

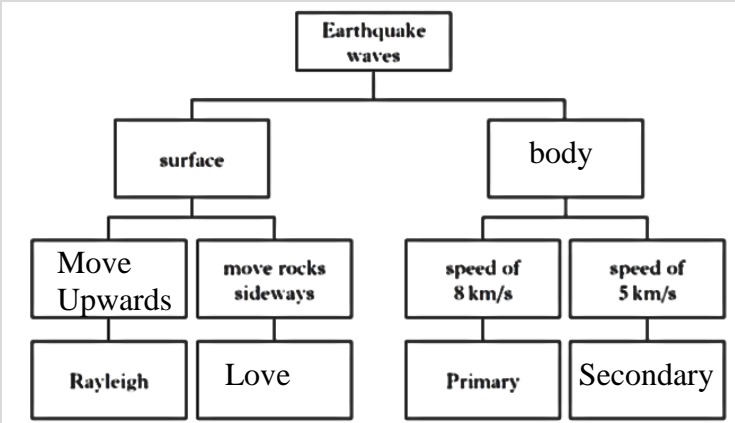
Year 10 2013 C

/ 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	Evidence	Marks
One	(a) The nucleus from the pollen fuses/joins the nucleus from the egg	1 mark
	(b) A name = petal/ sepal B function – produces pollen	1 mark 1 mark
	(c) ovary	1 mark
Two	(a)	1 mark
	Dish A B C D # of seed 10 10 10 10 # germinating 0 9 0 10	
	(b) Light is not needed : since the seeds germinated in dish D which had no light	1 mark
	(c) Water is needed : as no seeds germinated in A or C which were both dry/had no water	1 mark
(d) Some may be dead and not germinate/ to gain more reliable results	1 mark	
Three	(a) Temperature A – 67 temperature B – 75	½ mark each = 1 mark
	(b) Beaker A: Points correctly plotted smooth curve drawn	1 mark ½ mark
	(c) Beaker B: Points correctly plotted smooth curve drawn	1 mark ½ mark
	(d) B it was cooler after 20 minutes / Beaker B was 60 °C compared to Beaker A which was 67 °C “graph/results show it” NOT accepted.	1 mark
	(e) Any two: <ul style="list-style-type: none"> • Use same volume of water • Same size/shape of beakers • Beakers in the same place/ensure room temperature is same “same temperature” is not accurate enough 	1 mark each = 2 marks
Four	(a) Yellow	½ mark
	(b) red	½ mark
	(c) red	½ mark
	(d) Neutralization (NOT ‘neutral’)	1 mark
	(e) Universal indicator It is the only indicator that has a specific colour at pH 7/neutral pH. Other indicators have the same colour at neutral pH and other pH values as well. “more precise/accurate” needs justification	½ mark 1 mark
	(f) <ul style="list-style-type: none"> • Chop up the red cabbage • Boil in water • Filter or strain and collect the coloured liquid 	All steps = 2 marks One step omitted = 1 mark

Five	(a) Leaves : photosynthesis (accepted diffusion/ref to stomata) Rain : roots	½ mark + ½ mark ½ mark + ½ mark
	(b) Water + carbondioxide → glucose + oxygen	2 reactants or 2 products correct = ½ mark 1 mark – all correct
Six	(a)	All correct = 1 mark
	 <pre> graph TD EW[Earthquake waves] --> S[surface] EW --> B[body] S --> MU[Move Upwards] S --> MRS[move rocks sideways] MU --> R[Rayleigh] MRS --> L[Love] B --> S8[speed of 8 km/s] B --> S5[speed of 5 km/s] S8 --> P[Primary] S5 --> S[Secondary] </pre>	
	(b) Cannot tell with only 2 points/ there are two intersecting points where the earthquake could have occurred- (a reasoned explanation is required).	1 mark
	(c) X is drawn where the 3 circles intersect	1 mark
(d) 6	1 mark	
Seven	(a) Group 1 – because it has one valence electron/ one electron in its outermost/last shell/ electron arrangement is 2, 8, 1 Period 3 – because it has 3 shells / energy levels	1 mark 1 mark
	(b) A – neutron B – proton C – nucleus D – electron	3-4 correct = 1 mark
	(c) The number of protons is equal to the number of electrons/ same number of positively and negatively charged particles	1 mark
Eight	(a) Temperature increases(not heat released / made produced) Bubbles of gas is produced Magnesium ribbon gets smaller (not accepting dissolved)	Any two – ½ mark each
	(b) Hydrogen gas : Burning splint Burns/explodes with a 'pop' sound	½ mark ½ mark
	(c) The pH of the solution increases because the HCl has a low pH and when it reacts with Magnesium, it forms magnesium chloride which has a neutral pH/ thus the increase in pH/ HCl is used up in the reaction not accepting Mg is a base/ alkali and other general nonsense	1 mark for correct explanation 2 marks if answer includes the name or formula of salt
Nine	(a) Attract Not attract (or not attract as much as the iron example)	½ mark ½ mark
	(b) It is not magnetic	1 mark
	(c) No aluminium is not magnetic/ attracted to a magnet	½ mark ½ mark
	(d) Lighter/does not rust	1 mark
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