

2015 10 BA

- / means OR eg. green / blue – answer needs green OR blue
 () means additional, not really required eg. Gauze (mat) – gauze would be sufficient
 : means AND eg. red : hot - answer needs red and hot.

Question			
One	(a)	(i) Any 3 hazards circled	1 mark
		(ii) Any one correct outcome identified for a named hazard e.g. fire due to sockets overheating, electrocution due to metal screwdriver in live socket etc. Should include a consequence and not just 'toaster could fall in the sink' for eg	1 mark
	(b)	C	½ mark
	(c)	C	½ mark
	(d)	Switch 1 : <i>correct reason why</i> e.g. motor circuit needs to be complete	½ mark + ½ mark
	(e)	All : <i>correct reason why</i> e.g. switch 2 needs to be closed to complete the heater circuit and switch 1 for motor and heater to work as they are in parallel	½ mark + ½ mark
Two	(a)	84	1 mark
	(b)	B	1 mark
	(c)	C	1 mark
	(d)	Z : at any/all temperatures it had the slowest/longest time	½ mark + ½ mark
	(e)	D	1 mark
Three	(a)	Colour of light. Not just 'the light'	1 mark
	(b)	Any 2 relevant variables e.g amount of weed, water temperature, light intensity, amount of sodium (bi) carbonate (oops). Not just unqualified 'same water' or 'light' or similar.	1 mark each - max of 2 marks
	(c)	Results have been averaged / repeats have been done Obvious outlier / anomalous result / "2 for blue light" has been omitted	½ mark 1 mark
	(d)	Any correct statement e.g. photosynthesis is slowest under green light	1 mark
	(e)	A	½ mark
Four	(a)	Any one of no obvious petals, no nectary, has feathery stigma, has dangly stamens, pollen on the outside of flower etc BUT NOT no scent or no nectar. Must use correct vocabulary, ie can't write 'has feathery things outside flower to catch pollen' etc	1 mark
	(b)	No scent / no nectar / usually green	1 mark
	(c)	Pollen is carried in the air/wind AND is breathed by/comes into	1 mark

		contact with people	
	(d)	31 - 22 : 9°C	½ mark + ½ mark
	(e)	germinating seeds produce heat / dead seeds don't produce heat	1 mark
Five	(a)	hydrogen peroxide is liquid/solution / is in funnel: manganese dioxide powder is solid OR need to swap labels for manganese dioxide and hydrogen peroxide over	1 mark
	(b)	bung / stopper / cork	1 mark
	(c)	so gas doesn't escape / to hold funnel and tube in place	1 mark
	(d)	calcium : chloride or salt ½ mk	½ mark + ½ mark
	(e)	bubble gas through : turn white / cloudy / milky	½ mark + ½ mark
Six	(a)	X somewhere by seat in front of bullet and untouched coffee	½ mark
	(b)	dust with a named / black / white / powder lift with tape / photograph	1 mark 1 mark
	(c)	loop . arch	½ mark + ½ mark
	(d)	6	½ mark
Seven		Any errors e.g. y axis uneven, y axis upside down, no label for y axis, points not plotted with x's, point plotted incorrectly, smooth line / curve of best fit not drawn, poor use of available graph paper, graph had no title etc	5 errors = 3 marks; 3-4 errors 2 marks, 1-2 errors 1 mark
Eight	(a)	D	1 mark
	(b)	calcium : magnesium	½ mark + ½ mark
	(c)	zinc or Fe	1 mark
	(d)	Ca Mg Zn Fe Cu NOTE: 2 errors ½ mark	1 mark
Nine	(a)	Paint is insoluble in water (or what would happen to your car when it rained?)	1 mark
	(b)	D : matches pattern of paint A on chromatogram	1 mark
	(c)	Any sensible answer e.g. check and see if paint from courier van matches pattern of spots	1 mark
Ten	(a)	removed: drawing pin, iron nail remained: glass marble, eraser, copper coin, gold ring	5-6 correct 2 marks, 3-4 correct 1 mark
	(b)	No : answer justified e.g. second strongest magnet was the large magnet B	½ mark + ½ mark
	(c)	length of rubber band / distance between iron ball and magnet	1 mark

	(d)	(i) iron filings or compass (ii) left hand side diagram	½ mark ½ mark
Eleven	(a)	Any correct similarity e.g both travel through the mantle / they are both body waves (there will be other answers so please check)	½ mark
	(b)	Any correct difference e.g P travel faster than S (there will be other answers so please check)	½ mark
	(c)	3 : minutes	½ mark + ½ mark
	(d)	2750 km (+ or - 5)	1 mark
	(e)	Location is where circles intersect; if you have 2 stations then 2 intercepts - 2 possible locations	1 mark
	(f)	(i) where line from distance / S-P time and amplitude crosses the magnitude scale	1 mark
		(ii) 4	1 mark
Twelve			
	(a)	Measuring cylinder: to measure volume of liquid / solution / accurately Tripod: to hold / support beaker / gauze / to sit gauze on for heating / use with Bunsen Metal tongs: To hold a sample / specimen (NOT TUBE) for heating / use with Bunsen To get full marks students need to say bolded words/ideas	½ mark ½ mark ½ mark ½ mark ½ mark ½ mark
	(b)	Volume....L Distance.... km Diameter... mm Area..... cm ²	½ mark ½ mark ½ mark ½ mark
Thirteen	(a)	A..... anchors plant B..... supports the leaves C..... makes food D.... attracts insects	½ mark ½ mark ½ mark ½ mark
	(b)	B	1 mark
	(c)	Fruit is ticked and dispersal mechanism described Blackberries: eaten : by birds / animals Sycamore: fly / float / blown: by wind Peas: exploding pod : flings out / catapults out seeds	½ mark ½ mark
	(d)	To avoid competition with [named] correct answer e.g. water, light, nutrients / to spread to new areas / any other correct idea	1 mark
	(e)	A	1 mark
Fourteen	(a)	repel / repulse / move away	1 mark
	(b)	attract / move towards	1 mark
	(c)	Any correct use e.g. fridge magnet for holding notes, magnetic catch on a door, kids fishing game,	1 mark

	(d)	temporary	1 mark
	(e)	it will be attracted (to core) / stick to core	1 mark
Fifteen	(a)	T - incisor ✓ - biting	½ mark ½ mark
	(b)	A - oesophagus B - stomach ✓ - digestion	½ mark ½ mark ½ mark
	(c)	P - cheese C - bread	½ mark ½ mark
	(d)	Burn peanut under water in tube see/measure temperature rise	½ mark ½ mark ½ mark
Sixteen	(a)	B	1 mark
	(b)	A has a pH less than 7 (is an acid) - do NOT accept indicator was yellow unless student has said indicator is red orange or yellow in acid	1 mark 1 mark
	(c)	chop up / cut up / grind up cabbage boil / heat / cook in water until water/liquid is purple filter	½ mark ½ mark ½ mark ½ mark
Seventeen	(a)	it can attract small pieces of paper	1 mark
	(b)	the dust is attracted by static charges...	1 mark
	(c)	conductors	1 mark
	(d)	Any 2 of: sticky tape, plasticine, newspaper (accept any 2 correct and ignore third answer)	1 mark
	(e)	Bottom left diagram	1 mark
	(f)	another / more batteries	1 mark
Eighteen	(a)	(i) A (ii) E (iii) C (note letters slid along so they may have written (i), (ii) and (iii) beside the thermometers)	½ mark ½ mark ½ mark
	(b)	Line continued to show 82°C	½ mark
	(c)	Any 2 suitable answers e.g. Same starting water temperature : to make it fair Same volume of water: less water would cool quicker (or vice versa argument) Thermometer in same position : cool faster if nearer edge	½ mark + ½ mark ½ mark + ½ mark
Nineteen	(d)	A = VI B = II C = IX (clue is cracked pipe and well-build buildings suffered considerable damage))	1 mark 1 mark 1 mark 1 mark

	<p>D = VII <i>Many students filled in ALL the boxes - in which case just look for VI, II, IX and VII</i></p>	
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