Energy

Physics Paper 1 | 30 quick questions

GCSE science knowledge recall

Answer online, marked instantly

Name: _____ **Date:** _____ **Score:** _____ **/ 30**

1 A moving bus has energy in which store? Answer with one word.

2 A stretched spring stores energy in which store? Answer with one word.

3 Food, fuels and batteries store energy in which store?

4 A book is lifted onto a high shelf. Which energy store increases? Answer with two words.

5 What is the unit of energy? Give the name.

6 Write the equation for kinetic energy in words, using mass and speed.

7 A 2 kg ball moves at 3 m/s. What is its kinetic energy in joules?

8 A car's speed doubles. By what factor does its kinetic energy change? Give a number.

9 Write the equation for gravitational potential energy in words.

10 What is the value of the gravitational field strength on Earth used at GCSE, in N/kg?

11 A 5 kg box is lifted 2 m. Using g = 10 N/kg, how much gravitational potential energy does it gain, in joules?

12 In the equation for elastic potential energy, $E_e = ½ k e^2$, what does the letter k stand for? Answer with two words.

13 What is the name for the energy needed to raise the temperature of 1 kg of a substance by 1 °C? Answer with three words.

14 What is the unit of specific heat capacity?

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15 2 kg of water (specific heat capacity 4200 J/kg °C) is heated by 10 °C. How much energy is transferred, in joules?

16 What is the name for the rate at which energy is transferred, or the rate at which work is done?

17 What is the unit of power? Give the name.

18 A motor transfers 600 J of energy in 20 s. What is its power in watts?

19 Energy can be transferred, stored or dissipated, but what can never happen to it overall in a closed system? Answer with three words.

20 Energy that is spread out to the surroundings and is no longer useful is described as what? Answer in one word.

21 Oil is put on the moving parts of a bike chain. Which force does this lubrication reduce?

22 A house has walls with a lower thermal conductivity. Does the rate of energy loss from the house increase or decrease?

23 Write the word equation for efficiency using energy.

24 A lamp is given 200 J and gives out 50 J as light. What is its efficiency as a decimal?

25 Describe one way to increase the efficiency of an electric motor.

Higher

26 Is coal a renewable or a non-renewable energy resource?

27 Which energy resource uses the rise and fall of the sea twice a day to generate electricity?

28 Name the renewable energy resource that uses hot rocks underground to heat water.

29 Name the main gas released when fossil fuels are burned that adds to global warming.

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30 Name a renewable resource whose output depends on the weather and stops completely on a still day.

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