4 Cell membranes – Part 1 — Answers

Answers

Work through these after trying the questions yourself.

4.1 The fluid mosaic model.
4.2 (a) the phospholipids slide past each other, so the membrane can move/bend \ (b) proteins are scattered through the bilayer like tiles in a mosaic.
4.3 (a) forms a water-filled pore so ions can pass through \ (b) controls the fluidity of the membrane and adds strength.
4.4 In the middle of the bilayer, away from the water, because the tails are hydrophobic (water-fearing).
4.5 B → A → C.
4.6 Only the target cells have the receptor with the matching shape, so only they can bind the hormone and respond.

4.7 Oxygen is small and non-polar, so it dissolves easily through the hydrophobic tails in the middle of the bilayer. Glucose is large and polar, so it cannot pass through that hydrophobic core and must instead cross through a (channel or carrier) protein.