



ARJUNA NEET BATCH



CELL THE UNIT OF LIFE

Test : 1 By : Biswajit Sir

Q1. Which of the following is incorrect with respect to inanimate things?

- (A) They have prokaryotic cells ✗
- (B) They have the basic unit of life ✗
- (C) They are non-living ✓
- (D) Both A and B

↓
nonliving
↓
cell -ve

Q2. Which of the following statements are correct?

Statement P: All organisms are made of cells (T)

Statement Q: Many organisms are single celled (F)

(A) Both P and Q *same*

☒ (B) Only P

(C) Only Q

(D) None



Q3. Who described a living cell for the first time?

☒ (A) Leeuwenhoek

(B) Robert Hooke

(C) Schleiden

(D) Schwann

↳ dead cell

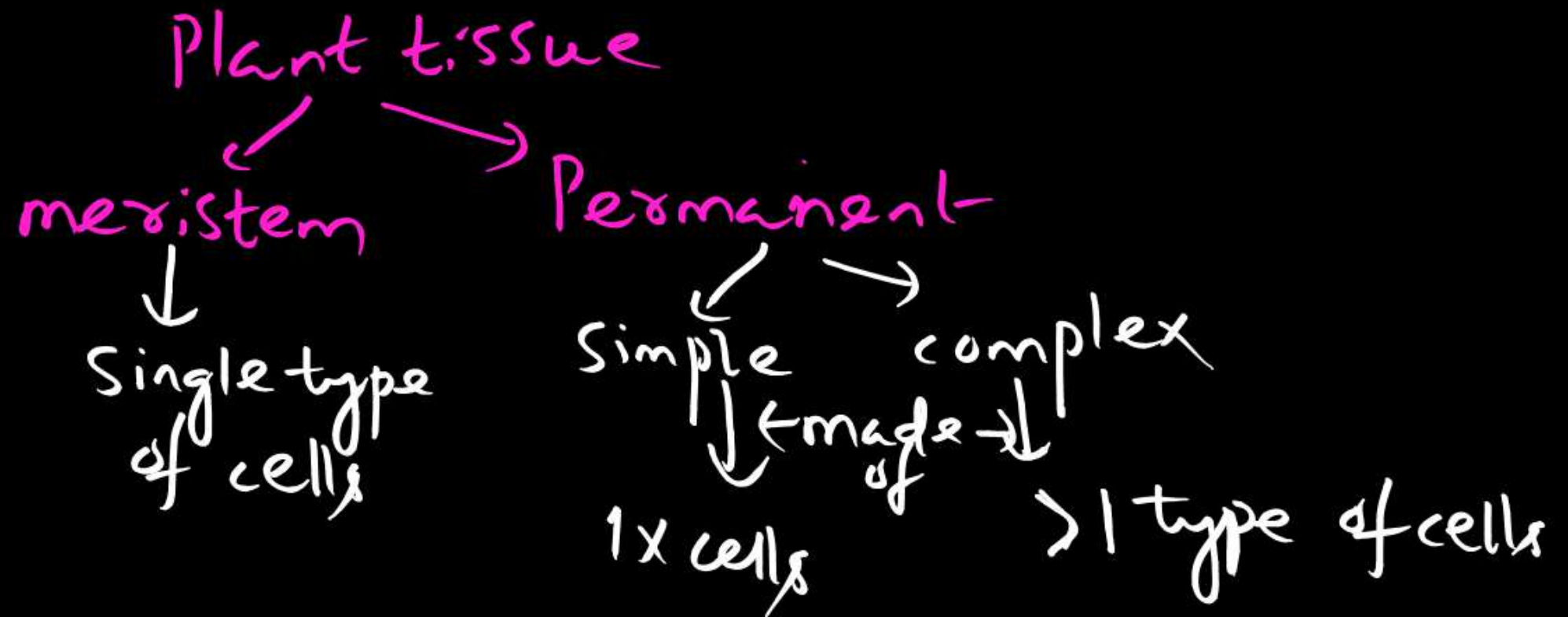
Q4. Which of the following is true about Schleiden ?

- (A) German botanist (T)
- (B) Studied plants and ~~animal~~ cells (F)
- (C) Observed that presence of cell wall is unique feature of plants (F)
- (D) All of the above

↳ Schwann

Q5. Statement P: plant tissue is always made of single type of cells. (P)
 Statement Q: Schleiden studied large number of plants in 1839. (F)
 Which statement is / are correct? 1838

- (A) Only P (B) Only Q
 (C) Both P and Q (D) ~~None~~





Q6. Who said that new cells develop from pre-existing cell by cell division?

- ☒ (A) Virchow (B) Schwann
(C) Scheiden (D) Both B and C



Q7. Who modified cell theory?

☒ (A) Virchow

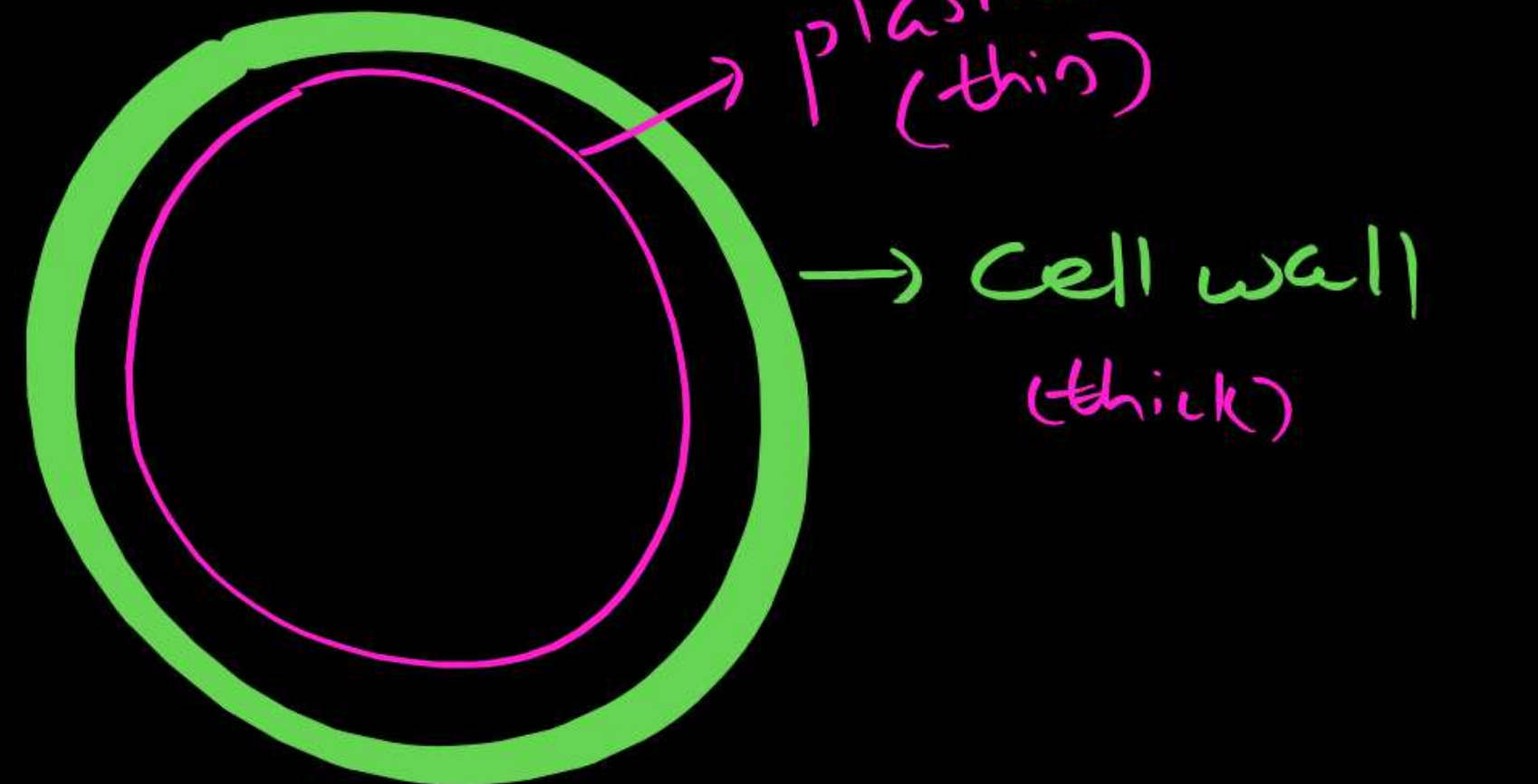
(B) Schwann

(C) Leeuwenhoek

(D) Robert brown

Q8. In a typical plant cell, cell wall and plasmamembrane are

- (A) Identical ✗
- (B) Distinct ✓
- (C) Can be identical or distinct ✗
- (D) Equally thick ✗



Q9. Membrane bound organelles are present in

(A) Prokaryotic cells ☒

(B) Eukaryotic cells ☒

(C) Mature RBC ☒

(D) Both Band C

eukaryotic cells

Q10. In eukaryotic cell the genetic material is

(A) Protein ~~✗~~

(B) Lipid ~~✗~~

☒ (C) DNA

(D) RNA ~~✗~~

In all cellular organisms
 ↓
 genetic material
 ↓
 ds DNA



Q11. Which of the following is main arena of cellular activities?

- ☒ (A) Cytoplasm
- ☐ (B) Plasma membrane
- ☐ (C) Nucleus
- ☐ (D) Cell wall

Q12. In which organelle ribosome is not present?

- (A) Golgi complex *-ve* (B) Mitochondria *+ve*
 (C) Chloroplast *+ve* (D) More than one

Q13. Which of the following organelle is / are non-membrane bound

- | | | | |
|-----|--------------|-----|-----------------|
| (A) | Centrosome ✓ | (B) | Ribosome ✓ |
| (C) | Nucleus ✗ | (D) | More than one ✓ |

Q14. Which of the following statement is incorrect

- (A) Cells differ slightly in shape size and activities (F)
- (B) The largest isolated cell is egg of ostrich (T)
- (C) The shape of cell can be irregular (T)
- (D) All of the above

Q15. Statement P: The shape of cell ^{may} ~~always~~ vary with function performed by the cell (F)

Statement Q: nerve cells are some of the longest cells (T)

Which of the following statement is correct?

(A) Both P&Q

(B) Only P

(C) Only Q

(D) None



Q16. Which of the following has smallest cells?

- (A) Mycoplasma (0.3 μ m) (B) RBC
(C) WBC (D) neuron

Q17. Find out the odd one with respect to eukaryotic organisms

- (A) Protists
(C) Plants
(B) Bacteria
(D) Animals

EX

EX

EX

EX

PK

Q18. Large central sap vacuole is absent in

- (A) Animal cells *-ve*
- (B) Immature plant cells *-ve*
- (C) Mature plant cells *+ve*
- ☒ (D) Both A and B

Q19. Centriole is absent in

- (A) ~~All plant cells~~ ✗
- ✓ (B) Almost all plant cells ✓
- (C) Animal cells ✗
- (D) None

Q20. Which of the following organelle is self duplicating but without having any genetic material

(A) Mitochondria
(C) Centrosome

(B) Lysosome
(D) Chloroplast

→ non self duplicating



Self duplicating organelles

Mitochondria

Plastid

Centrosome
(centriole)

↓
+ve

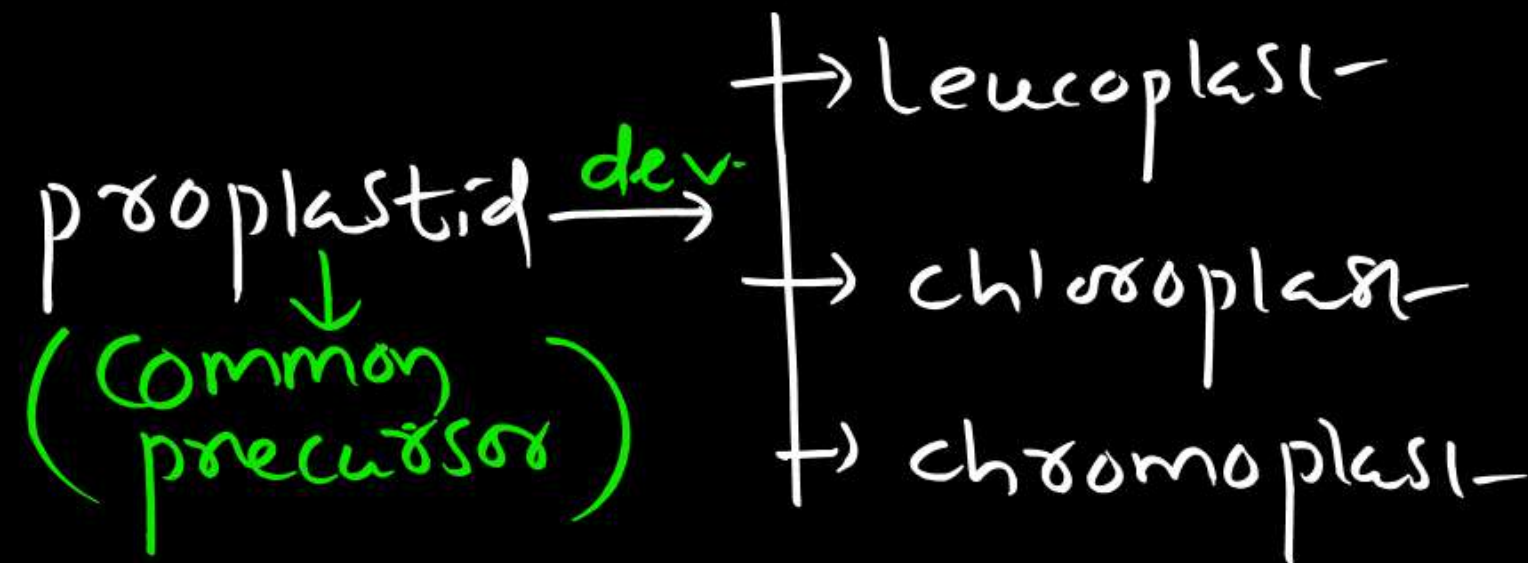
↓
+ve

↓
-ve

genetic material →

Q21. Which is the common precursor of all plastids?

- (A) Leucoplast (B) ☒ Proplastid
(C) Amyloplast (D) Aleuroplast





Q22. Which of the following enzyme is marker enzyme of mitochondria

- ☒ (A) Succinate dehydrogenase
- (B) Glycolate oxidase
- (C) Hexokinase
- (D) All of the above

Q23. Which components of plasma membrane are responsible for transport of various types of molecules

- (A) Lipid ✓
- (B) Protein ✓
- (C) Carbohydrate ✗
- (D) Both lipid and protein ✓

Plasmamembrane → lipid + protein + Carbohydrate
 ↓
 mediate transport



Q24. Facilitated diffusion is

- (A) Passive process ✓
- (B) Active process ✗
- (C) Can be either active and passive ✗
- (D) None

Q25. In human RBC plasma membrane what is the approximate percentage of proteins

(A) 50%

(B) 42%

(C) 52%

(D) 40%

{ lipid → 40%
 { protein → 52%
 Carbohydrate



Q26. Which of the following protein is loosely associated with lipid bilayer in plasmamembrane

- (A) External protein ✓
- (B) Peripheral protein ✓
- (C) Extrinsic protein ✓
- (D) ✓ All of the above



Q27. Which of the following model for plasmamembrane is most valid

- (A) Fluid music model ✓**
- (B) Unit membrane concept**
- (C) Danieli Davson model**
- (D) Overton model**

Q28. Which of the following shows both lateral and flipflop movement in plasma membrane

- | | | | |
|---|--------------|-----|------------------|
| (A) <input checked="" type="checkbox"/> | Lipid | (B) | Protein |
| (C) | Carbohydrate | (D) | All of the above |

PM $\begin{cases} \rightarrow \text{lipid} \rightarrow \text{lateral, flip flop movement} \\ \rightarrow \text{protein} \rightarrow \text{lateral movement} \end{cases}$



Q29. Which ^{of} ~~is~~ the following component of plasma membrane is present only on non cytosolic surface

(A) Lipid

(B) Protein

(C) Carbohydrate

(D) none

Q30. The most abundant lipid in plasma membrane is

- (A) Sterol
- (B) Phosphoglyceride ✓
- (C) Sphingophospholipid
- (D) Glycolipid

Q31. Find out the odd one with respect to cell wall components in algae

(A) Chitin ✗
(C) Galactan ✓

(B) Cellulose ✓
(D) Mannan ✓

algal cell wall
↓

cellulose, galactan, mannans,
minerals



Q32. Which of the following forms symplast within apoplast

- (A) Cell wall
- ☒ (B) Plasmodesmata
- (C) Endoplasmic reticulum
- (D) Plasmamembrane

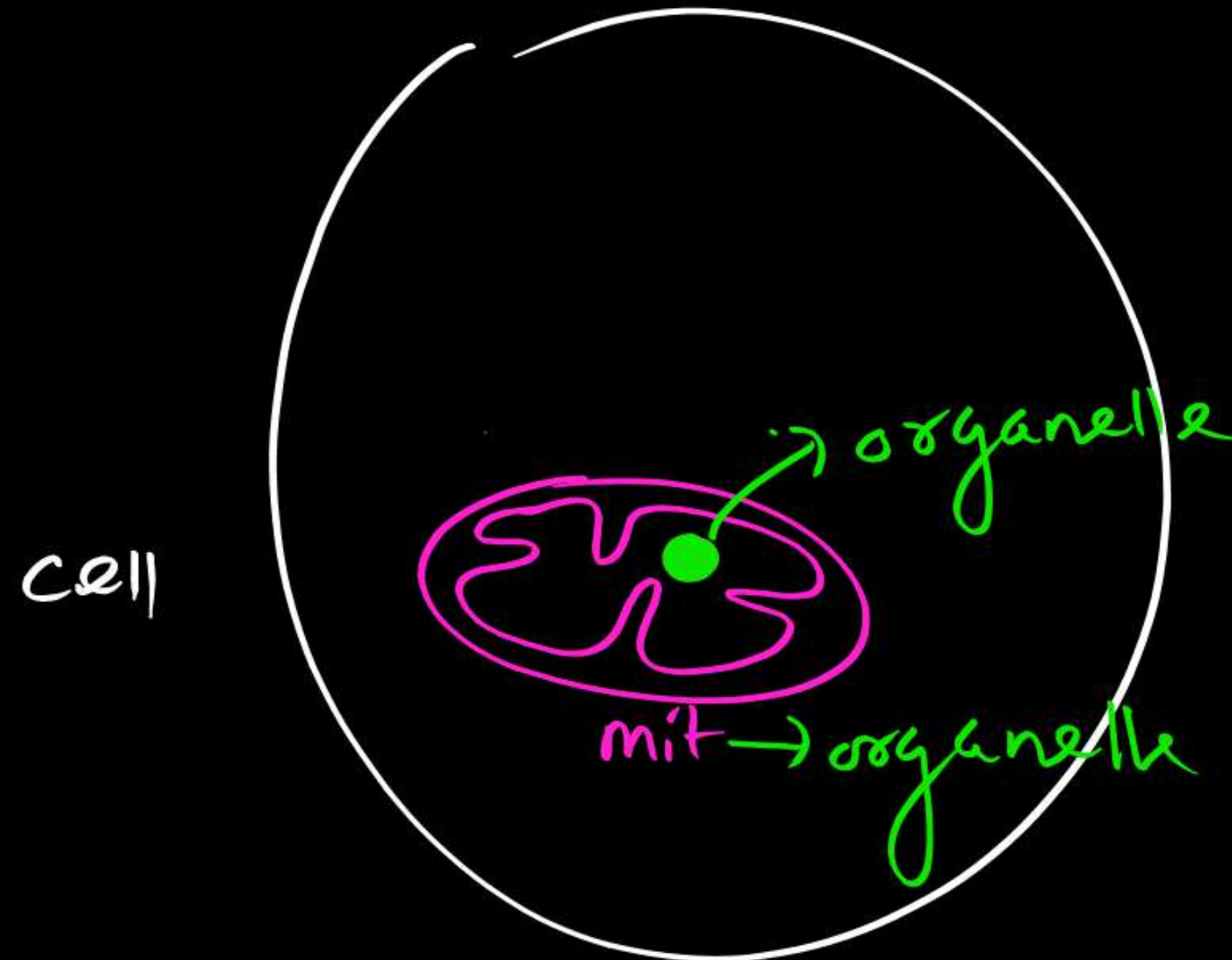


Q33. Unthickened areas of secondary wall is known as

- ☒ (A) Pits
- ☐ (B) Plasmodesmata
- ☐ (C) Desmotubule
- ☐ (D) Cementing layer

Q34. Which of the following organelle is considered as organelle within organelle

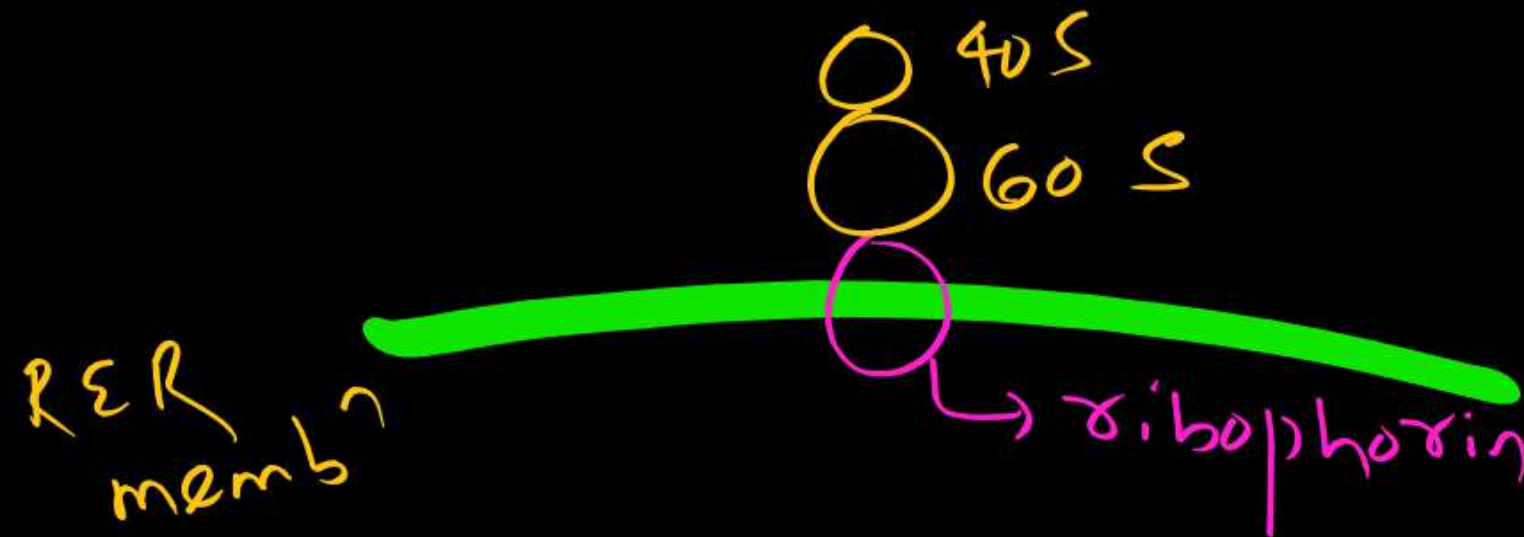
- (A) Centrosome (B) ☒ Ribosome
(C) Protein factory (D) More than one



Q35. Which of the following subunit of ribosome is attached to RER membrane?

(A) 60 S
(C) 50 S

(B) 40 S
(D) 30 S



Q36. Which of the following not a component of endomembrane system

- (A) Golgi complex ✓
- (B) Endoplasmic reticulum ✓
- (C) Lysosome ✓
- (D) Peroxisome ✗

endomembrane system →

- + ER
- + GR
- + lysosome
- + vacuole.

Q37. Mitochondrion is semi-autonomous due to presence of

- (A) Ribosome
- (B) Enzyme
- (C) Membrane
- (D) Ribosome, DNA, RNA



Q38. Which of the following is involved in detoxification of xenobiotics

unusual compounds

(A) ☒ SER

(C) Golgi complex

(B) RER

(D) Peroxisome

↓ by
Cyt P₄₅₀ →
↓ present in
SER



Q39. Which of the following organelle is the major site of packaging of material?

☒ (A) Golgi complex

(B) SER

(C) Peroxisome

(D) Mitochondrion

Q40. Which cytoskeleton is structural component of Spindle fibre

- ☒ (A) Microtubule
- ☐ (B) Microfilaments
- ☐ (C) Intermediate filament
- ☐ (D) All of the above

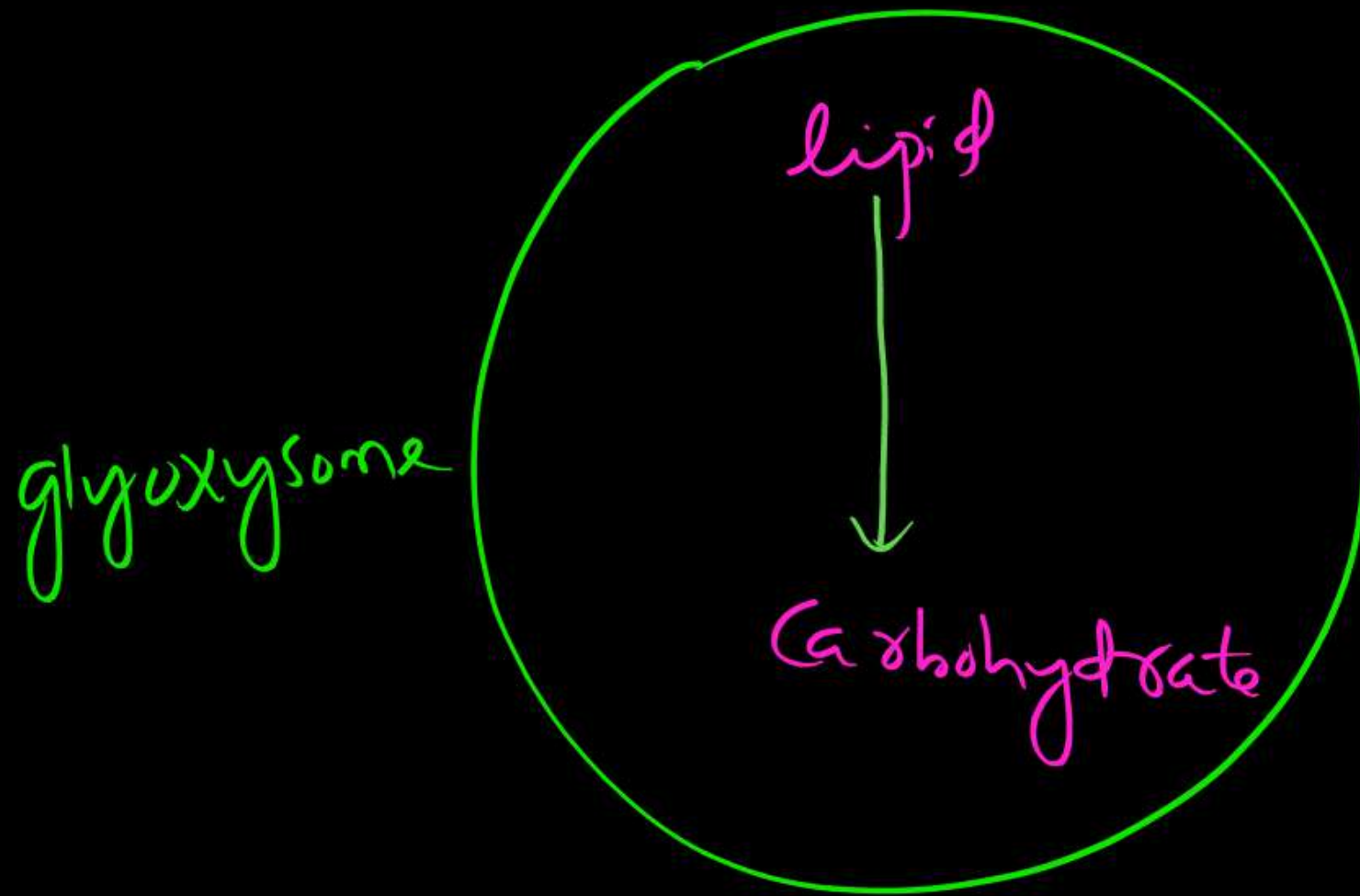
Q41. Which of the following organelle is associated with lipid synthesis and storage

- | | |
|--|-------------------|
| (A) <input checked="" type="checkbox"/> Spherosome | (B) Glyoxysome |
| (C) Peroxisome | (D) Mitochondrion |

lipid $\left\{ \begin{array}{l} \text{Synthesis} \rightarrow \text{SER, spherosome} \\ \text{Storage} \rightarrow \text{spherosome} \end{array} \right.$

Q42. Animal cells can't convert lipid into carbohydrate due to absence of

- | | | | |
|--------------------------------------|------------|-----|------------|
| <input checked="" type="radio"/> (A) | Glyoxysome | (B) | Peroxisome |
| (C) | Lysosome | (D) | Spherosome |



Q43. The DNA present in mitochondria is

(A) Double stranded ①

(B) Linear X

(C) Circular ①

(D) ✓ More than one

↳ DNA

↓

• ds

• circular

naked

rich

Q44. Tonoplast is

- (A) Semipermeable ✗
- (B) Membrane of vacuole ✓
- (C) Performs diffusion of ions across it ✗
- (D) Half unit membrane ✗

→ pumping / active transport

Tonoplast → membrane of
vacuole
→ selective permeable

Q45. Where is the most abundant protein in earth present?

- (A) Mitochondrial matrix
- (B) Stroma of chloroplast
- (C) Thylakoid membrane
- (D) Inner mitochondrial membrane

→ RUBISCO

↓ found in
chloroplast
↓ found in
Stroma

Thank You ਕਰਦੀ 😊

