Name of the Student:_____
Max. Marks : 22 Marks **Time : 22 Minutes**

Mark Schemes

Q1.

(a) plastic/glass walls; vacuum; insulating top
any two for 1 mark each
2

(b) silvering/shiny on either wall
for 1 mark
1

[3]

Q2.

(a) (i) Carries heat up (as convection current)
1

(ii) (1) By conduction or from molecule to molecule
(2) By radiation or as IR
2

(iii) Use shiny surface (inside or outside) or small area
1

(b) (i) Rise more quickly
1

(ii) Dull surface good absorber
(accept “attract” = “absorb” if context correct, then penalise spg mark.

Shiny surface poor absorber
2

(c) (i) Fall more quickly
1

(ii) Dull surface good emitter
Shiny surface poor emitter
2

[10]

Q3..

(a) (i) hot water rises (not heat)
for 1 mark

due to convection currents

or water expands/becomes less dense on heating
or less dense water rises
any for 1 mark

2

(ii) inside hotter (than outside)
for 1 mark

1

(iii) (heat transfer by) conduction
for 1 mark

1

(iv) surround/cover/insulate tank with poor conductor **or** named insulator
for 1 mark each

2

(b) (i) air is an insulator/poor conductor
for 1 mark

1

(ii) convection stopped foam is an insulator/poor conductor
for 1 mark each

2

[9]