

Name of the Student: _____

Max. Marks : 24 Marks

Time : 24 Minutes

Mark Schemes

Q1.

- (a) kinetic
accept movement
1
- (b) (i) 3 (kWh)
allow 1 mark for selecting the correct information
1
- (ii) transfers more energy
accept transform or use for transfer
accept electricity for energy
*allow higher (average) power **and** switched on for more time*
2
- (iii) any **one** from:
- use the internet
 - brochures
 - reading adverts
 - visiting shops
 - recommendation from friends / plumbers
- 1

[5]

Q2.

- (a) (i) grid
accept any way of indicating correct answer
1
- (ii) increases voltage
accept any way of indicating correct answer
1
- (iii) 230 V
accept any way of indicating correct answer
1
- (iv) reduce

- (b) (i) increases the temperature
accept make it hotter / heat goes into the air
accept convection currents
accept sensible comment eg sound energy / it buzzes
ignore pollutes the air

1

- (ii) less than 100%

1

[6]

Q3.

- (a) gas
- (b) fuel burning stations produce electricity at any time / all the time
accept fuel available all the time
- wind generator can only produce when the wind is strong enough
accept it's not always windy
- (c) no fuel is burnt **or** no fuel is used **or** uses only energy from wind **or**
 does not emit harmful gases / soot / smoke

1

1

1

*do **not** accept wind is natural / environmentally friendly / renewable*
*answer must be in terms of wind, **not** negative of fuel burning*
specific examples of gases CO₂, SO₂,
acid rain and greenhouse gases can be accepted
ozone negates credit

1

[4]

Q4.

- (a) (i) 7pm
accept 19.00 / 1900

1

- (ii) 8pm
accept 20.00 / 2000

1

temperature drops more slowly
accept heat for temperature accept line is less steep

1

- (b) insulator

1

conduction *

1

convection *

** answers can be either way around*

1

(c) (i) 4 (years)

1

(ii) it is the cheapest / cheaper / cheap

*do **not** accept answers in terms of heat rising or DIY*

1

has the shortest / shorter payback time

*do **not** accept short payback time*

1

[9]