.

Ans. c) cancer cells.

Q.30) Shrinking of nucleus is caused when this inactivates

a) gelsolin

c) actin

b) tubulin

d) lamin.

Ans. d) lamin.

Q.31) This is concerned with the intrinsic pathway of apoptosis?

a) cytochrome d

c) cytochrome b

b) cytochrome c

d) cytochrome a

Ans. b) cytochrome c

Q.32) Apoptotic bodies can be recognized with the presence of these on the surface.

- a) phosphatidyl tyrosine
- b) phosphatidylinositol
- c) phosphatidylcholine
- d) phosphatidylserine

Ans: d) phosphatidylserine

Q.33) Pairing of homologous chromosomes can be seen during -

- a) zygotene
- b) leptotene
- c) diplotene
- d) pachytene

Ans: a) zygotene

Q.34) During metaphase mitosis chromosomes -

- a) undergo ~~early~~ coiling.
- b) move towards the pole
- c) line up the equator.
- d) break & disintegrate

Ans: c) line up to the equator.

Q.35) During meiosis chiasmata are observed at

- a) pachytene
- b) diplotene
- c) leptotene
- d) diakinesis

Ans: a) pachytene