

Sec 1E Science LSS Answers

Multiple Choice Questions

A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
A	A	B	A	B	D	D	A	D	C

A11	A12	A13	A14	A15	A16	A17	A18	A19	A20
A	C	A	A	A	D	B	C	C	D

Section A

1(a)	Controlled variable	All correct – 2 marks. Deduct 1 mark for any mistake.
1(b)	Controlled variable	
1(c)	Dependent variable	
2(a)	Filtration	[1]
2(b)	X – beaker Y – filter funnel Z – conical flask	[1] [1] [1]
2(c)(i)	Residue – flour	[1]
2(c)(ii)	Filtrate – water	[1]
3(a)	Zero error = + 0.04 cm	[1]
3(b)	Observed diameter = 3.34 cm	[1]
3(c)	Actual diameter = Observed diameter – zero error = 3.34 – (+0.04) = 3.30 cm	[1] [1]
4(a)	If the object has <u>higher density</u> than the liquid, the object <u>sinks</u> . If the object has <u>lower density</u> than the liquid, the object <u>floats</u> .	[1]
4(b)	X – 0.0500 g/cm ³ Y – 0.920 g/cm ³	[1] [1]
5(a)(i)	Solution is clear / allows light to pass through. Solution is uniform / no solid particles settle at the bottom on standing. Solution cannot be separated by physical methods, e.g. filtration.	Any 1 point – 1 mark.
5(a)(ii)	Solute – Vitamin C tablets Solvent – water	Both correct – 1 mark
5(a)(iii)	1. Crush the Vitamin C tablets to form powder. 2. Increase the temperature of water. 3. Stir the mixture.	Any 2 correct answers – 2 marks
5(b)(i)	P	[1]
5(b)(ii)	S	[1]
5(b)(iii)	P	[1]
5(b)(iv)	Q / R / U Choose one.	[1]
5(b)(v)	P / S Choose one.	[1]

6(a)	X – nucleus Y – cell wall Z – vacuole	[1] [1] [1]
6(b)(i)	X – contains genetic/hereditary materials or controls cellular activities.	[1] – allow ecf based on answer to 6(a).
6(b)(ii)	Y – provides structure and shape for the plant cell.	[1] – allow ecf based on answer to 6(a).
6(c)	Chloroplasts	[1]

Section B

7(a)	<table border="1"> <tr> <td>An element</td><td>A compound</td><td>A mixture</td></tr> <tr> <td>Chromium</td><td>Carbon dioxide Salt Sugar</td><td>Seawater brass</td></tr> </table>	An element	A compound	A mixture	Chromium	Carbon dioxide Salt Sugar	Seawater brass	Every entry in the same column correct – 1 mark Total: [3]
An element	A compound	A mixture						
Chromium	Carbon dioxide Salt Sugar	Seawater brass						
7(b)(i)	A compound is a substance that consists of two or more elements <u>chemically combined together</u> .	[1] [1]						
7(b)(ii)	X – compound Y – element Z – mixture	[1] [1] [1]						
7(c)(i)	Distillation	[1]						
7(c)(ii)	1. Boiling 2. Condensation	[1]						
8(a)(i)	Metal	[1]						
8(a)(ii)	<u>Very good/high thermal conductivity</u> thus <u>heat can be transferred quickly from the flame to the food</u> . <u>Very strong material</u> thus able to <u>support the heavy load (food) without breaking</u> .	[1] [1] or [1] [1]						
8(a)(iii)	Fibre is <u>flexible</u> thus able to <u>bend and stretch</u> and <u>return to its original shape</u> . Metal is <u>denser</u> and hence clothes made will be heavier.	[1]						
8(a)(iv)	1. Plastic has a <u>lower density</u> than glass so handle of the same size is <u>more light-weight</u> . 2. Plastic is <u>stronger</u> than glass so it can <u>support the heavy load in the pot better/without breaking</u> .	[1] [1] or [1] [1]						
8(b)(i)	Pencil line <u>does not dissolve</u> in the <u>solvent</u> and <u>interfere with the chromatography result</u> .	[1] [1]						
8(b)(ii)	2 dyes	[1]						
8(b)(iii)	Not harmful + all harmful chemicals are not present in GW.	[1]						

