Name of the Student:_____
Max. Marks : 21 Marks **Time : 21 Minutes**

Mark Schemes

Q1.

(a) (i) any **one** from:

water to the mug
water to the air
mug to the air
mug to the table

both *required*

direction of transfer must be correct

1

(ii) when <u>temperatures</u> are the same

accept a specific example eg when the <u>temperature</u> of the water and mug are the same

accept radiant heat transfer will never stop

1

(b) wood

1

(c) (i) conduction

accept convection if not given as 3rd answer

1

insulator

1

(ii) any **one** from:

*do **not** accept any rebuilding of house*

double glazing

loft insulation

accept roof for loft

1

carpets

(cavity) wall insulation

*do **not** accept closing doors and windows*

draft excluders

foil behind radiators

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accept blocking chimney

paint inside walls white

[6]

Q2.

(a) (i) (insulate it) with **fibre** glass **or** foam **or** felt **or** polystyrene beads **or** rockwool **or** (aluminium) foil

an example must be included

do not credit loft insulation

1

(ii) fill the cavity with fibre glass **or** foam **or** mineral wool **or** polystyrene **or** named liner inside wall **or** making walls thicker

an example must be included

do not credit cavity wall insulation

1

(iii) double glaze **or** draw the curtains **or** blinds **or** thicker glass **or** secondary glazing described

do not credit fit smaller windows

1

(iv) put in draught excluder (or described) **or** strip **or** description of filling gaps **or** seal gaps **or** double glazed doors **or** build porch **or** curtains inside door **or** mat under door

do not credit just carpet

accept buy new doors

accept premise that gap is between frame and wall as well as between frame and door

1

(b) windy **or** stormy **or** wet **or** snow **or** rain **or** sleet **or** hail **or** fog **or** mist

do not credit frosty

1

[5]

Q3.

(a) (i) conduction

1

convection

they may be in either order

1

(ii) radiation

1

(iii) evaporation

1

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convection

they may be in either order

1

(iv) convection

1

(v) conduction

1

(b) in the middle above halfway up (above line joining top of spacers)

below the surface of the liquid

1

(c) by particles vibrating more

*particles shake more **or** move more*

do not credit they start vibrating

1

they pass on the energy **or** vibrations

do not credit heat

1

[10]

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