

- 17 Methanol, CH₃OH, can be made industrially by the reaction of carbon monoxide with hydrogen, as shown in **equilibrium 1**.



- (a) Predict the conditions of pressure and temperature that would give the maximum equilibrium yield of CH₃OH in **equilibrium 1**.

Explain your answer.

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..... [3]

- (b) A catalyst is used in the production of methanol in **equilibrium 1**.

State **two** ways that the use of catalysts helps chemical companies to make their processes more sustainable and less harmful to the environment.

1

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2

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[2]

