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# BIOLOGY

## FOUNDATIONS IN BIOLOGY

Level & Board	OCR (A-LEVEL)
TOPIC:	BIOLOGICAL MOLECULES - LIPIDS
PAPER TYPE:	SOLUTION - 2
TOTAL QUESTIONS	08
TOTAL MARKS	/19

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## **Biological Molecules: Lipids - 2**

1.

(a) Because their fatty acid tails are poorly soluble in water, phospholipids spontaneously form bilayers in aqueous solutions, with the hydrophobic tails buried in the interior of the membrane and the polar head groups exposed on both sides, in contact with water.

**OR**

Fatty acids are hydrophobic

Phospholipid bilayer forms with fatty acids pointing inwards

2.

(a)

$$21/2\pi = 3.344$$

140.5

(b) Lipid is less dense than protein

**OR**

Lipids can increase the buoyancy because they are less dense than proteins

3.

(a)

Storage

Carbon

Hydrogen

Insoluble

Stability

Bile

(b)

Uses / AW, water

To break 3 ester bonds

Lysis means splitting and fatty acids are split / AW from glycerol

**4.**

**(a)**

Phosphate (on head), is hydrophilic / bonds with water molecules

Two fatty acid tails are hydrophobic

Heads orientate towards water / tails orientate towards other fatty acids / tails orientate away from water so a bilayer form

**5.**

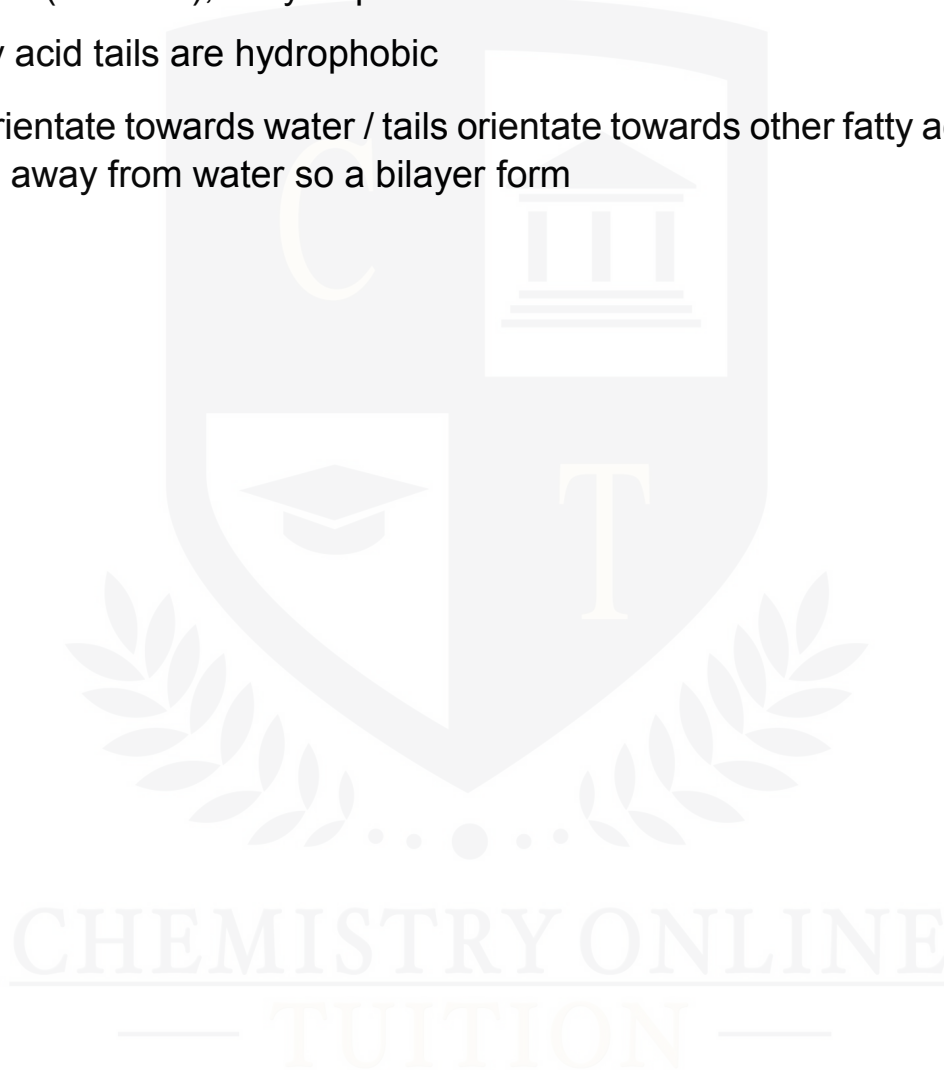
**(a) A**

**6.**

**(a) C**

**7.**

**(a) D**



I am Sorry !!!!!



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- Founder & CEO of Chemistry Online Tuition Ltd.
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