

**Student Name:** \_\_\_\_\_**Class:** \_\_\_\_\_**Student ID:** \_\_\_\_\_**Date:** {{DATE}}

## Assessment Details

<b>Duration:</b> 45 minutes	<b>Total Marks:</b> 60
<b>Topics Covered:</b>	<ul style="list-style-type: none"><li>• Filtration</li><li>• Distillation</li><li>• Chromatography</li><li>• Centrifugation</li></ul>

## Instructions to Students:

1. Read all questions carefully before attempting.
2. Show all working out - marks are awarded for method.
3. Calculator use is permitted except where stated otherwise.
4. Write your answers in the spaces provided.
5. If you need more space, use the additional pages at the end.
6. Time management is crucial - allocate approximately 1 minute per mark.

**Question 1**

**[2 marks]**

What is the primary principle behind the separation method of filtration?

A) Difference in boiling points

B) Difference in particle size

C) Difference in density

D) Difference in color

**Question 2**

**[2 marks]**

Which of the following methods is used to separate a mixture of two liquids with different boiling points?

A) Filtration

B) Distillation

C) Chromatography

D) Centrifugation

**Question 3**

**[8 marks]**

Describe the process of distillation and explain how it is used to separate a mixture of two liquids.

**Question 4**

**[8 marks]**

What are the advantages and disadvantages of using chromatography to separate a mixture of substances?

**Simulation 1**

**[5 marks]**

Separating a Mixture of Sand and Water using Filtration and Decantation

a) What is the purpose of filtration in this simulation? [2 marks]

b) What are the advantages of using filtration to separate a mixture of sand and water? [3 marks]

**Simulation 2**

**[10 marks]**

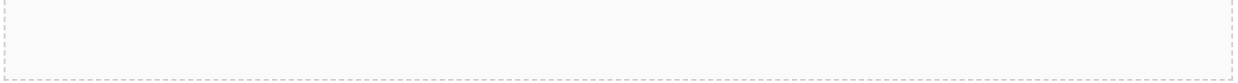
Purifying a Substance using Distillation

a) What is the purpose of distillation in this simulation? [2 marks]

b) What are the advantages of using distillation to purify a substance? [3 marks]

Page 0 | Separation of Mixtures Assessment

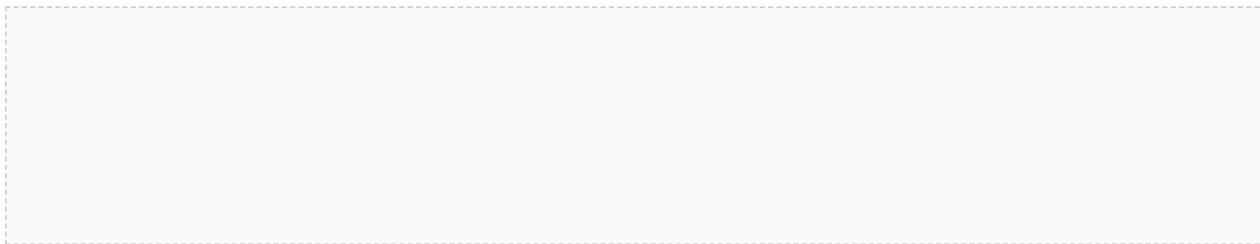
c) Describe the process of distillation and how it is used to separate a mixture of two liquids. [5 marks]



**Question 5**

**[10 marks]**

Label the different parts of a distillation apparatus and explain their functions.



**Question 6**

**[5 marks]**

Label the different stages of the filtration process and explain what happens at each stage.

