SMART EXAM RESOURCES
SUBJECT: PHYSICS
TOPIC: WORK / ENERGY /POWER
SET-11-QP-MS

1 Water is held behind a dam in a hydroelectric power scheme.

State **one** other renewable source of energy.

..... [1]

MARK SCHEME:

	biofuel / wind / geothermal / tidal / solar / wave	**B1**

2 Radiation from the Sun is the main source of energy for most of our energy resources.

State **two** energy resources that are **not** due to radiation from the Sun.

.....

..... [2]

MARK SCHEME:

	any **two** from: • geothermal • nuclear • tidal	**B2**

3 State **two** energy resources for which the Sun is **not** the main source.

1 .....

2 .....

[2]

MARK SCHEME:

?(b)	any **two** from: • geothermal • nuclear • tidal	**B2**

4 A cup of water contains 250 cm^3 of water at a temperature of 0 °C. An identical cup contains 250 cm^3 of a mixture of ice and water at a temperature of 0 °C.

The temperature of the surrounding air is 20 °C.

State and explain which cup contains the liquid with the lower temperature after 10 minutes.

statement .....

explanation .....

..... [2]

MARK SCHEME:

	cup containing mixture of ice and water	**M1**
	mixture of ice and water will remain at 0 °C until all ice is melted (but temperature of water at 0 °C rises) or reverse argument OR energy needed for change of state so temperature doesn't rise until this has taken place	**A1**

5 The load is pulled down a small distance below its equilibrium position to position A, as shown in Fig. 1.3. The load then moves up and down between position A and position B in Fig. 1.3.

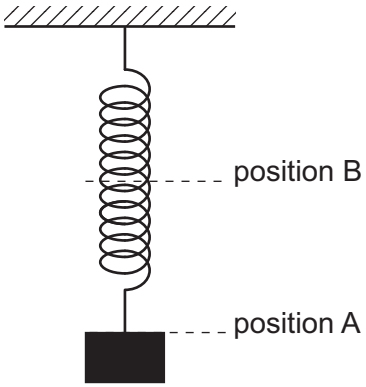

Fig. 1.3

Describe the energy transfers which occur as the load moves:

from position A to the equilibrium position

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.....

from the equilibrium position to position B.

.....

.....

[3]

MARK SCHEME:

	• from elastic / strain energy • to gravitational potential energy EITHER: • to kinetic energy, when moving from A to equilibrium OR from kinetic energy, when moving from equilibrium to B	**B3**