

Design & Technology

AQA GCSE

Paper – 8552/W

2 hours

Materials required for questions

- Pencil
- Rubber
- Calculator

Instructions

- 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

- 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!

100 marks

Section A – Core technical principles

Each of Questions 01 to 10 is followed by four responses, A, B, C and D.

For each question circle the appropriate answer.

Q1) What is the primary reason that many renewable energy technologies still depend on finite resources?

- A** They require rare earth elements for magnets and batteries
- B** Sunlight and wind are actually finite resources
- C** No non-finite resources are needed for their construction
- D** They cannot operate without fossil fuel backup systems

Q2) How is electricity generated in a nuclear power plant?

- A** By burning uranium to produce steam
- B** By using nuclear fusion to directly create electricity
- C** By splitting uranium atoms to produce heat, which generates steam
- D** By using nuclear fission to directly create electricity

Q3) Why are metal foams valuable in automotive design?

- A** They absorb impact energy while being lightweight
- B** They conduct electricity better than copper
- C** They change colour under stress
- D** They increase fuel consumption for safety reasons