

SENIOR PREP
MAY EXAM PREPARATION

1.
 - a. Give an example of a fossil fuel

 - b. Give an example of an alternative fuel

 - c. Why is it important to find and use alternative fuels ?

2. Explain the following
 - a. A gas can be compressed but a liquid cannot

 - b. The smell from a piece of rotten fish quickly spreads throughout a room

3. Aluminium oxide can be made by burning aluminium in air.
 - a. What kind of substance is aluminium oxide

 - b. What element in the air does magnesium react with ?

4. Below shows a table for an experiment on the “stretchieness” of a metal.

Mass of weight (kg)	0	1	2	3	4	5	6
Length of aluminium rod (cm)	15	20	26	34	45	60	72

- a. draw a graph to show these results

- b. Draw a diagram to show how this experiment could have been carried out

5. Name a device in which the following energy changes occur

a. electrical to kinetic

b. electrical to sound

c. sound to electrical

6. a. What is meant by the period of a pendulum ?

b. Complete the table below which summarises the effect of certain variables on the period of a pendulum

Variable	Effect
	None
Length of string	
Height of swing	

7. a. When the temperature of a cooling liquid is recorded over time . A curve is obtained. What name do we give to this curve ?

b. Why is a curve always obtained when a substance cools down ?

c. What effect does the mass of the substance being cooled down have on the rate of cooling ?

8. Distillation can be used to separate two liquids from each other.
- What property does distillation depend upon to separate the two substances
 - draw a diagram to show how distillation could be used to separate two liquids. On your diagram indicate where any state changes occur.
9. What is meant by the following terms
- An atom
 - A molecule
 - For the following state whether they can be true or false
 - An element can be a molecule
 - An atom can be a molecule
 - A compound can be a molecule
 - A molecule can be an atom
10. Iron can be obtained from iron oxide by roasting the oxide with carbon monoxide. In this process carbon dioxide is also made
- Write a word equation for this reaction
 - Give a test for carbon dioxide gas
11. a. What is meant by the term energy ?
- Give two ways in which energy can be saved in the home

12. Margaret and Simon carried out an experiment to measure the densities of two different rocks. They knew to calculate the density they would have to divide the mass of the rock by its volume.

a. Design an experiment to show how this experiment might have been carried out

b. What could the units of density be