Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic: Energy (Standard Demand)

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Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

Q1.

A gas burner is used to heat some water in a pan.



Of the energy released by the burning gas by the time the water starts to boil:

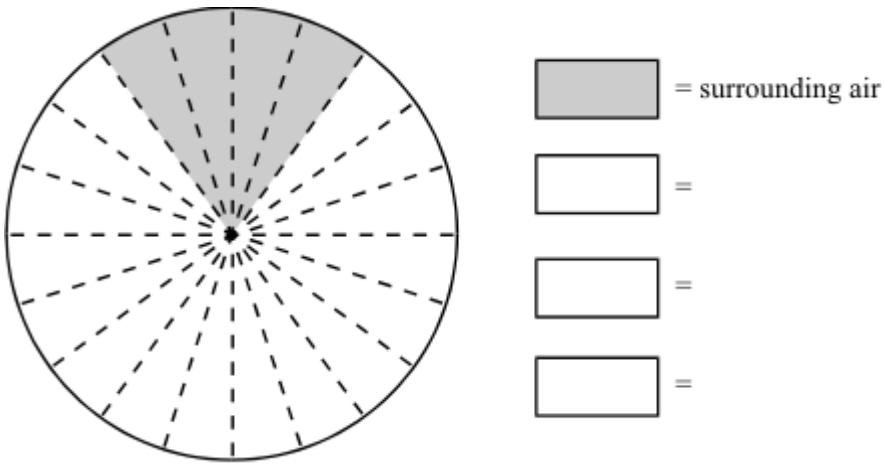
60% has been transferred to the **water**.

20% has been transferred to the **surrounding air**.

13% has been transferred to the **pan**.

7% has been transferred to the **gas burner** itself.

(a) Use the above information to complete the pie-chart.



(3)

(b) Some of the energy released by the burning gas is wasted.

(i) What happens to this wasted energy?

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_____

_____

(2)

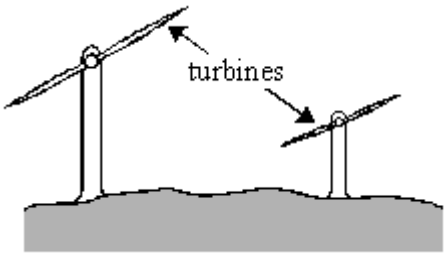
(ii) What percentage (%) of the energy from the gas is wasted? Answer: _____ %

(1)

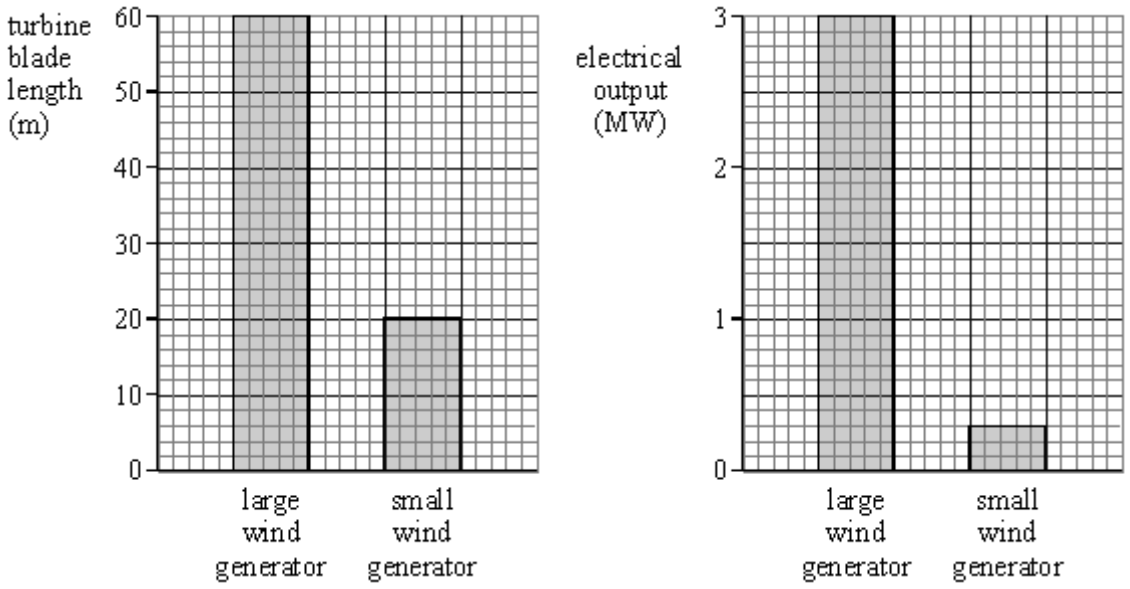
(Total 6 marks)

Q2.

On a very windy hilltop there are two wind generators side by side.



The bar charts show the lengths of the turbine blades and the electrical outputs of the two wind generators.



Complete the following table.

	LENGTH OF TURBINE BLADE (m)	ELECTRICAL OUTPUT (MW)
Large wind generator	60	
Small wind generator		

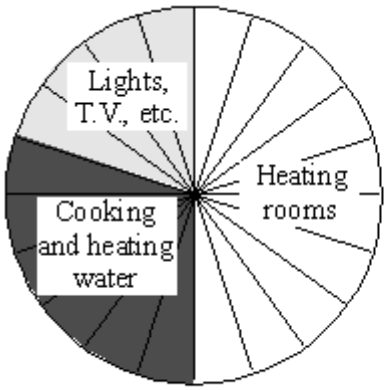
(Total 3 marks)

Q3.

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(a) The pie-chart shows how energy is used in a home.

Complete the table using the information on the pie-chart.

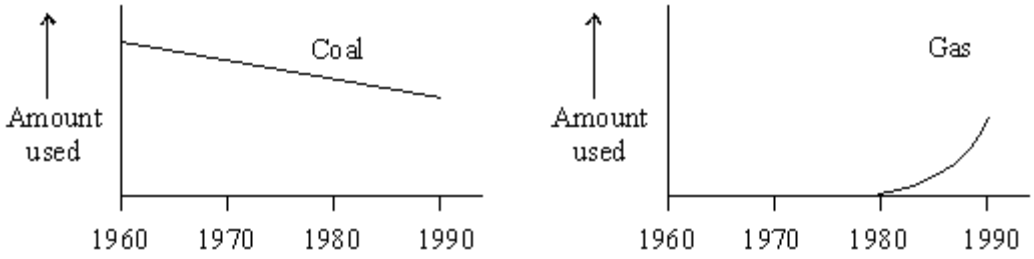


USE OF ENERGY	%
lights, T.V., etc.	20
cooking and heating water	
heating rooms	

(2)

(b) We get some of the energy we need in our homes from electricity.

The graphs show how the amounts of coal and gas used to generate electricity changed between 1960 and 1990.



Describe these changes.

Coal _____

_____

_____

Gas _____

_____

_____

(4)

(c) Read the information below.

- More carbon dioxide in the air may change the weather. Farmers may then not be able to produce the food we need.
- Burning coal produces sulphur dioxide. Burning gas does not do this.
- It is cheaper to generate electricity from gas than from coal.
- Sulphur dioxide causes acid rain which can kill fish and damage buildings.

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- Two power stations generate the same amount of electricity. The one which burns gas produces less carbon dioxide than the other which burns coal.

Many people say that the change from coal to gas is better for the environment.

Why do you think they say this?

_____

_____

_____

_____

(3)

(Total 9 marks)

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