

Name of the Student: \_\_\_\_\_

Max. Marks : 20 Marks

Time : 20 Minutes

Mark Schemes

**Q1.**

(a) coal 1

(b) fossil fuels can be used to generate electricity at any time  
*if more than 2 boxes ticked, mark incorrect boxes first* 1

a few large power stations can generate the electricity for a million homes 1

(c) (i) no fuel is burnt  
*accept a named fuel*  
*accept nothing is burnt*  
*accept does not use (fossil) fuel* 1

(ii) kinetic 1

(iii) any **two** from:

- ♦ cause noise pollution
  - ♦ cause visual pollution
- } *accept causes pollution for 1 mark*

- need concrete for bases
- new roads / infrastructure needed
- may interfere with TV / radio / mobile  
phone signals
- dangerous to birds
- do not generate all of the time  
*accept generates only when the wind blows*  
*do **not** accept 'generate when the wind blows'*
- need a lot of generators  
*do **not** accept 'take up a lot of space / land'*
- high initial / capital costs

- reduces house prices

2

[7]

## Q2.

(a) (i) heat

1

(ii) temperature increases **or** (cause) convection (currents)

*accept gets warmer*

*accept gets hotter*

1

(iii) 60% **or** 0.6

*60 without % scores 1 mark*

*0.6 with a unit scores 1 mark*

*60 with incorrect unit scores*

*1 mark*

*or correct substitution  $\frac{120}{200}$*

*for 1 mark*

2

(b) street

1

more (energy transferred as) light or less (energy transferred as) heat or useful energy output the highest

*can only score this mark if first mark scored*

*all efficiencies calculated correctly score 2nd mark point*

1

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## Q3.

(a) (i) 3

1

(ii) 1

*accept a definition of frequency ignore units*

1

(iii) hertz

1

(b) straight line in correct direction

*judge by eye (from 'a' of waves to 's' of across) ignore arrow*

*accept equal angles shown on waves*

1

(c) (i) gets smaller

1

(ii) kinetic

*accept movement*

1

(iii) renewable

1

[7]