

2.2 Carbohydrates & Lipids

Question Paper

Course	CIE A Level Biology (9700) exams from 2022
Section	2. Biological Molecules
Topic	2.2 Carbohydrates & Lipids
Difficulty	Easy

Time allowed: 10

Score: /10

Percentage: /100

Question 1

The structure of cellulose is held together by which type of bond?

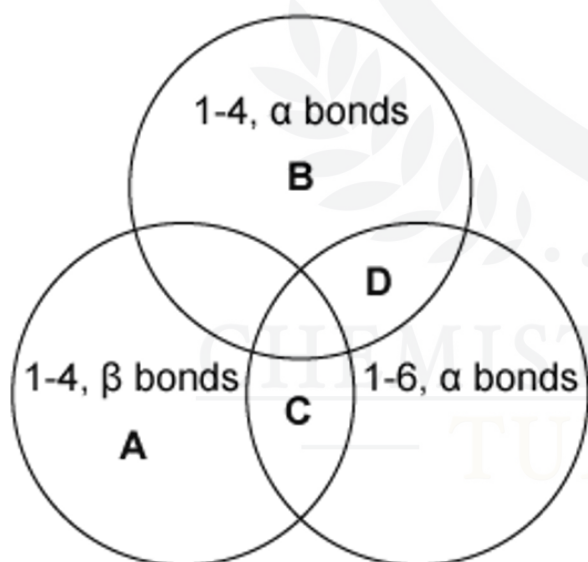
- 1 ionic bonds
- 2 glycosidic bonds
- 3 hydrogen bonds

A 1, 2 and 3 **B** 1 and 2 only **C** 2 and 3 only **D** 1 and 3 only

[1 mark]

Question 2

Which bonds are found in glycogen?



[1 mark]

Question 3

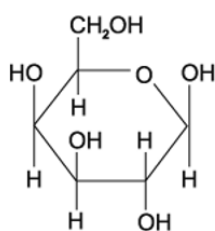
Where are the double bonds located in unsaturated lipid molecules?

- A** within fatty acids chains and within glycerol molecules
- B** between glycerol molecules and fatty acids chains
- C** within glycerol molecules only
- D** within fatty acid chains only

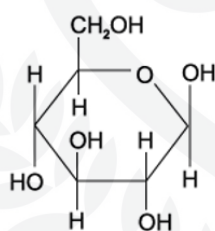
[1 mark]

Question 4

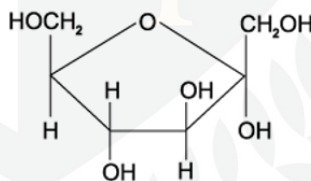
Which of the molecules below is β -glucose?



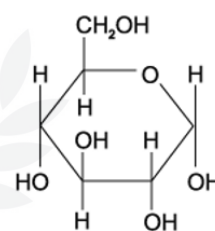
A



B



C

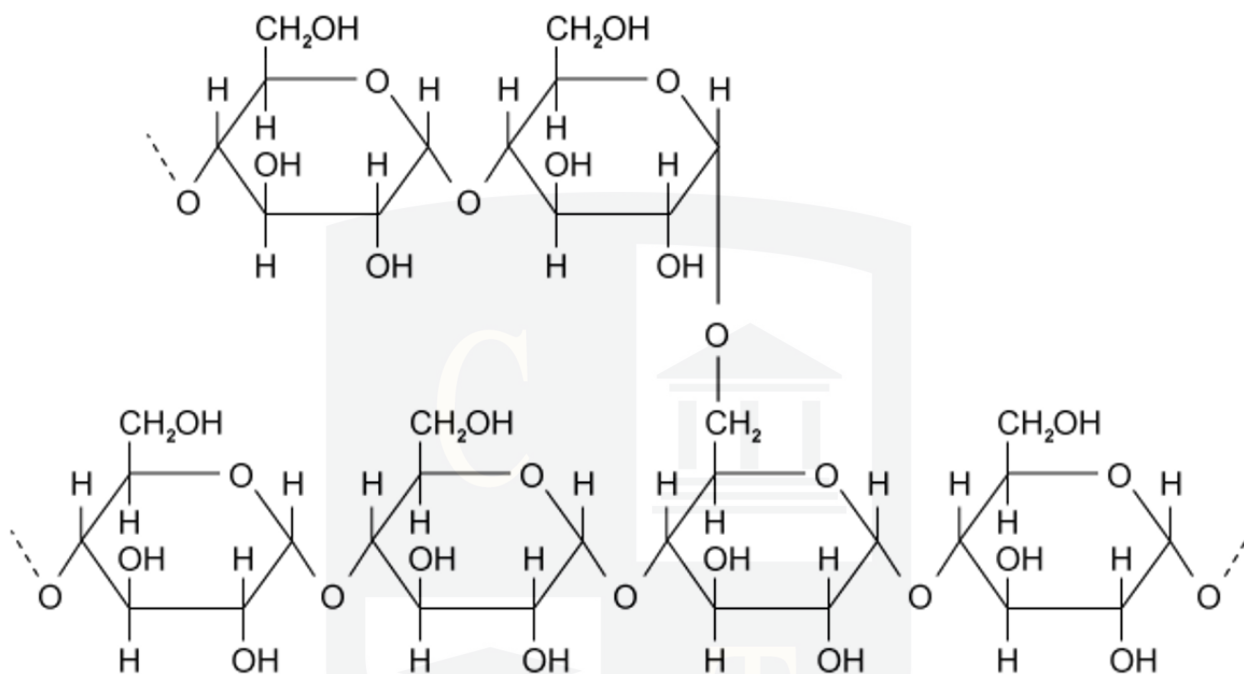


D

[1 mark]

Question 5

A biological molecule is shown in the image below.



Which of the following could the molecule above be?

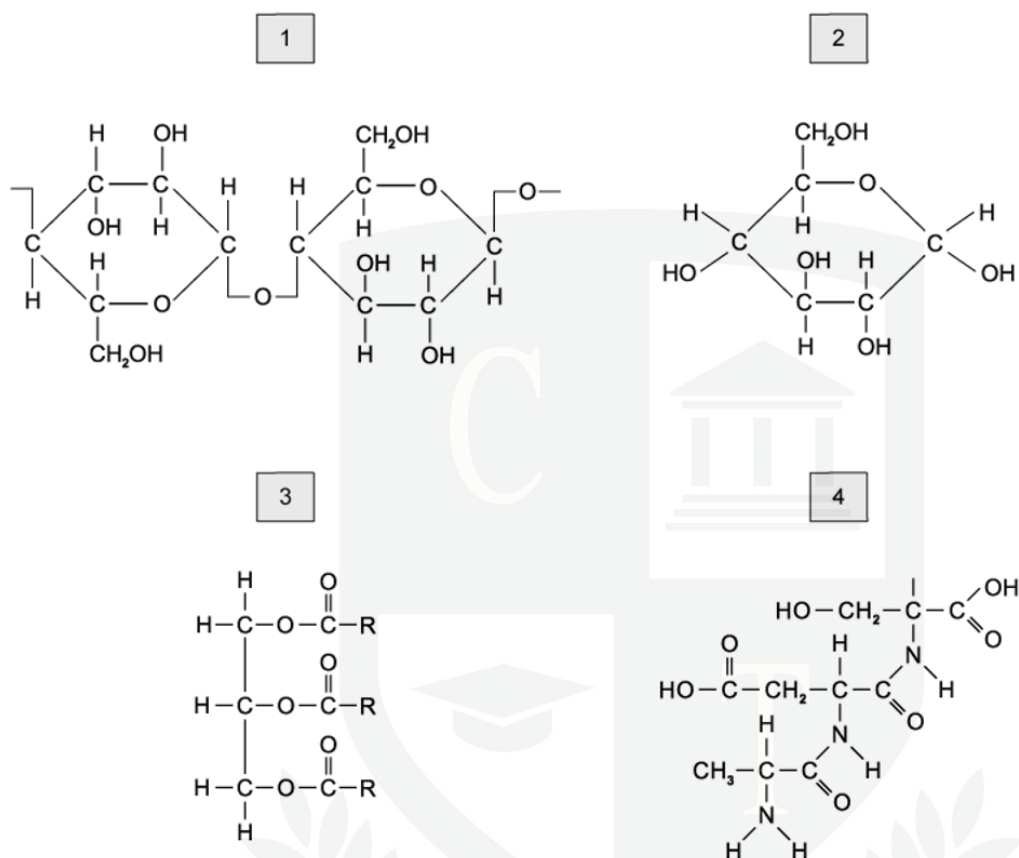
- 1 amylose
- 2 amylopectin
- 3 cellulose
- 4 glycogen

A 1, 2 and 4 **B** 1 and 2 only **C** 1 and 3 only **D** 2 and 4 only

[1 mark]

Question 6

The diagrams below show a number of biological molecules.



Which of the molecules above contains a glycosidic bond?

- A** 1 and 3 only **B** 1, 2 and 4 **C** 1 and 2 only **D** 1 only

[1 mark]

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Question 7

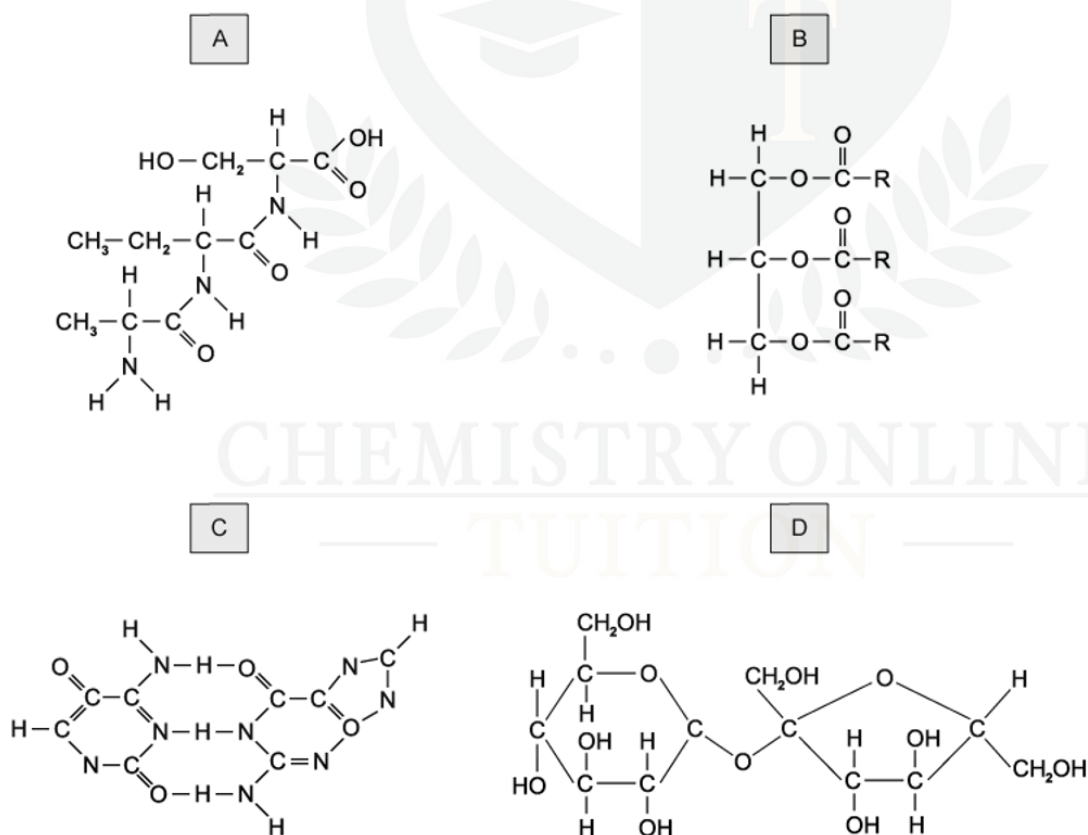
Which of the following features distinguishes starch from glycogen?

- A Starch contains 1,6-glycosidic bonds.
- B Starch only contains α -glucose.
- C Starch is a polysaccharide.
- D Starch has an unbranched component.

[1 mark]

Question 8

Which molecule in the image below contains ester bonds?



[1 mark]

Question 9

Which of the following types of bond is responsible for joining smaller molecules together to form biological polymers?

- A covalent
- B hydrogen
- C hydrophobic interactions
- D ionic

[1 mark]

Question 10

Which of the following statements about triglycerides is incorrect?

- A They play a vital role in energy storage within an organism.
- B They have a lower ratio of oxygen to carbon compared with carbohydrates.
- C Only triglycerides with unsaturated fatty acid chains contain double bonds.
- D They are made up of three fatty acids combined with glycerol.

[1 mark]

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