

NAME:

SCHOOL:.....

DATE:

SEPARATION OF MIXTURES

INSTRUCTIONS TO CANDIDATES

Answer ALL questions in this paper in the spaces provided.

1. You are provided with water and the usual laboratory apparatus. Describe how you would fully separate solid lead II carbonate from a mixture of lead II Carbonate, iron fillings and sodium carbonate. (3mks)

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2 a) Nitrogen, Oxygen and argon are obtained from liquid air by fractional distillation.
State the physical property that makes this possible. (1mk)

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b) Arrange the gases in (a) in order of how they distill, starting with the first. (1mk)

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c) Give one industrial use of nitrogen (1mk)

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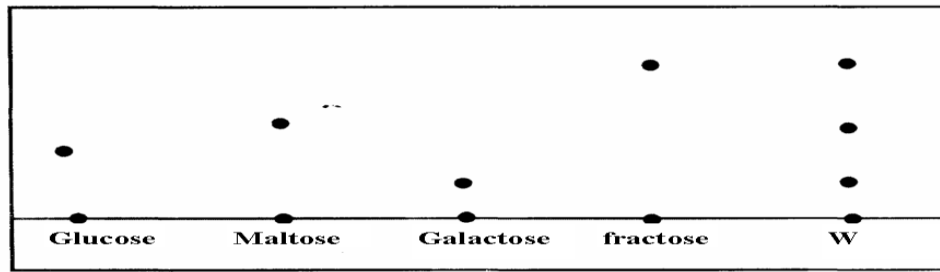
3. Consider the solubility of substance X, Y & Z in different solvents in the table below.

	Water	Ethanol	Ester
X	Soluble	Insoluble	Insoluble
Y	Soluble	Soluble	Insoluble
Z	Insoluble	Soluble	Very soluble

Describe how you would obtain a sample of Y from the mixture. (3mks)

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4. A sugar called raffinose was treated with dilute hydrochloric acid. The resulting solution W was analysed to find out the sugar present using chromatography.



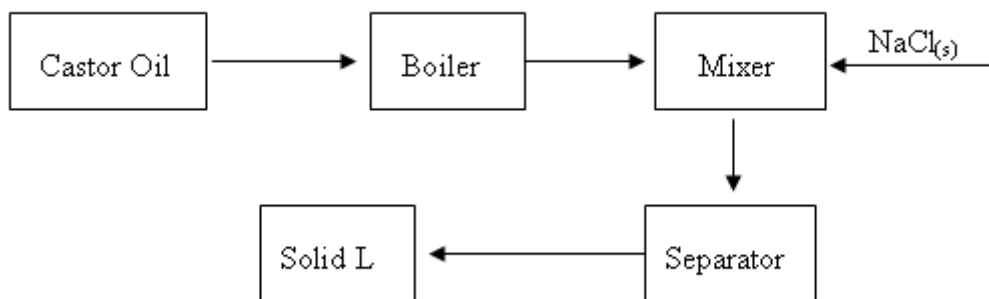
- a) Identify the sugars present in W (1½mks)

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- b) Which of the sugar has highest density? Explain your reasoning (½mks)

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5. The flow diagram below was used by a student to obtain solid L. Study it and answer questions that follow.



- i) Identify:
 I Solid L (1mk)

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II The type of reaction taking place in the boiler (1mk)

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ii) What is the role of sodium chloride in the mixer? (1mk)

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6. Name the method of separation that can most suitably be used to separate the following mixtures.

(a) Gasoline from petroleum (1mk)

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(b) Benzoic acid and potassium carbonate (1mk)

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(c) Oil from cashew nuts (1mk)

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