

CLASS XI BIO CH:8

Set 4

1. Who first saw and described a live cell?
 - a) Robert Brown
 - b) Robert Hooke
 - c) Antonie van Leeuwenhoek
 - d) Matthias Schleiden
2. The cell theory was formulated by:
 - a) Leeuwenhoek and Schwann
 - b) Schleiden and Schwann
 - c) Virchow and Schleiden
 - d) Brown and Hooke
3. Who stated that all cells arise from pre-existing cells (Omnis cellula-e cellula)?
 - a) Robert Hooke
 - b) Rudolf Virchow
 - c) Camillo Golgi
 - d) Antonie van Leeuwenhoek
4. The genetic material in a prokaryotic cell is:
 - a) Enclosed by a nuclear membrane
 - b) Associated with histones
 - c) Basically naked
 - d) Linear DNA
5. Which of the following is NOT a function of the mesosome in prokaryotes?
 - a) Cell wall formation
 - b) DNA replication
 - c) Protein synthesis
 - d) Respiration
6. The fluid mosaic model of the plasma membrane was proposed by:
 - a) G.N. Ramachandran
 - b) Singer and Nicolson
 - c) Camillo Golgi
 - d) George Palade
7. Which of these is a single membrane-bound organelle?
 - a) Mitochondrion
 - b) Nucleus
 - c) Lysosome
 - d) Chloroplast
8. The main arena for various cellular activities is the:
 - a) Nucleus
 - b) Mitochondria

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- c) Cytoplasm
- d) Endoplasmic Reticulum
- 9. The organelle involved in the formation of lysosomes is the:
 - a) Endoplasmic Reticulum
 - b) Golgi apparatus
 - c) Mitochondria
 - d) Vacuole
- 10. The "powerhouse of the cell" is the:
 - a) Golgi body
 - b) Lysosome
 - c) Mitochondria
 - d) Chloroplast
- 11. Which of the following is NOT a part of the endomembrane system?
 - a) Endoplasmic Reticulum
 - b) Golgi complex
 - c) Mitochondria
 - d) Vacuoles
- 12. Rough Endoplasmic Reticulum (RER) is involved in:
 - a) Lipid synthesis
 - b) Protein synthesis
 - c) Detoxification
 - d) Carbohydrate metabolism
- 13. The organelle that contains hydrolytic enzymes is the:
 - a) Ribosome
 - b) Lysosome
 - c) Peroxisome
 - d) Glyoxysome
- 14. In plant cells, the vacuole is bound by a single membrane called:
 - a) Tonoplast
 - b) Plasmalemma
 - c) Cristae
 - d) Lamella
- 15. The structure formed by the stacking of thylakoids in chloroplasts is called:
 - a) Stroma
 - b) Granum
 - c) Cristae
 - d) Lumen
- 16. The 70S ribosomes are found in:
 - a) Eukaryotic cells only
 - b) Prokaryotic cells only
 - c) Both prokaryotic and eukaryotic cells
 - d) Mitochondria and chloroplasts of eukaryotes

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17. The cytoskeleton does NOT include:
- a) Microtubules
 - b) Microfilaments
 - c) Mesosomes
 - d) Intermediate filaments
18. The core of cilia and flagella, which has a 9+2 array of microtubules, is called the:
- a) Basal body
 - b) Axoneme
 - c) Centriole
 - d) Kinetochore
19. Centrioles are found in:
- a) Animal cells
 - b) Plant cells
 - c) All eukaryotic cells
 - d) Prokaryotic cells
20. The primary constriction of a chromosome is called the:
- a) Kinetochore
 - b) Centromere
 - c) Satellite
 - d) Telomere
21. Chromosomes with a terminal centromere are called:
- a) Metacentric
 - b) Sub-metacentric
 - c) Acrocentric
 - d) Telocentric
22. The site for ribosomal RNA synthesis is the:
- a) Nucleolus
 - b) Nucleoplasm
 - c) Chromatin
 - d) Nuclear pore
23. Which of the following is NOT a function of the plasma membrane?
- a) Transport of molecules
 - b) Cell recognition
 - c) Protein synthesis
 - d) Signal transduction
24. The movement of water across a semi-permeable membrane is called:
- a) Diffusion
 - b) Osmosis
 - c) Active transport
 - d) Facilitated diffusion

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25. The structure that holds two chromatids together is the:
- a) Kinetochore
 - b) Centrosome
 - c) Centromere
 - d) Centriole
26. Which of the following is a non-membrane bound organelle?
- a) Lysosome
 - b) Ribosome
 - c) Mitochondrion
 - d) Vacuole
27. The cell wall of plants is made of:
- a) Chitin
 - b) Cellulose
 - c) Peptidoglycan
 - d) Lipopolysaccharide
28. The middle lamella is composed mainly of:
- a) Cellulose
 - b) Hemicellulose
 - c) Calcium pectate
 - d) Lignin
29. Which of the following plastids stores starch?
- a) Chloroplast
 - b) Chromoplast
 - c) Amyloplast
 - d) Elaioplast
30. The model that describes the quasi-fluid nature of the lipid bilayer is the:
- a) Sandwich model
 - b) Unit membrane model
 - c) Fluid mosaic model
 - d) Lamellar model
31. The organelle that helps in cell division in animal cells is the:
- a) Nucleus
 - b) Centrosome
 - c) Golgi apparatus
 - d) ER
32. The smallest cells are:
- a) Bacteria
 - b) Mycoplasmas
 - c) PPLO
 - d) Viruses
33. Which of the following is a Gram-negative bacteria?
- a) Bacillus

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- b) Streptococcus
 - c) E. coli
 - d) Staphylococcus
34. The plasmid DNA confers resistance to:
- a) Viruses
 - b) Antibiotics
 - c) Heat
 - d) Pressure
35. The structure that helps bacteria attach to host tissues is:
- a) Flagella
 - b) Pili
 - c) Fimbriae
 - d) Mesosome
36. The site of aerobic respiration is the:
- a) Chloroplast
 - b) Mitochondrion
 - c) Lysosome
 - d) Ribosome
37. The organelle that contains its own DNA is the:
- a) Nucleus and Mitochondrion
 - b) Mitochondrion and Chloroplast
 - c) Chloroplast and Lysosome
 - d) Lysosome and Vacuole
38. The organelle involved in the synthesis of steroidal hormones is the:
- a) Rough ER
 - b) Smooth ER
 - c) Golgi apparatus
 - d) Lysosome
39. The organelle that packages materials for secretion is the:
- a) Endoplasmic Reticulum
 - b) Golgi apparatus
 - c) Lysosome
 - d) Vacuole
40. The organelle that contains cristae is the:
- a) Chloroplast
 - b) Mitochondrion
 - c) Nucleus
 - d) Lysosome
41. The structure that connects the cytoplasm of adjacent plant cells is:
- a) Tight junction
 - b) Plasmodesmata


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- c) Desmosome
 - d) Gap junction
42. The organelle that is not found in animal cells is the:
- a) Centriole
 - b) Chloroplast
 - c) Mitochondrion
 - d) Lysosome
43. The organelle that is not found in plant cells is the:
- a) Cell wall
 - b) Chloroplast
 - c) Centriole
 - d) Large vacuole
44. The organelle that is involved in the formation of the acrosome of sperm is the:
- a) Mitochondrion
 - b) Golgi apparatus
 - c) Lysosome
 - d) Nucleus
45. The organelle that is involved in the degradation of macromolecules is the:
- a) Ribosome
 - b) Lysosome
 - c) Peroxisome
 - d) Glyoxysome
46. The organelle that is involved in the synthesis of phospholipids is the:
- a) Rough ER
 - b) Smooth ER
 - c) Golgi apparatus
 - d) Lysosome
47. The organelle that is involved in the synthesis of ATP is the:
- a) Chloroplast
 - b) Mitochondrion
 - c) Ribosome
 - d) Nucleus
48. The organelle that is involved in the synthesis of RNA is the:
- a) Nucleolus
 - b) Nucleus
 - c) Ribosome
 - d) Both a and b
49. The organelle that is involved in the synthesis of proteins is the:
- a) Ribosome
 - b) Nucleus

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- c) Mitochondrion
 - d) All of the above
50. The organelle that is involved in the storage of water and minerals is the:
- a) Vacuole
 - b) Lysosome
 - c) Golgi apparatus
 - d) Endoplasmic Reticulum

Answer Key: Set 4

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- 1. c) Antonie van Leeuwenhoek
 - 2. b) Schleiden and Schwann
 - 3. b) Rudolf Virchow
 - 4. c) Basically naked
 - 5. c) Protein synthesis
 - 6. b) Singer and Nicolson
 - 7. c) Lysosome
 - 8. c) Cytoplasm
 - 9. b) Golgi apparatus
 - 10. c) Mitochondria
 - 11. c) Mitochondria
 - 12. b) Protein synthesis
 - 13. b) Lysosome
 - 14. a) Tonoplast
 - 15. b) Granum
 - 16. d) Mitochondria and chloroplasts of eukaryotes
 - 17. c) Mesosomes
 - 18. b) Axoneme
 - 19. a) Animal cells
 - 20. b) Centromere
 - 21. d) Telocentric
 - 22. a) Nucleolus
 - 23. c) Protein synthesis
 - 24. b) Osmosis
 - 25. c) Centromere
 - 26. b) Ribosome
 - 27. b) Cellulose
 - 28. c) Calcium pectate
 - 29. c) Amyloplast
 - 30. c) Fluid mosaic model
 - 31. b) Centrosome

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- 32. b) Mycoplasmas
- 33. c) E. coli
- 34. b) Antibiotics
- 35. c) Fimbriae
- 36. b) Mitochondrion
- 37. b) Mitochondrion and Chloroplast
- 38. b) Smooth ER
- 39. b) Golgi apparatus
- 40. b) Mitochondrion
- 41. b) Plasmodesmata
- 42. b) Chloroplast
- 43. c) Centriole
- 44. b) Golgi apparatus
- 45. b) Lysosome
- 46. b) Smooth ER
- 47. b) Mitochondrion
- 48. d) Both a and b
- 49. a) Ribosome
- 50. a) Vacuole

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