

# Energy Sources

## Question Paper

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

**Time Allowed**      10

**Score**                /5

**Percentage**        /100

### Question 1

When plants are grown they take in carbon dioxide from the atmosphere during photosynthesis, but when biofuel is burned it releases carbon dioxide back into the atmosphere.

A company manufacturing biofuels claim that they are carbon neutral.

Why is this claim considered to be controversial?

- A.** Because if the land used to grow the crops had been used to grow food produce instead, the same amount of carbon dioxide would have been removed from the atmosphere but none would have been emitted back into the atmosphere
- B.** Because fertilisers and pesticides are used to grow the crops which are harmful to the environment
- C.** Because the farming of biofuel crops is labour intensive so they cost a lot to produce
- D.** Because farming biofuel crops year on year on the same land depletes the land of soil nutrients

[1 mark]

### Question 2

Which of the following energy sources produce no atmospheric pollution?

- A.** Fossil fuels, bio fuels & nuclear fuel
- B.** Bio fuel, nuclear fuel and wave power
- C.** Nuclear fuel, wave power and solar cells
- D.** Wave power, solar cells & geothermal power

[1 mark]

### Question 3

Which of the following energy sources cause damage to natural habitats?

- A. Fossil fuels, wave power & hydroelectric dams
- B. Solar power, geothermal energy & nuclear power
- C. Hydroelectric dams, wave power and solar panels
- D. Fossil fuels, solar cells and wind power

[1 mark]

### Question 4

It is possible to reduce the harmful effects of burning fossil fuels on the environment without reducing the amount of fossil fuels burned.

Which of the following suggestions would **not** reduce the harmful effects of burning fossil fuels?

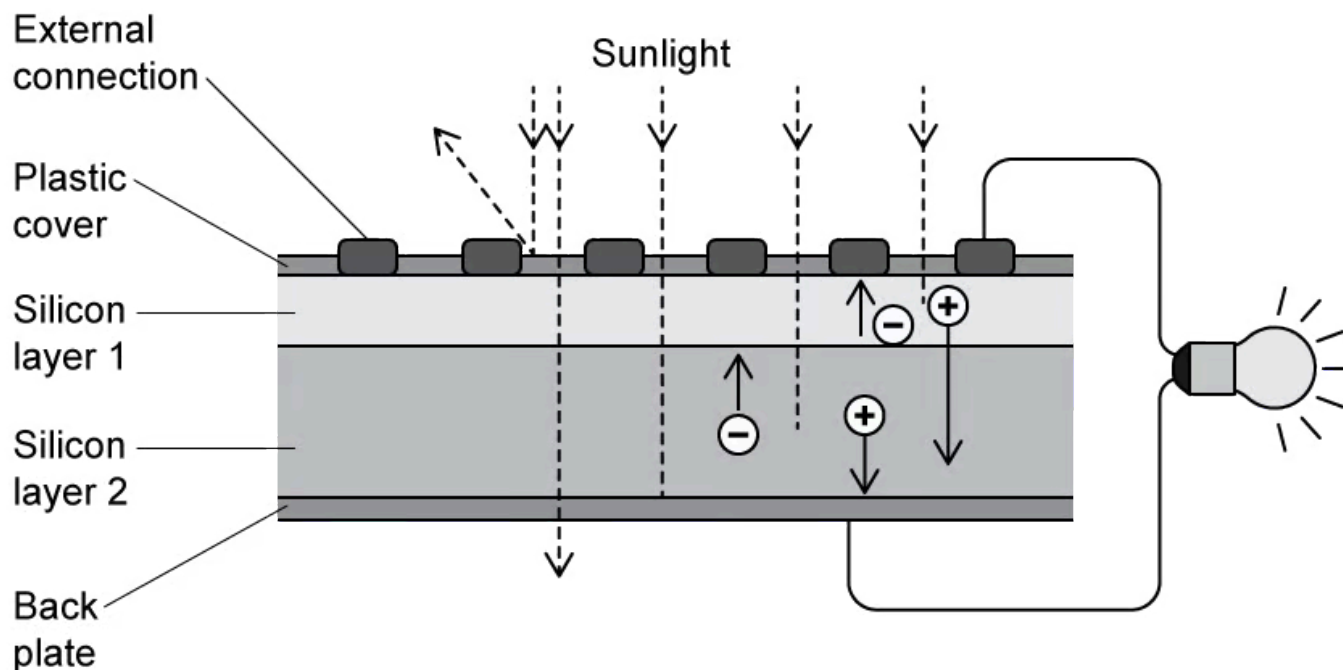
- A. Planting more trees
- B. Investing in carbon capture and sulphur removal technologies
- C. Increasing the efficiency of power stations
- D. Increasing the number of hydroelectric dams

[1 mark]

### Question 5

The diagram below shows how a solar cell produces electricity using energy from the sun.

Energy is transferred by radiation to the silicon layer of the solar cell causing charges to move. This movement of charges produces a current.



The efficiency of a solar cell is far below 100%.

Which of the following statements does **not** account for wasted energy?

- A. Reflection from the external connections and plastic cover
- B. Absorption by the the external connections, plastic cover & back plate
- C. Absorption by the charges
- D. Transmission through the back plate

[1 mark]