



0 7 . 2 The part of the phospholipid in **Figure 8** labelled **A** is formed from a particular molecule. Name this molecule. [1 mark]

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0 7 . 3 Name the type of bond between **A** and fatty acid **X**. [1 mark]

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0 7 . 4 Which of the fatty acids, **X** or **Y**, in **Figure 8** is unsaturated? Explain your answer. [1 mark]

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**Question 7 continues on the next page**

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Scientists investigated the percentages of different types of lipid in plasma membranes from different types of cell. **Table 2** shows some of their results.

**Table 2**

Type of lipid	Percentage of lipid in plasma membrane by mass		
	Cell lining ileum of mammal	Red blood cell of mammal	The bacterium <i>Escherichia coli</i>
Cholesterol	17	23	0
Glycolipid	7	3	0
Phospholipid	54	60	70
Others	22	14	30

**0 7 . 5** The scientists expressed their results as **Percentage of lipid in plasma membrane by mass**. Explain how they would find these values.

**[2 marks]**

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Cholesterol increases the stability of plasma membranes. Cholesterol does this by making membranes less flexible.

**0 7 . 6** Suggest **one** advantage of the different percentage of cholesterol in red blood cells compared with cells lining the ileum.

**[1 mark]**

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0 7 . 7 *E. coli* has no cholesterol in its cell-surface membrane. Despite this, the cell maintains a constant shape. Explain why.

[2 marks]

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