

## 2024 Higher Chemistry Paper 1 - Q15

Section: Chemistry in Society

Topic: Controlling the Rate

Question summary (Q15):

Which of the following is not a correct statement about the effect of a catalyst?

Worked Solution:

- A catalyst speeds up a reaction by lowering the activation energy and providing an alternative reaction pathway.
- It does not increase the energy of molecules.
- Check each option:
  - A. "Increases the energy of molecules" → ☐ false (this is incorrect).
  - B. "Lowers the energy needed for successful collisions" → ☐ true.
  - C. "Provides an alternative pathway" → ☐ true.
  - D. "Increases the rate of reaction" → ☐ true.

Final Answer: A — increases the energy of molecules

Revision Tips:

- Catalysts lower activation energy; they don't add energy to particles.
- They are not used up in reactions and can be reused.
- Catalysts change the rate, not the position, of equilibrium.