2 | Elements, Compounds & Mixtures

1) Define an element. (1)

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2) Explain the simple differences between $CaCO_3$ and a bowl of iron fillings with sand.

(3)

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3)

a) Suppose Sample H is denoted as a pure compound. Which of the following can be the best temperature as its melting point and boiling point.

(1)

A) M.p. = 841°C | B.p. = 999°C – 1007°C
B) M.p. = 92°C – 98°C | B.p. = 148°C
C) M.p. = 129°C | B.p. = 140°C
D) M.p. = 12°C – 18°C | B.p. = 48°C - 57°C

b) Define an impurity. (1)

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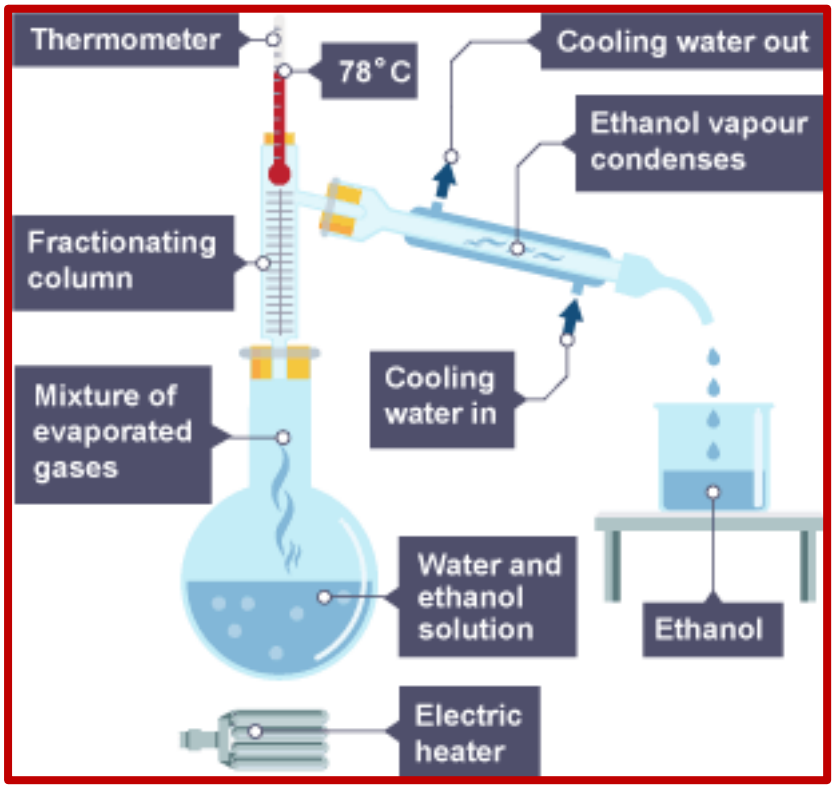
4) The following apparatus is set up in this direction.

Note: Ethanol's boiling point – 78*C
Water's boiling point – 100*C



a) Explain why we boil off the ethanol first, then the water?

(2)

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b) It is noted that the salt solution is in the flask. Describe an experiment you would use to get salt crystals.

(3)

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5) Describe on how we can test for the separation of dyes (5)

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6) Which of the following best describes a mixture? (1)

A) Chemically combined elements
B) Not chemically combined
C) Homogenous
D) Heterogenous

7) Describe the process of crystallization (3)

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Total – 20 marks