

Internal Energy and Changes of Matter MS

QUESTION 1

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	B draught increases (the rate of) evaporation evaporation has a cooling effect so temperature will fall faster / further	no mark for B - marks are for the explanation first two mark points can score even if A is chosen accept more evaporation happens accept draught removes (evaporated) particles faster do not accept answers in terms of particles gaining energy from the fan / draught accept (average) kinetic energy of (remaining) particles decreases	1 1 1
b)	larger surface area increasing the (rate of) evaporation or for water to evaporate from	accept more / faster evaporation accept easier for particles to evaporate accept more particles can evaporate accept water / particles which have evaporated are trapped (in the bag) answers in terms of	1 1

		exposure to the Sun are insufficient	
Total marks			5

QUESTION 2

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	Z		1
a)ii)	X		1
b)i)	moving randomly		1
b)ii)	stronger than		1
c)i)	evaporation		1
c)ii)	any one from: becomes windy temperature increases less humid	accept (becomes) sunny "the sun" alone is insufficient	1
			6

QUESTION 3

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	(kinetic) energy (of the particles) is reduced move closer together	accept slow down accept transfer energy to (cold) glass / surface accept energy is lost do not accept vibrate less	1 1
Total marks			2

QUESTION 4

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	any two from: • water evaporates • water molecules /	accept steam / water vapour for water molecules	2

	<p>particles go into the air</p> <ul style="list-style-type: none"> • mirror (surface) is cooler than (damp) air • water molecules / particles that hit the mirror lose energy • cooler air cannot hold as many water molecules / particles (causes) condensation (on the mirror) <p>or</p> <p>particles move closer together</p>	<p>accept water turns to steam</p> <p>accept the mirror / surface / glass is cold</p> <p>accept water molecules / particles that hit the mirror cool down</p> <p>accept steam changes back to water (on the mirror)</p>	1
b)	<p>mirror (surface) is warm (rate of) condensation reduced</p>	<p>mirror is heated is insufficient</p> <p>accept no condensation (happens)</p>	1 1
Total marks			5