

Name of the Student: _____

Max. Marks : 14 Marks

Time : 14 Minutes

Mark Schemes

Q1.

- (a) (heat) is conducted through the glass
the answers must be within the context of the question
1
- (heat) passes through glass and air by radiation
both glass and air required
1
- (heat) crosses the air gap by convection
mention of conduction through air is neutral
1
- (b) any **one** from
light
accept sunlight
gamma rays
X-rays
radio
*accept sound **or** ir **or** microwaves **or** electromagnet waves*
1
- (c) any **two** from
cuts down convection currents
accept stops air moving
air pockets trap air (from moving)
accept has air pockets
*do not accept stops heat moving **or** traps heat*
foam is a poor conductor
air in the foam is a good insulator
accept air is a good insulator in air pockets for both marks
2
- (d) evaporation (of the water)
do not accept rain is cold
1

takes energy from the house

*accept takes heat away **or** higher energy molecules leave first*

1

[8]

Q2.

Marks awarded for this answer will be determined by the Quality of Written Communication (QWC) as well as the standard of the scientific response. Examiners should apply a 'best-fit' approach to the marking.

0 marks

No creditworthy response

Level 1 (1 – 2 marks)

At least **one** relevant statement is made

Level 2 (3 – 4 marks)

Relevant statements are made about two of the states

or

a relevant statement is made about each state

Level 3 (5 – 6 marks)

Relevant statements are made about each of the three states

Examples of the Physics points made in the response:

ignore statements about the states of matter

*a description without mention of particles, but clearly about particles,
can gain **max** 4 marks*

solids:

- arranged in a regular pattern
allow closely / tightly packed / compact
- particles vibrate about fixed points
allow cannot move freely / around
- particles have low energy.

liquids:

- pattern is irregular
allow close together
- particles are not fixed in place **or** can move freely / around
- particles have more energy than solids and / or less energy than gases.

gases:

- particles are in a random pattern
allow far apart
- particles move (about) freely / randomly
allow move fast(er)
- particles have high energy.

[6]