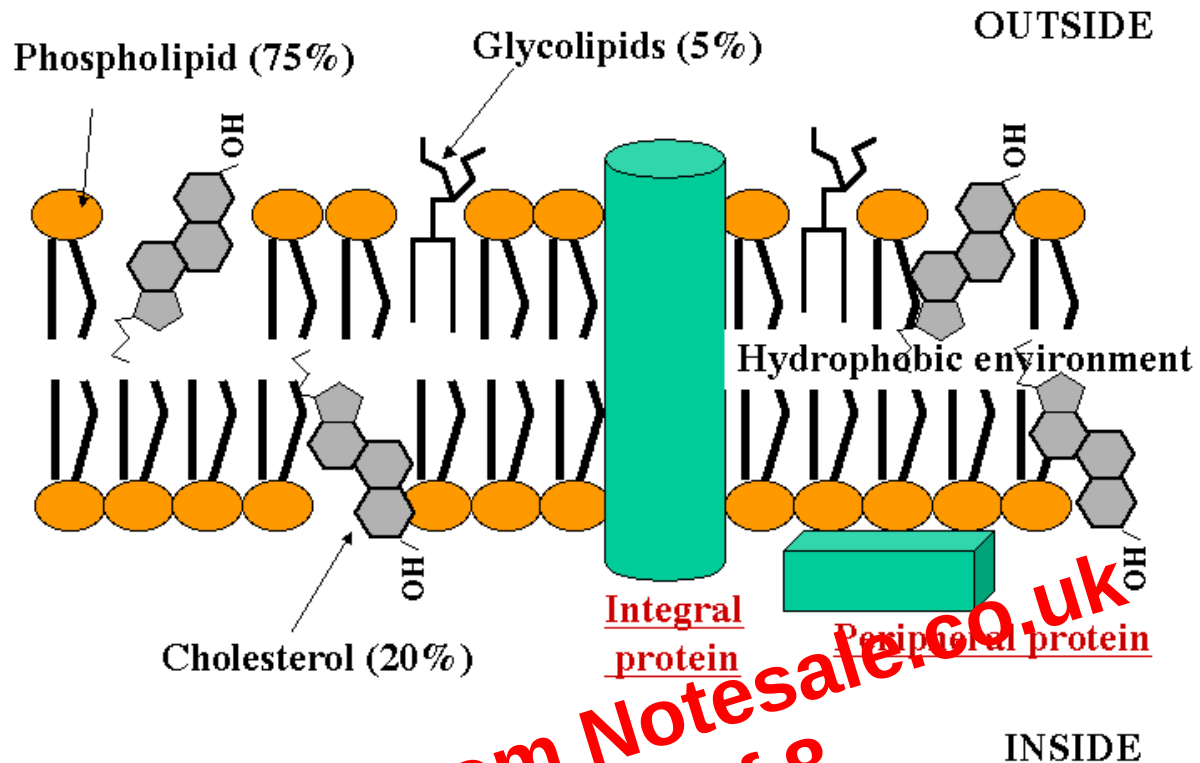


Cell Biology Revision:

The nucleus and cytoplasm:

The outside boundary of the mammalian cell is its membrane
Organelles are defined by membranes.



The nucleus:

- Most prominent cellular component
- Administrative centre of the cell
- 5-10% of the cell volume
- Contains DNA (chromatin – DNA + protein)
- Two concentric membranes forming the nuclear envelope.

Functions of the nucleus:

- Safe storage of DNA
 - Very long polymers encoding the genetic information for the organism
- Site of DNA replication (DNA→RNA)
 - Used in cell division
- Site of transcription (DNA→RNA)
 - Used to make mRNA (an intermediate in protein synthesis) and other RNA molecules

Enclosed by the nuclear envelope (double membrane)
Outer nuclear membrane is continuous with the ER.

The nuclear envelope contains transport channels –
nuclear pores – for direct communication between the

