



QUESTION WORKBOOK

Lipids: triglycerides, phospholipids and the ester bond

Biological molecules, water and inorganic ions · Unit B02

AQA 3.1.3 · OCR A 2.1.2 · CAIE 2.2

9 questions · 25 marks

NAVY SCREEN EDITION

SECTION A · Short, 1 to 2 marks

A1 Name the two kinds of molecule from which a triglyceride is formed, and name the bond that joins them. [2]

A2 State one structural difference between a phospholipid and a triglyceride, and state one property of a phospholipid that results from it. [2]

A3 A cell hydrolyses 180 molecules of triglyceride completely. Calculate the number of molecules of water used. [2]

SECTION B · Standard, 3 to 5 marks

B1 Describe how you would test a sample of food for the presence of a lipid, including a suitable control. [4]

B2 Describe how a triglyceride is formed from its components. [3]

B3 Sunflower oil is liquid at room temperature and beef fat is solid at the same temperature. Explain this difference in terms of the fatty acids each contains. [3]

B4 Before migrating, a bird lays down a store of triglyceride rather than an equivalent store of glycogen. Explain the advantage of storing triglyceride. [3]

B5 Compare the behaviour of a triglyceride and a phospholipid when each is added to water. [3]

B6 A membrane protein is removed from a cell surface membrane and placed in pure water, where it does not dissolve. Suggest what this indicates about the amino acids on the outside of that protein, and suggest where in the membrane the protein sits. [3]
