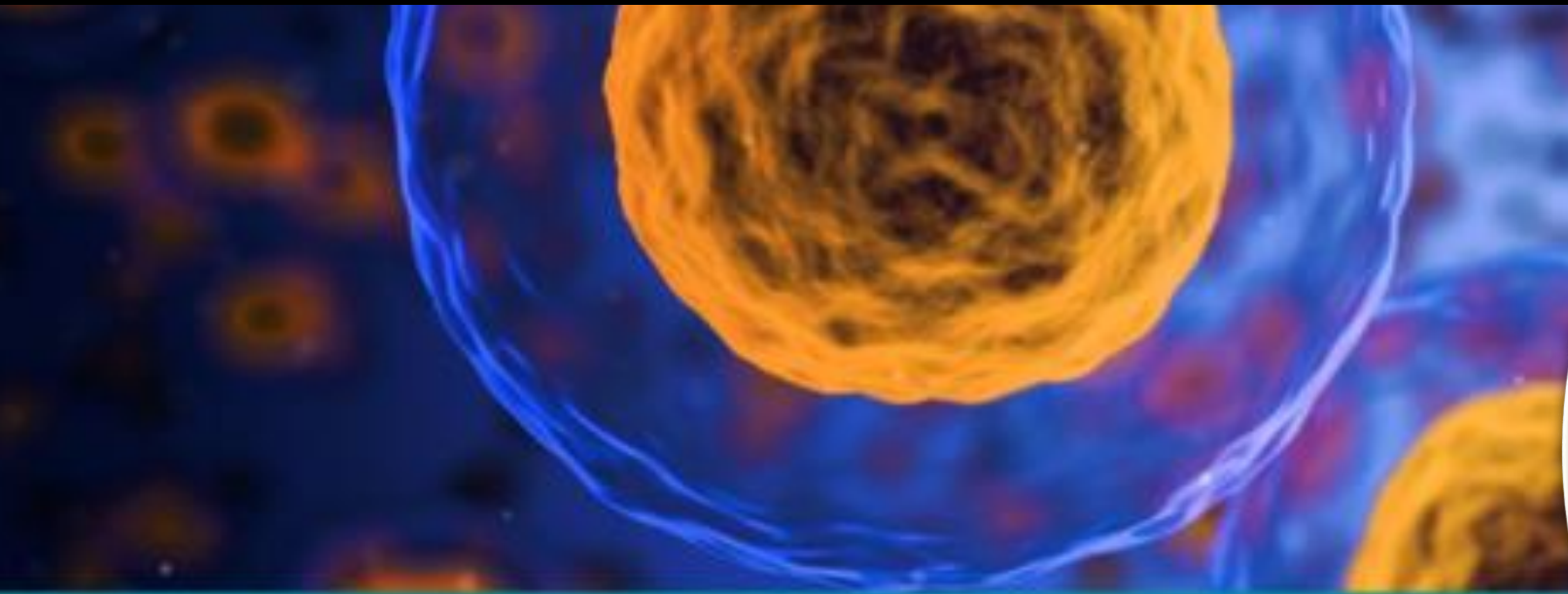




ARJUNA NEET BATCH



CELL THE UNIT OF LIFE

DPP-4

By : Biswajit Sir



Q1. When was the most accepted model for plasmamembrane organization given?

(A) 1962

(C) 1984

☒ (B) 1972

(D) 1964

→ fluid mosaic model
↳ Singer, Nicolson
↳ 1972.





Q2. Who proposed fluid mosaic model?

- (A) Danielli and Davson → *Trilaminar / Sandwich model*
- (B) Robertson → *unit membrane concept*
- ☒ (C) Singer and Nicolson
- (D) Overton → *lipid model.*





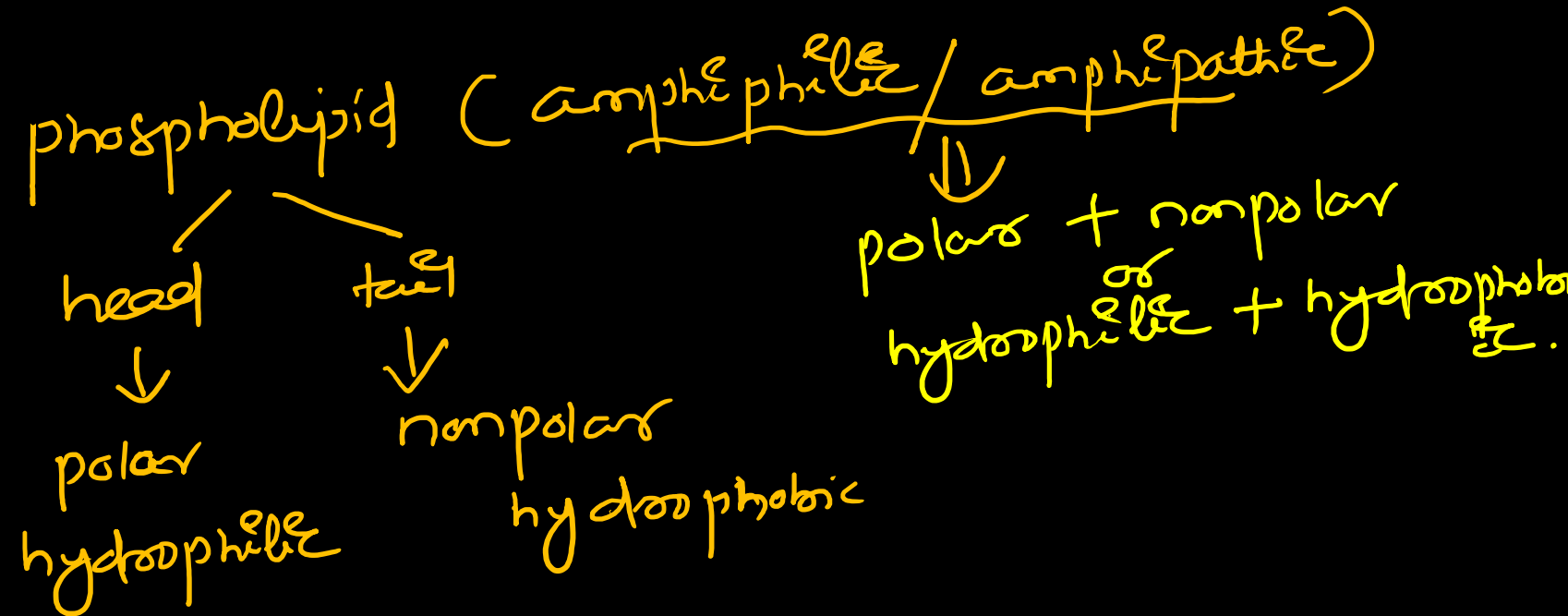
Q3. Phospholipid of plasmamembrane is

☒ (A) Amphiphilic

(B) Polar

(C) Nonpolar

(D) Hydrophobic





Q4. Which part of phospholipid is protected from aqueous environment? → hydrophobic part

- (A) Head → hydrophilic
- ☒ (B) Tail → hydrophobic
- (C) Both head and tail
- (D) Phospholipid is not protected from aqueous environment





Q5. Tail of phospholipid is made of

- (A) Fatty acids ✓
- (B) Saturated hydrocarbon ✓
- (C) Unsaturated hydrocarbon
- (D) More than one is true ✓





Q6. Which model for the first time stated that in plasmamembrane proteins are also present in addition to lipid?

- (A) Robertson unit membrane concept
- ☒ (B) Danielli and Davson model
- (C) Fluid mosaic model
- (D) Overton model

- Overton model \rightarrow PM \rightarrow lipid \rightarrow monolayer
- Hexter, Grendel \rightarrow PM \rightarrow lipid \rightarrow bilayer
- Danielli, Davson \rightarrow PM \rightarrow lipid + protein
 \hookrightarrow bilayer
- Robertson \rightarrow PM \rightarrow lipid + protein + carbohydrate
 \hookrightarrow bilayer
- Singer, Nicolson \rightarrow PM \rightarrow lipid + protein + carb.
 \hookrightarrow bilayer





Q7. Sugars in plasmamembrane can be

(A) Branched ✓

(B) Unbranched ✓

☒ (C) Both

(D) Sugars are ~~absent~~ in plasmamembrane



Q8. Sugars in plasmamembrane are associated with

- (A) Lipid ✓
- (B) Protein ✓
- (C) Nucleic acid ✗
- (D) ~~More than one is true~~

PM $\begin{cases} \text{lipid} + \text{sugar} \rightarrow \text{glycolipid} \\ \text{protein} + \text{sugar} \rightarrow \text{glycoprotein} \end{cases}$

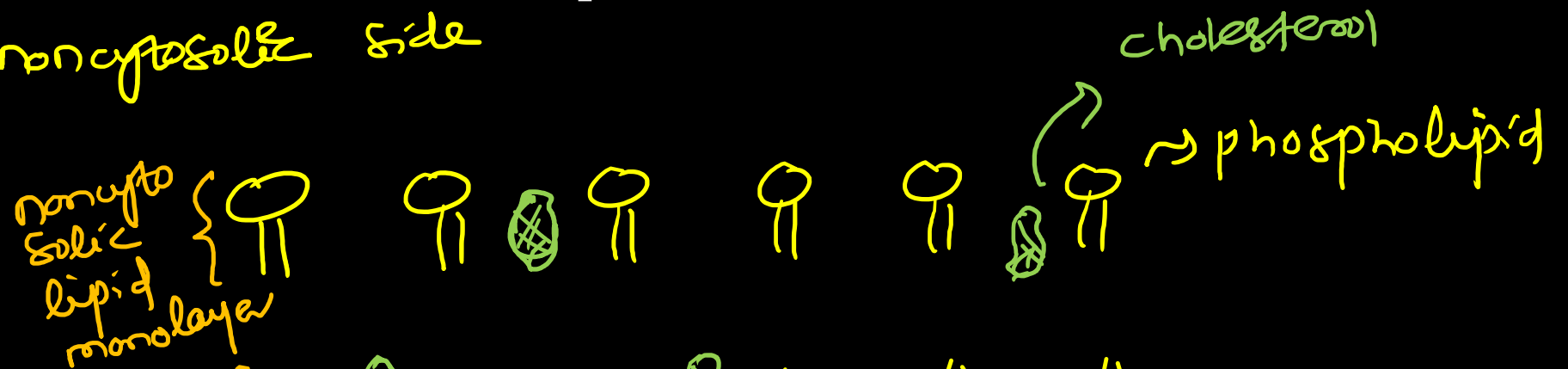




Q9. Cholesterol is present in which layer of lipid in plasmamembrane?

- (A) Cytosolic monolayer
- (B) Noncytosolic monolayer
- ✓ (C) Both A and B
- (D) Cholesterol is absent in plasmamembrane

noncytosolic side



cytosolic side



Q10. Which component of plasmamembrane helps in maintenance of its fluidity?

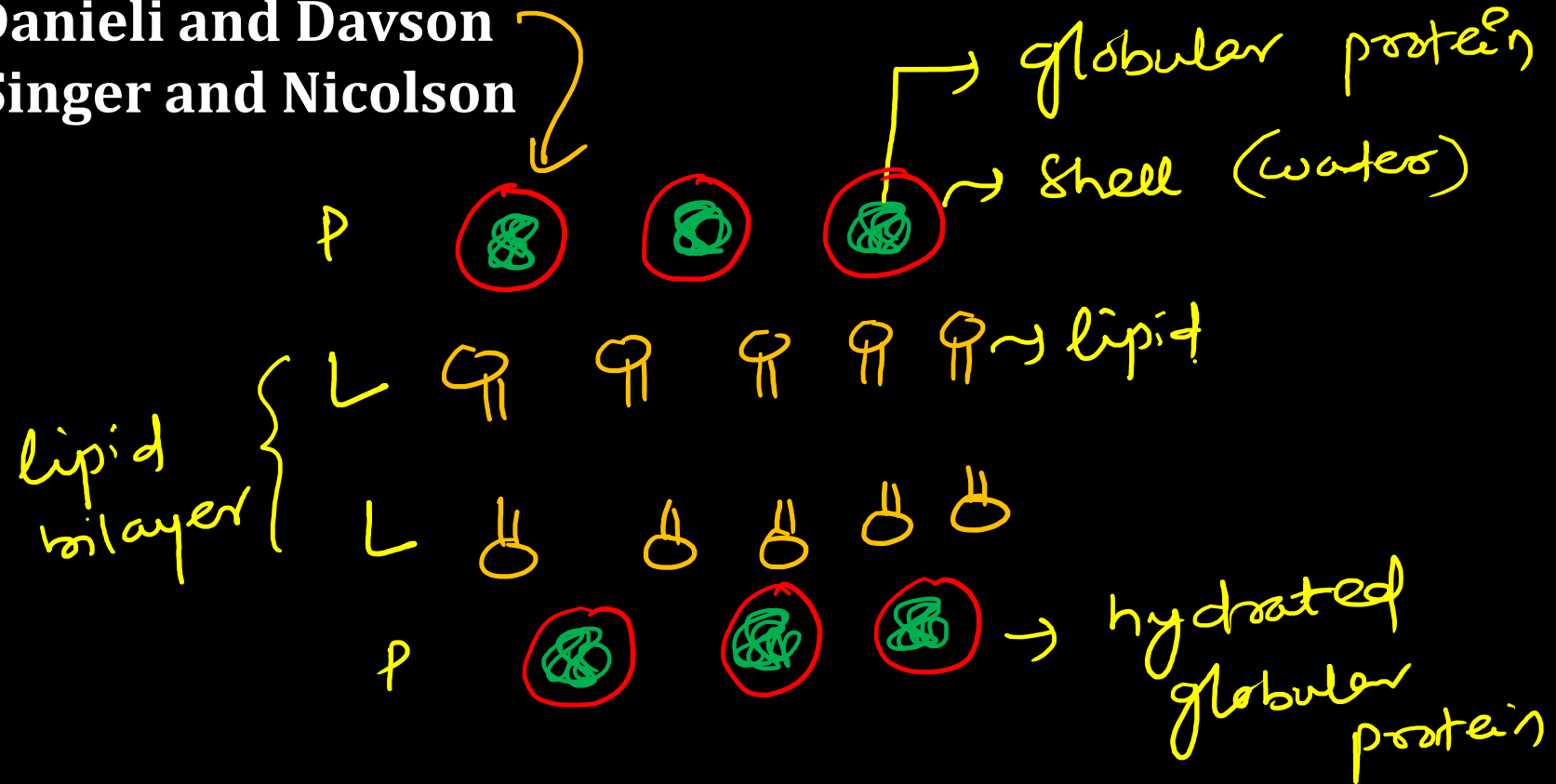
☒ (A) Cholesterol
(C) Glycolipid

(B) Phospholipid
(D) None



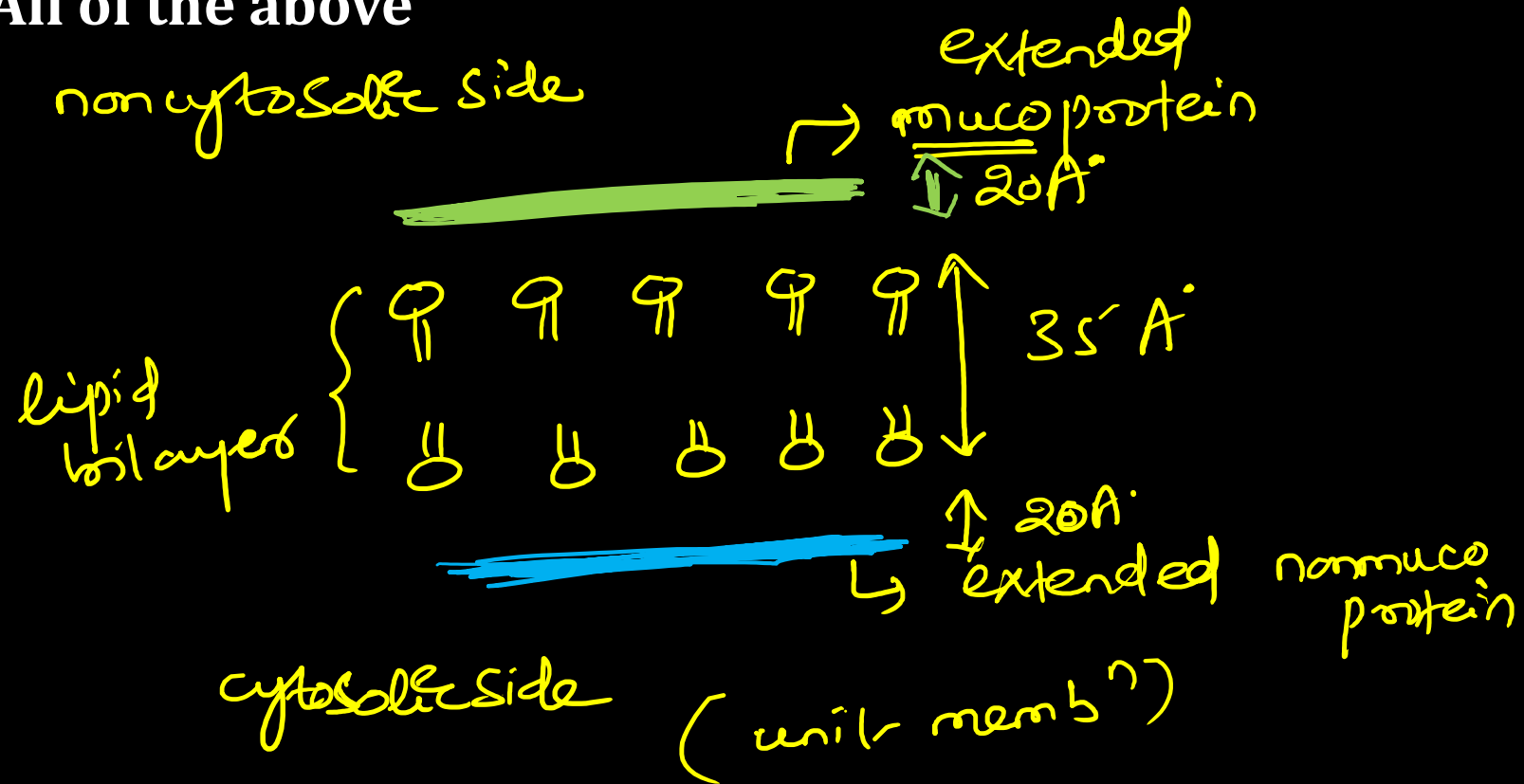
Q11. Who gave first sandwich model of plasmamembrane?

- (A) Robertson
- (B) Overton
- ☒ (C) Danielli and Davson
- (D) Singer and Nicolson



Q12. Which of the following is incorrect with respect to unit membrane as per Robertson?

- (A) Lipid bilayer is sandwiched between protein layers (T)
- (B) Lipid bilayer is surrounded by ~~Globular~~ proteins (F)
- (C) Average thickness of unit membrane is about 75 Å (T)
- (D) All of the above





Q13. Which part of plasmamembrane shows both lateral and flip flop movement?

(A) Lipid

(C) Carbohydrate α

(B) Protein α

(D) All of the above

PM lipid \rightarrow lateral + flip-flop

PM protein \rightarrow lateral



Q14. Quasifluid nature of Plasmamembrane is essential for functions like

- (A) Cell division ✓**
- (B) Cell growth ✓**
- (C) Endocytosis ✓**
- (D) All of the above**





Q15. Transmembrane proteins are

(A) ~~Peripheral~~ proteins

(B) Integral proteins ✓

(C) Difficult to be extracted from lipid bilayer ✓

~~(D) Both B and C~~





Thank You बच्चों

