

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

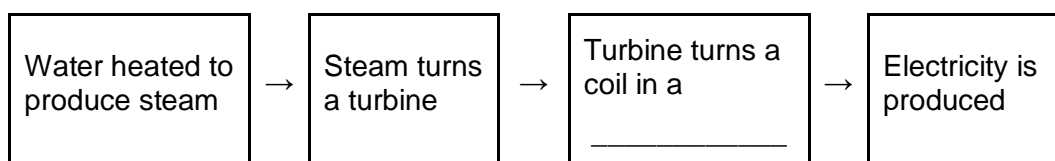
Name of the Student: _____

Max. Marks : 10 Marks

Time : 10 Minutes

Q1.

- (a) In Britain most power stations burn fuel to produce heat. The diagram shows the stages by which the heat is transferred into electrical energy. Complete the diagram by filling in the missing word.



(1)

- (b) A fuel burning power station uses 2000 joules of fuel energy to generate 600 joules of electrical energy. The rest of the fuel energy is wasted as heat.

- (i) For every 600 joules of electrical energy generated, how much fuel energy is wasted as heat?

(1)

- (ii) Calculate the efficiency of the power station. Show clearly how you work out your answer.

efficiency = _____

(2)

- (c) List **A** gives three energy resources used to generate electricity. List **B** gives environmental problems that may be caused by using different energy resources. Draw a straight line from each energy resource in List **A** to the environmental problem it may cause in List **B**. Draw **three** lines only.

List A
Energy resource

Wind

Tides

Falling water
(hydroelectricity)

List B
Environmental problem that may be caused

Destroys the habitat of wading birds in river estuaries

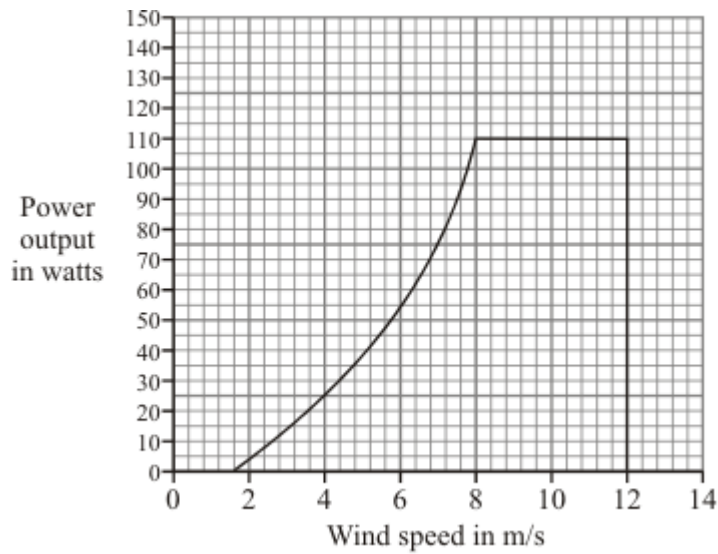
Produces a lot of noise

Produces the gas sulphur dioxide

Floods land used for farming or forestry

(3)

- (d) A small wind generator is used to charge a battery. The graph shows the power output of the generator at different wind speeds.



- (i) What is the maximum power produced by the generator?

_____ watts

(1)

- (ii) The generator is designed to stop if the wind speed is too high.

At what wind speed does the generator stop working?

_____ m/s

(1)

- (iii) Give **one** disadvantage of using a wind generator to charge a battery.

(1)

(Total 10 marks)