

STARS ACADEMY LAHORE

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Roll No. of Candidate

Name of Candidate

STARS ENTRY TEST SYSTEM-2020 SESSION - MDCAT

Test Code: B1 (The Cell)

Time Allowed: 40 Minutes

1. Select the correct option from two columns

1	Lysosome	A	Protein synthesis
2	Mitochondria	B	Photosynthesis
3	Chloroplast	C	Suicidal bag
4	RER	D	Use ADP

A) (1,D) (2,C) (4, A) (3, B)
B) (1,A) (2,C) (4, D) (3, B)

C) (1,D) (2,B) (4, A) (3, C)
D) (1,C) (2,D) (4, A) (3, B)

2. Which of the following cellular event is **NOT** directly involved with mitochondria?

A) Apoptosis
B) ATP synthesis

C) Controlling cell cycle
D) Protein degradation

3. Example for autonomous organelle(s):

A) Mitochondria
B) Chloroplast, mitochondria and Golgi

C) Chloroplast
D) Mitochondria and chloroplast

4. Cholesterol functions in the plasmalemma to

A) Increase fluidity of the lipid bilayer.
B) Decrease fluidity of the lipid bilayer.
C) Facilitate the diffusion of ions through the lipid bilayer.
D) Assist in the transport of hormones across the lipid bilayer.

5. The material inside the endoplasmic reticulum is separated from the cytoplasmic material by the spherical or tubular membranes called:

A) Cisternae
B) Cristae

C) Thylakoids
D) Grana

6. Pancreas produces secretory granules that help in digestion. These granules after passing through endoplasmic reticulum are pinched off from _____ surface of Golgi apparatus:

A) Forming face
B) Outer surface

C) Maturing face
D) Convex surface

7. Eukaryotic cells usually contain

A) Endoplasmic reticulum
B) Nucleus

C) Mitochondria
D) All the above

8. _____ is the largest organelle in a matured RBC.

A) Nucleus
B) Mitochondria

C) Ribosome
D) Golgi complex

9. Which of the following are not the contents of vacuole?

A) Water
B) Sap

C) Enzymes
D) Excretory products

10. _____ is a site for synthesis of glycolipids and glycoproteins.

A) Golgi apparatus
B) Lysosome

C) Plastid
D) Mitochondria

11. What A and B indicate in the given diagram?



- A) Nucleolus, Nuclear membrane
B) Nucleus, Chromatin
C) Nucleus, Nucleolus
D) Chromosome, Nuclear membrane
12. Prokaryotic cell does not have _____.
A) Nucleus
B) Mitochondria
C) Golgi complex
D) All of these
13. Which is the correct order that depicts how vesicles are transported to membranes?
i. Golgi apparatus ii. ER iii. Vesicle iv. Plasma membrane
A) i, ii, iii, iv
B) ii, iii, i, iv
C) i, iii, iv, i
D) None of these
14. Prokaryotic cells usually lack
A) Nucleic acids
B) Nucleus
C) Ribosomes
D) Vacuoles
15. The most predominant ribosome type in prokaryotes is
A) 60S
B) 70S
C) 80S
D) 90S
16. The cellular connections in animal cells is by
A) Plasmodesmata
B) Pores
C) Gap junctions
D) Receptors
17. The space between the cell wall and the plasma membrane in prokaryotes is called
A) Periplasmic space
B) Extra-cytoplasmic space
C) Interstitial space
D) Extranuclear space
18. Which of the following cell organelle can be viewed by a light microscope?
A) Ribosome
B) Endoplasmic Reticulum
C) Golgi
D) Mitochondria
19. In plant cell, which organelle secretes pectin, hemicelluloses, proteins and microfibrils of cellulose to make cell wall?
A) ER
B) Dictyosomes
C) Plasma membrane
D) Glyoxysomes
20. Microtubules help in
A) Cilia, flagella, centrioles, spindle apparatus formation / cell division
B) Chromosomal fibres, nerve processes, endocytosis
C) Cell motility and cell shape, muscle contraction
D) All the above are correct
21. The statement that is wrong about mitochondria?
A) Size and shape of mitochondria varies in a cell
B) Mitochondria in the cell can fuse with one another
C) Large mitochondria in the cell can split into two
D) In all cells, a single mitochondrion will be exceptionally larger than others
22. Which one of the following transport processes requires energy?
A) Facilitated diffusion
B) Passive transport
C) Active transport
D) Simple diffusion

23. **The nuclear pore complex**
 A) Permits free communication between the nucleus and the cytoplasm.
 B) Is bridged by a unit membrane.
 C) Is located only at specific nuclear pore sites.
 D) Permits passage of proteins via receptor mediated transport.
24. **Which one of the following is an inclusion not bounded by a membrane that is observable only during interphase?**
 A) Nuclear pore complex
 B) Heterochromatin
 C) Nucleolus
 D) Outer nuclear membrane
25. **A structure that is continuous with RER is the**
 A) Nuclear pore complex
 B) Nucleolus.
 C) Heterochromatin
 D) Outer nuclear membrane
26. **You would expect a cell with an extensive Golgi apparatus to**
 A) Make a lot of ATP
 B) Secrete a lot of material
 C) Move actively
 D) Store large quantities of food
27. **Precursors of ribosomal subunits are found in**
 A) Nucleolus
 B) Peripheral area
 C) Central fibril
 D) Both a + b
28. **In mitochondria, cristae act as sites for**
 A) Protein synthesis
 B) Breakdown of macromolecules
 C) Phosphorylation of flavoproteins
 D) Oxidation-reduction reaction
29. **An outer covering membrane is absent over**
 A) Nucleolus
 B) Lysosome
 C) Mitochondrion
 D) Plastid
30. **Which one have metabolically active plasma membrane**
 A) Plant cell
 B) Animal cell
 C) Bacteria
 D) Virus
31. **Which of the following is also called as suicidal bag?**
 A) Mesosome
 B) Peroxisome
 C) Lysosome
 D) Mitochondria
32. **Which of the following is associated with endocytosis?**
 A) Autolysosome
 B) Peroxisome
 C) Chloroplast
 D) Phagolysosome
33. **Which of the following has color other than green?**
 A) Leucoplast
 B) Chloroplast
 C) Chromoplast
 D) Amyloplast
34. **Rough endoplasmic reticulum is differentiated from Smooth endoplasmic reticulum by having:**
 A) DNA
 B) RNA
 C) Ribosome
 D) Double membrane
35. **The lens of light microscope nearest to the observer eye is called as:**
 A) Objective lens
 B) Condenser
 C) Ocular
 D) Reflector
36. **The ability of a microscope to distinguish two close points as two separate points is:**
 A) Efficiency
 B) Magnification
 C) Resolving power
 D) Focal length
37. **An animal cell differs from a plant cell by having:**
 A) Nucleus
 B) Mitochondria
 C) Centriole
 D) Ribosome
38. **The storage house of vital chemicals is:**
 A) Ribosome
 B) Nucleus
 C) Golgi complex
 D) Peroxisome
39. **How many chromosome pair are present in the fruit fly?**
 A) 2
 B) 4
 C) 6
 D) 8

40. The cell and cell organelles in biology is normally measured in _____
 A) Micrometer
 B) Nanometer
 C) Metre
 D) Angstrom
41. The increase in fluidity of the plasma membrane can be achieved by:
 A) Increasing unsaturated fatty acids
 B) Increasing in saturated fatty acids
 C) Increasing glycolipid content
 D) Increasing phospholipid content
42. The oxygen & carbon dioxide cross the cell membranes by:
 A) Active diffusion
 B) Facilitated diffusion
 C) Passive diffusion
 D) Random diffusion
43. _____ involved in apoptosis?
 A) Lysosome
 B) ER
 C) Golgi
 D) Mitochondria
44. The membrane bounded pigment bodies are _____.
 A) Plastids
 B) Chlorophyll
 C) Xanthophyll
 D) All of these
45. Which of the following are appeared to be tubular in appearance?
 A) Ribosome
 B) Golgi complex
 C) Smooth endoplasmic reticulum
 D) Rough endoplasmic reticulum
46. Protein structures which are long, unbranched and slender tubules are called
 A) Microfilaments
 B) Microtubules
 C) Intermediate tubules
 D) chromatin fibers
47. The chlorophyll in the cell is located _____.
 A) In stroma
 B) In matrix
 C) In lumen
 D) At thylakoid
48. Read the different combinations of terms given below and select the correct combination for animal cell.
 A) Cell wall, cell membrane, nucleus, plastid
 B) Cell wall, nucleus, ribosome, chromosome
 C) Cell membrane, mitochondria, ribosome, chromosome
 D) Cell membrane, ribosome, mitochondria, chloroplast.
49. Green color of leaves is due to presence of the pigment _____.
 A) Chlorophyll
 B) Mitochondria
 C) Ribosomes
 D) Anthocyanin
50. The most important function of cell membrane is that it:
 A) Controls the entry and exit of materials from cells.
 B) Controls only the entry of materials into cells.
 C) Controls only the exit of materials from cells.
 D) Allows entry and exit of materials without any control.
51. The association of a single mRNA with multiple ribosomes is called as:
 A) Polymer
 B) Polysome
 C) Polypeptide
 D) Polysaccharide
52. In mitochondrion, the ATP synthase is present at _____.
 A) Inner membrane
 B) Outer membrane
 C) Matrix
 D) Inter-membranal shape
53. The rRNA are actively synthesized in _____.
 A) Nucleoplasm
 B) Nucleolus
 C) Nucleus
 D) All of these
54. The organelle that is involved in the formation of cilia, flagella and basal granules?
 A) Golgi apparatus
 B) Centrosome
 C) Mitochondria
 D) lysosome
55. The subunits of prokaryotic ribosomes are.
 A) 50S + 30S
 B) 60S + 40S
 C) 40S + 30S
 D) 60S + 50S

56. **Golgi apparatus is produced from which organelle?**
 A) Endoplasmic reticulum
 B) Mitochondria
 C) Plasmamembrane
 D) Ribosomes
57. **The cell wall of bacteria is made up of _____.**
 A) Peptidoglycan
 B) Murein
 C) N-Acetylglucosamine
 D) All of these
58. **Fluid mosaic model for the structure of plasma membrane explains**
 A) A single lipid layer in between two protein layers
 B) A layer of proteins on one side and a bilayer lipid on other side
 C) Two lipid layers and one protein layer
 D) Phospholipid bilayer in which molecules of proteins are embedded in a mosaic manner
59. **Match Column –I with Column – II and select the correct option from the codes given below.**
- | Column – I | Column – II |
|-----------------|-----------------------|
| A) Mitochondria | (i) Without membrane |
| B) Lysosomes | (ii) Single membrane |
| C) Ribosomes | (iii) Double membrane |
| D) Nucleus | |
-
- | | A | B | C | D |
|----|-------|-------|-------|-------|
| A) | (i) | (ii) | (iii) | (iii) |
| B) | (iii) | (i) | (i) | (ii) |
| C) | (iii) | (ii) | (i) | (iii) |
| D) | (ii) | (iii) | (i) | (iii) |
60. **Large and central vacuole in plant is responsible is**
 A) Photosynthesis
 B) Starch storage
 C) Support to the leaves
 D) Ion crystal storage