

Energy Sources

Question Paper

Course	CIE IGCSE Physics
Section	1. Motion, Forces & Energy
Topic	Energy Sources
Difficulty	Easy

Time Allowed	40
Score	/33
Percentage	/100

Question 1

Here are some statements about energy and energy resources.

Some statements are correct. Put a tick (✓) in the box alongside each of these.

- ☐ Building hydroelectric power stations has an impact on the environment.
- ☐ Burning fossil fuels produces atmospheric pollution.
- ☐ Wind turbines are turned using gravitational potential energy.
- ☐ Coal and crude oil are sources of renewable energy.
- ☐ Geothermal energy is obtained from hot rocks below the ground.

[3 marks]

Question 2a

Coal is a non-renewable source of energy.

- (i) Explain what is meant by the term *non-renewable*.

[1]

- (ii) There are other non-renewable sources of energy.

Place a tick in the box by each non-renewable source of energy.

- ☐ nuclear
- ☐ oil
- ☐ solar
- ☐ wave
- ☐ wind

[1]

[2 marks]

Question 2b

State two advantages and two disadvantages of using natural gas as an energy source.

[4 marks]

Question 3a

Fig. 5.1 shows part of a solar farm. The solar panels tilt and rotate.

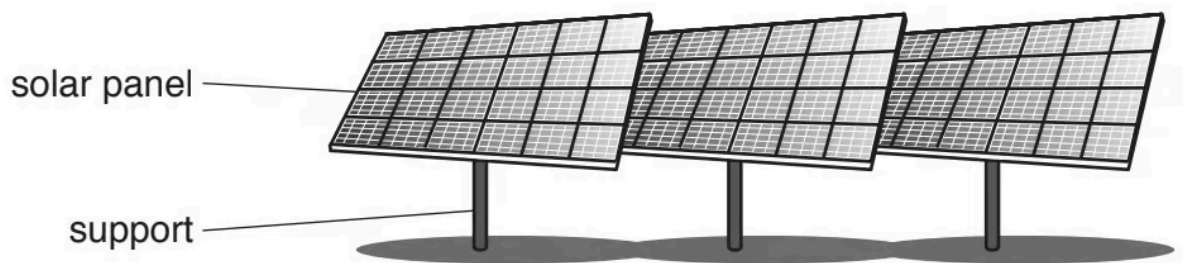


Fig. 5.1

The solar farm converts energy from a source into a different, useful form of energy.

State the energy source and the useful form of energy.

[2 marks]

Question 3b

Solar farms have advantages and disadvantages.

- (i) State **two** advantages of a solar farm.
- (ii) State one disadvantage of a solar farm.

[2]

[1]

[3 marks]

Question 3c

Suggest why it is useful that the panels can tilt and rotate.

[1 mark]

Question 4a

Fill in the gaps in the sentence below about energy sources.

Two methods of using energy from water are _____ and _____.

[2 marks]

Question 4b

State two advantages of one of the methods from part (a).

[2 marks]

Question 4c

A graph of the energy output of two renewable resources over time is shown in Fig. 1.1. One is a solar cell, the other is a wind turbine.

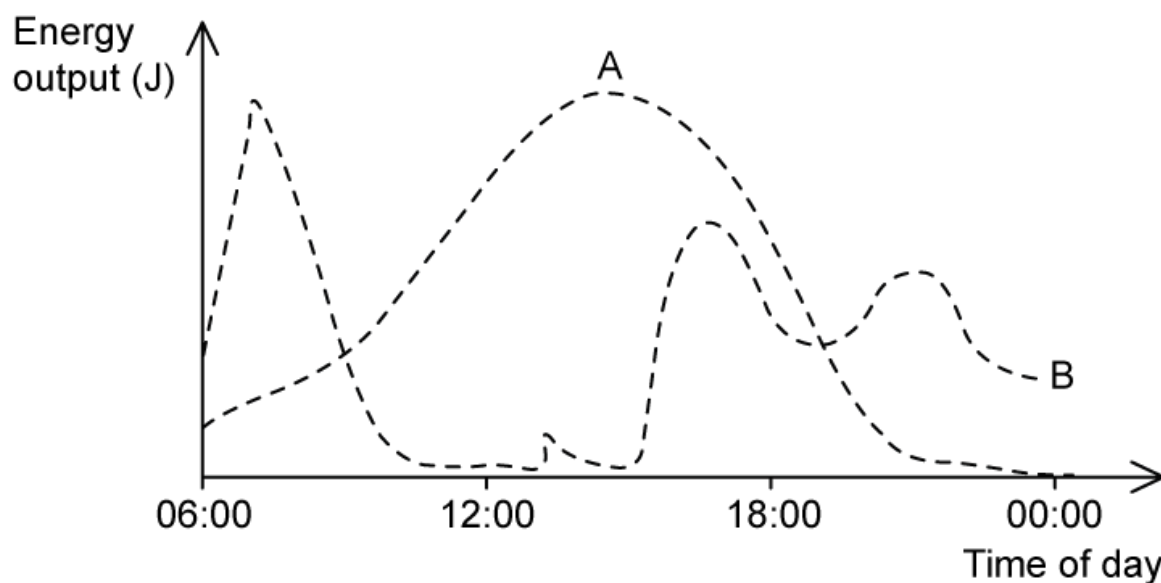


Fig. 1.1

Fig. 1.1

State which line on the graph represents the energy output of a solar cell.

[1 mark]

Question 4d

Explain how you arrived at your answer to part (c).

[2 marks]

Question 5a

Define the term "renewable resource".

[1 mark]

Question 5b

A list of resources is shown in the table below.

Resource	Renewable	Non-renewable
Coal		✓
Nuclear fuel		
Biofuel		
Solar energy		
Oil		

Place a tick in the correct box for each resource.

[4 marks]

Question 5c

Fossil fuels are produced when living matter is compressed. They are continually produced.

Explain why they are not a renewable resource.

[2 marks]

Question 5d**Extended tier only**

- (i) Describe the process of nuclear fusion. [2]
- (ii) Explain why nuclear fusion is not currently used as an energy resource. [2]

[4 marks]