Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

Mark Schemes

Q1.

(a) K = step-up transformer

1

L = transmission cables

allow power cables

ignore wires

1

M = step-down transformer

allow 1 mark if K and M are labelled transformer but step-up and step-down labels are incorrect or not present

1

(b) 8 (%) and 32 (%)

both required

1

Number of times = 4

1

(c) (burning gas) releases carbon dioxide

1

which causes global warming

*allow greenhouse effect **or** climate change*

1

(d) An energy resource that can be replenished quickly.

1

(e) higher power output

allow more electricity generated

1

lower variation in power output

1

[10]

Q2.

(a) the friction is decreased

1

(b) $E_p = 62.5 \times 9.8 \times 16.0$

1

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$E_p = 9800$ (J)

1

(c) $E_k = 0.5 \times 62.5 \times 12^2$

1

$E_k = 4500$ (J)

1

(d) Any **two** from:

- speed (at bottom of slide)
- friction *(*between sled and ground*)*

  allow mass/weight of rider (and sled)

  allow surface type
- air resistance

2

[7]

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