

Name of the Student: _____

Max. Marks : 17 Marks

Time : 17 Minutes

Mark Schemes

Q1.

- (a) the bigger the surface area, the faster the water cools down / temperature falls

answers must imply rate

accept heat for temperature provided rate is implied

*do **not** accept cools down more unless qualified*

1

- (b) any **two** from:

the ears:

- have large surface / area
not just has large ears
- radiate heat
*accept loses heat, but does not score
if the reason given for heat loss is wrong*
- keep blood cooler

2

- (c) (i) radiation

1

- (ii) conduction

1

[5]

Q2.

- (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]

Q3.

(i) conduction, convection

answer can be in either order

1

(ii) traps (lots of) air

*do **not** accept heat is trapped in the fibre*

1

air is a (good) insulator **or** poor conductor

1

[3]