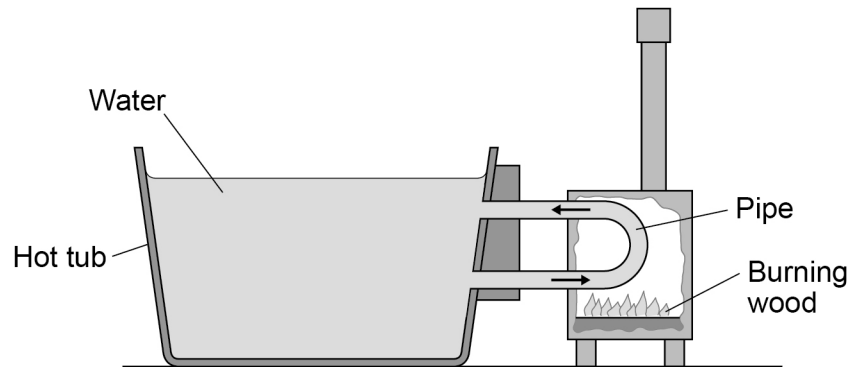


0 4

Figure 5 shows a wood-fired hot tub.

Figure 5



0 4 . 1

What type of fuel is wood?

[1 mark]

Tick (✓) **one** box.

A non-renewable biofuel

A non-renewable fossil fuel

A renewable biofuel

A renewable fossil fuel

0 4 . 2

Give **two** environmental effects of using wood as an energy resource.

[2 marks]

1 _____

2 _____



0 4 . 3

Describe the change to the stores of energy of the wood, pipe and water as the water is heated.

[3 marks]

Wood _____

Pipe _____

Water _____

0 4 . 4

The temperature of the water reaches 42 °C

The temperature then stays constant even though the fire continues to burn.

Explain why the temperature of the water stays constant.

[2 marks]

8

Turn over for the next question

Turn over ►



Question	Answers	Extra information	Mark	AO / Spec. Ref.
04.1	a renewable biofuel		1	AO1 6.1.3
04.2	any two from <ul style="list-style-type: none"> • burning wood causes air pollution • burning wood may lead to deforestation • destruction of habitats • burning wood is carbon-neutral 	allow creates smoke ignore cutting down trees allow does not contribute to global warming or the greenhouse effect or climate change	2	AO1 6.1.3
04.3	the chemical store of energy of the wood decreases the internal/thermal store of energy of the pipe increases the internal/thermal store of energy of the water increases	both the store of energy and what happens to the store are required	1 1 1	AO1 6.1.1.1
04.4	energy is dissipated (to the surroundings) at the same rate that energy is transferred to the water	allow energy is transferred/lost to the surroundings	1 1	AO2 6.1.2.1
Total			8	