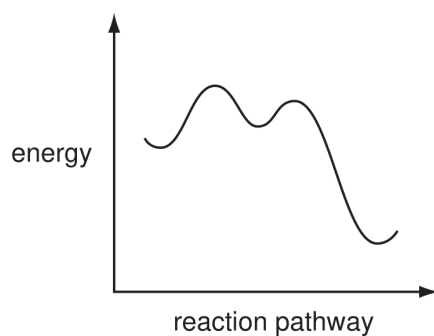


Unit 8: Reaction kinetics

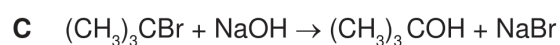
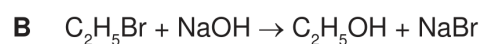
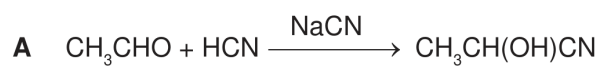
Subunit 8.1: Rate of reaction

Topical Question No: 1

29 A reaction pathway diagram is shown.



Which reaction does **not** have such a profile?



Topical Question No: 2

8 Why does the rate of a gaseous reaction increase when the pressure is increased at a constant temperature?

A More particles have energy that exceeds the activation energy.

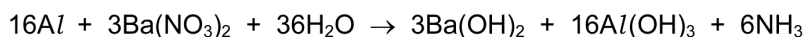
B The particles have more space in which to move.

C The particles move faster.

D There are more frequent collisions between particles.

Topical Question No: 3

- 8 When making sparkler fireworks, a mixture of barium nitrate powder with aluminium powder, water and glue is coated onto wires and allowed to dry. At this stage, the following exothermic reaction may occur.

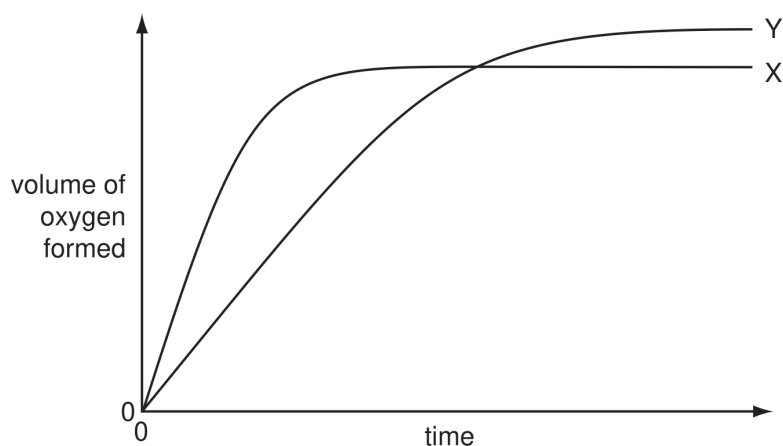


Which conditions would be best to reduce the rate of this reaction during the drying process, and would also keep the aluminium and barium nitrate unchanged?

	temperature / K	pH
A	298	7
B	298	14
C	398	7
D	398	14

Topical Question No: 4

- 5 In the diagram, curve X was obtained by observing the decomposition of 100 cm^3 of 1.0 mol dm^{-3} hydrogen peroxide, catalysed by manganese(IV) oxide.



Which alteration to the original experimental conditions would produce curve Y?

- A** adding more manganese(IV) oxide
- B** adding some 0.1 mol dm^{-3} hydrogen peroxide
- C** adding water
- D** raising the temperature

Answer Key

1. Error
2. Error
3. Error
4. Error