

# Design & Technology

## AQA GCSE

# Fossil Fuels

### Materials required for questions

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- Pencil
- Rubber
- Calculator

### Instructions

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- Use black ink or ball-point pen
- Try answer all questions
- Use the space provided to answer questions
- Calculators can be used if necessary
- For the multiple choice questions, circle your answer

### Advice

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- Marks for each question are in brackets
- Read each question fully
- Try to answer every question
- Don't spend too much time on one question

# Good luck!

**Q1.** Which one of the following statements is true?

- A** Coal is used to generate hydro-electric power
- B** Fossil fuels produce argon when they burn.
- C** Oil is extracted from the ground to produce petroleum

**Q2.** Which fossil fuel is the least commonly used for electricity generation today due to pollution concerns?

- A** Gas
- B** Coal
- C** Oil

**Q3.** Why are fossil fuels considered a reliable energy source?

- A** They are unlimited in supply
- B** They provide consistent power regardless of weather conditions
- C** They do not require any machinery to generate electricity

**Q4.** How is electricity primarily generated from coal?

- A** By directly converting coal into electrical current
- B** By chemically processing coal into electricity
- C** By burning coal to produce steam that drives a turbine

**Q5.** Explain the disadvantages of extracting fossil fuels as a source of energy **(3 marks)**

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## Answers

Q1.C

Q2. C

Q3. B

Q4. C

Q5.

- Mining of coal produces lots of waste (slag heaps) and pollution (of water courses).
- Visual pollution associated with open cast mining, location of power plants near rivers (water needed for cooling).
- Pollution associated with extraction of fossil fuels deep in the ground leads to atmospheric pollution.
- Shale gas extracted by pumping pressurised water and chemicals deep into the ground is believed to cause earthquakes/seismic shocks and damage to water courses.
- Drilling for oil can lead to pollution of marine ecosystems and pollution, eg Deepwater Horizon disaster in 2010 in the Gulf of Mexico.