

Shagaf

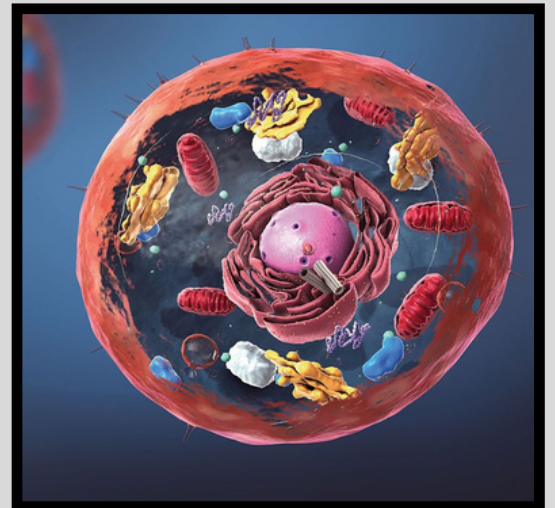
Cell Biology Final

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Q1. The best PH for lysosomes:

- A. Acidic PH .**
- B. Basic**
- C. Neutral**

Ans: A

Q2. All of the following are in prokaryotes except:

- A. Ribosome**
- B. Cell wall**
- C. Nucleoid**
- D. Endoplasmic reticulum**

Ans : D

Q3. What is the glycocalyx:

- A. A type of intracellular organelle involved in energy production**
- B. Fine filaments found in the outer layer of cell membrane**
- C. A lipid bilayer that forms the main structure of the cell membrane**
- D. A protein complex involved in the synthesis of DNA**

Ans : B

Q4. What happens at the beginning of anaphase during mitosis:

- A. The nuclear envelope re-forms around the chromatin**
- B. The chromosomes align at the cell's equatorial plate**
- C. The sister chromatids are separated and pulled towards opposite poles of the cell**
- D. The cell membrane begins to pinch inwards, starting cytokinesis**

Ans : c

Q5. Which type of cytoskeletal element is associated with desmosomes in cell-cell adhesions :

- A. Microtubules**
- B. Actin filaments**
- C. Intermediate filaments**
- D. None of the above**

Ans . C

Q6. Which of these cells is an application of the metachromasia phenomenon:

- A. Red blood cells**
- B. Neurons**
- C. Mast cells**
- D. Hepatocytes**

Ans : c

Q7. What are the components of ribosomes:

- A. DNA and protein**
- B. RNA and lipids**
- C. RNA and protein**
- D. Carbohydrates and nucleotides**

Ans : c

Q8. What type of genetic material is found in mitochondria:

- A. RNA**
- B. Protein**
- C. DNA**
- D. Lipids**

Ans : c

Q9. Which chromosome is the shortest in humans by physical length:

- A. Chromosome 1**
- B. Chromosome 21**
- C. Chromosome 22**
- D. Chromosome X**

Ans : c

Q10. Which statement is true regarding the Y chromosome in humans?

- .A. It is larger than the X chromosome**
- .B. It contains the gene for hemoglobin production**
- .C. Its short arm (p arm) is very small**
- .D. It is present in both males and females**

Ans : c

Q11. Where is the Golgi apparatus typically located in relation to the endoplasmic reticulum (ER):

- A. Inside the nucleus**
- B. Adjacent to the cell membrane**
- C. Near the centrioles**
- D. Near the ER**

Ans : D

Q12. From which type of cells are (iPS) cells derived:

- A. Embryonic stem cells**
- B. Somatic (adult) stem cells**
- C. Cancer cells**
- D. Prokaryotic cells**

Ans: B

Q13. All of the following are components of the nuclear envelope except:

- A. Nuclear membrane**
- B. Nuclear pores**
- C. Nuclear lamina**
- D. Nuclear sap**

Ans : D

:Q14. What is the primary function of nuclear pores in eukaryotic cells

- A. Protein synthesis**
- B. DNA replication**
- C. Regulate exchange between cytoplasm and nucleus**
- D. ATP production**

Ans : c

:Q15. Where does ribosomal RNA (rRNA) primarily form in eukaryotic cells

- A. Nucleus**
- B. Golgi apparatus**
- C. Endoplasmic reticulum**
- D. Mitochondria**

Ans : A

:Q16. In which group are chromosome number 3 typically classified in eukaryotic cells:

- A. Group A**
- B. Group B**
- C. Group C**
- D. Group D**

Ans : A

Q17. Which of the following is not a function of the nucleus in eukaryotic cells:

- A. Storage and protection of genetic material**
- B. Regulation of gene expression**
- C. Production of ATP**
- D. Synthesis of ribosomal RNA (rRNA)**

Ans : c

:Q18. What is the primary function of peroxisomal dehydrogenases in cell

- A. Break down of lipids**
- B. Break down of carbohydrates**
- C. Break down of hydrogen peroxide**
- D. Break down of proteins**

Ans : c

Q19. What is the primary function of telomeres in eukaryotic cell.

- A. Facilitate DNA replication**
- B. Protect chromosomes from degradation**
- C. Encode proteins**
- D. Regulate gene expression**

Ans : B

Q20. When does the genetic material exchange.

Pachytene

Q21. When homologous chromosomes unite together by synaptonemal complex:

Zygotene

Q22. When the cell has 92 s chromosome it's in:

- Anaphase**
- Metaphase**
- Prophase**
- Telophase**

Ans : A

Q23. How are the substages of prophase I classified:

- A. According to the number of chromosomes**
- B. According to the behavior of spindle fibers**
- C. According to the morphology of the chromosomes**
- According to the size of the cell**

Ans : c

Q24. What are the phases of the cell cycle that occur after the S phase in eukaryotic cells:

- A. G1 phase, G2 phase**
- B. G2 phase, mitosis, G1**
- C. G1 phase, meiosis, G2**
- D. Meiosis, G2 phase**

Ans : B

Q25. Which of the following cells is known for being multinuclear:

- A. Neuron**
- B. Hepatocyte**
- C. Osteocyte**
- D. Skeletal muscle fiber**

Ans : D

Q26. What distinguishes stem cells from other cells:

- A. Their ability to proliferate only**
- B. Their ability to differentiate only**
- C. Their ability to both proliferate and differentiate**
- D. Their inability to proliferate or differentiate**

Ans :C

Q27. What type of stem cells are typically found in cord blood:

- A. Pluripotent**
- B. Totipotent**
- C. Multipotent**
- D. Unipotent**

Ans: c

Q28. The inner folded membrane form:

- A. Cristea**
- B. Cisternea**

Ans : A

Q29. Which of the following is a reason why mitochondria are able to replicate independently of the cell cycle

- A. They contain their own DNA**
- B. They are surrounded by a double membrane**
- C. They produce ATP**
- D. They are involved in cellular respiration**

Ans : A RNA نركز هون مش

Q30. What structural component forms the core of both cilia and flagella:

- A. Microfilaments**
- B. Microtubules**
- C. Intermediate filaments**
- D. Actin filaments**

Ans : B

Q31. What is the primary function of the nuclear lamina:

- A. Protein synthesis**
- B. Cellular respiration**
- C. DNA replication**
- D. Nuclear stability**

Ans :D

Q32. Can be calculated Barr bodies by :

- A. X-1**
- B. X+1**
- C. X-2**
- D. X+2**

Ans: A

Q33. Which banding pattern is widely used in cytogenetics:

- A. G-band**
- B. C-band**
- C. R-band**
- D. Q-band**

Ans : A

Q34. Which of the following is not considered one of the main types of tissues in the body:

- A. Epithelial tissue**
- B. Connective tissue**
- C. Muscle tissue**
- D. Lymphatic tissue**

Ans : D

Q35. What is the primary function of ribosomes:

- A. DNA replication**
- B. ATP production**
- C. Protein synthesis**
- D. Lipid synthesis**

Ans : c

Q36. During which phase of mitosis do chromosomes align on the equatorial plane:

- A) Prophase**
- B) Metaphase**
- C) Anaphase**
- D) Telophase**

Ans : B

Q37. In which organ are peroxisomes particularly abundant:

- A) Heart**
- B) Brain**
- C) Liver**
- D) Stomach**

Ans : C

Q38. During which phase of cell division is the cell typically studied:

- A) Prophase**
- B) Metaphase**
- C) Anaphase**
- D) Telophase**

Ans :B

