



**EXAM PAPERS PRACTICE**

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## **8.1 Metabolism**

Easy



# **BIOLOGY**

## **IB HL**

# 8.1 Metabolism

## Question Paper

Course	DP IB Biology
Section	8. Metabolism, Cell Respiration & Photosynthesis (HL Only)
Topic	8.1 Metabolism
Difficulty	Easy

Time allowed: 10

Score: /5

Percentage: /100

### Question 1

Which of the following statements is **not** true about enzymes in metabolic pathways?

- A. All metabolic reactions are catalysed by an enzyme.
- B. All proteins are enzymes.
- C. All enzymes are proteins.
- D. All enzymes reduce activation energy of metabolic reactions in living organisms.

[1 mark]

### Question 2

The following statements are about enzymes:

1. The speed that they function at can be reduced by competitive inhibitors.
2. Their primary structure is translated from mRNA.
3. They can be embedded in the plasma membrane of a cell.
4. They all have quaternary structures.

Which of these statements are correct for all enzymes?

- A. 1 and 3 only
- B. 1, 2 and 3 only
- C. 2, 3 and 4 only
- D. All of them are correct

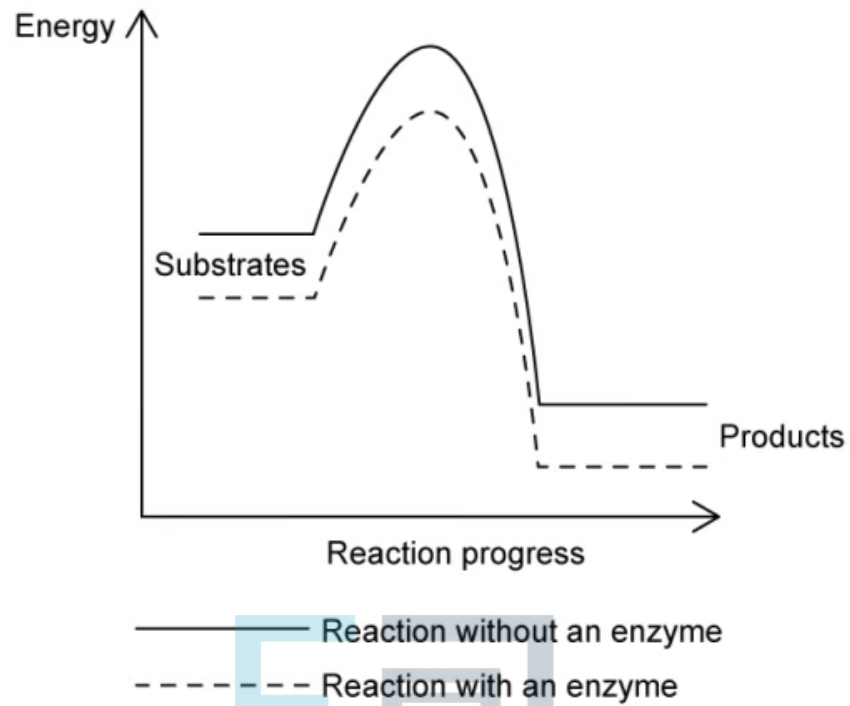
[1 mark]



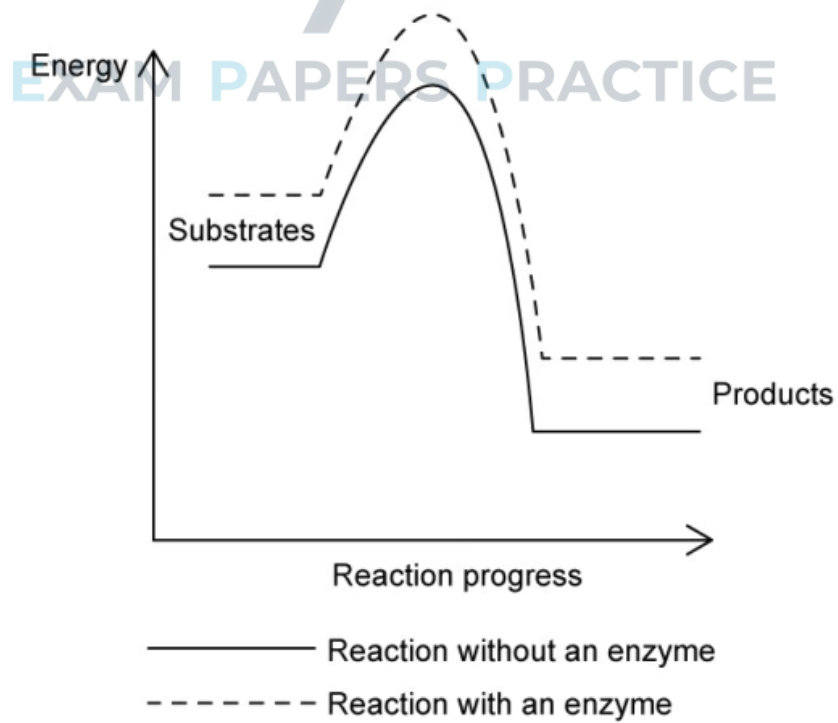
### Question 3

Which of the following sketch graphs best shows the effect of an enzyme on a biochemical reaction profile?

A.

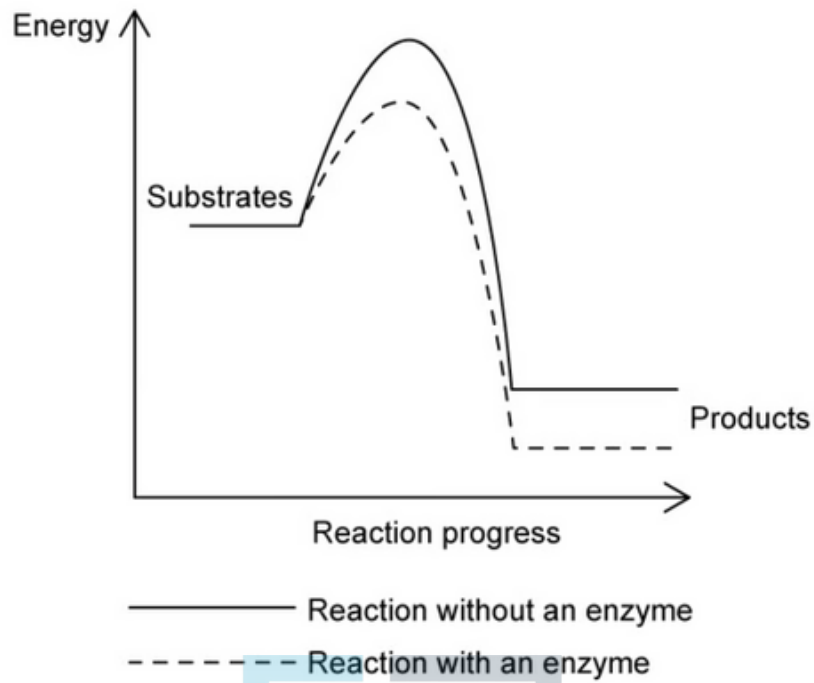


B.

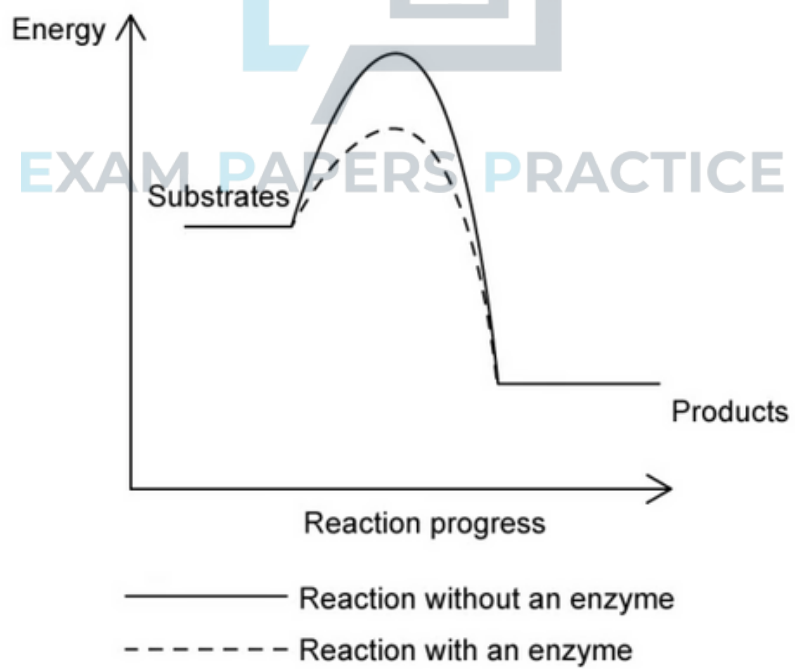




C



D.



[1 mark]

#### Question 4

Which **one** of the following phenomena is **not** a consequence of end-product inhibition in biochemical pathways?

- A. Regulation of the pathway.
- B. Prevention of a build-up of biochemical intermediate compounds.
- C. Shutdown of the pathway once product levels reach zero.
- D. Allosteric changes to an enzyme involved in the pathway.

[1 mark]

#### Question 5

Enzymes alter the activation energy required for a biochemical reaction to take place. Which of the following gives the best definition of activation energy?

- A. The energy input required to break bonds in order for a reaction to take place.
- B. The energy is released as bonds breaks in a reaction.
- C. The energy required to allow substrates and enzymes to be closely aligned at the active site.
- D. The energy given off when an enzyme-substrate complex forms.

[1 mark]