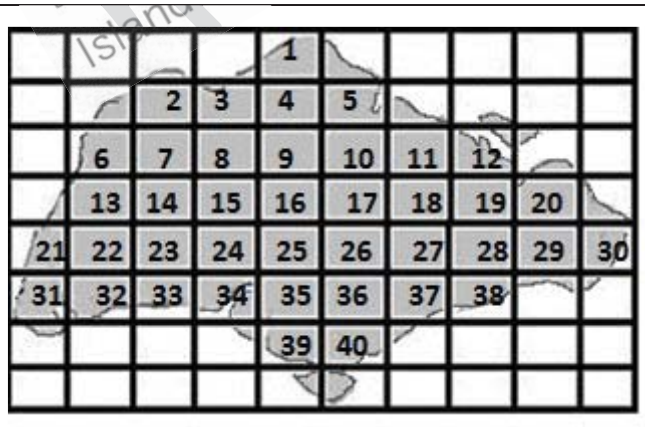
BEDOK VIEW SECONDARY SCHOOL
Sec 1E LSS
Mid -Year Examination / 2018

Confidential

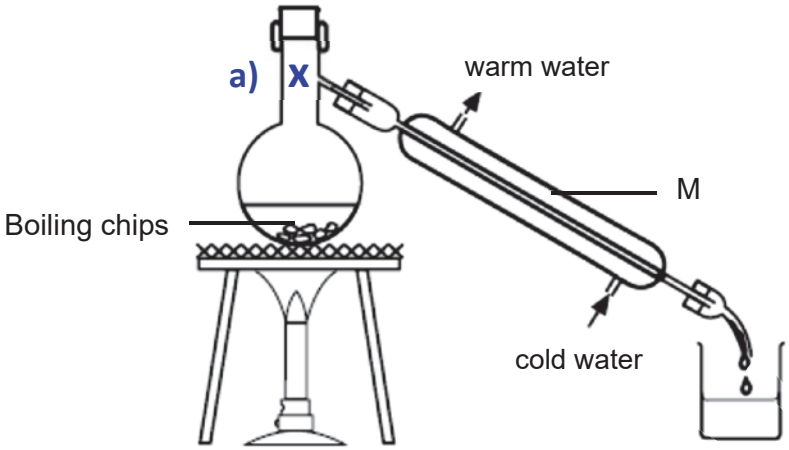
Marking Scheme
Section A – Multiple Choice Questions [10 marks]

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
B	B	C	D	C	C	D	B	B	D
Q11	**Q12**	**Q13**	**Q14**	**Q15**	**Q16**	**Q17**	**Q18**	**Q19**	**Q20**
C	B	D	C	A	C	A	C	A	D

Section B- [40 marks]

21	a)	J: beaker K: tripod stand No marks for spelling error	B1 B1
	b)	Wear safety googles when heating/ Long hair should be tied up when handling the Bunsen burner/ heating. Any 1 point (**close air –hole: must state when turning on Bunsen Burner to prevent strike-back**)	B1
	c)	Non-luminous flame. It is hotter flame. This allows more efficient heating. Accept: hotter flame/ burns more completely.	B1 B1
22	a)	At least 3	B1
	b)	If steel scratches glass, glass is less than 6. If the glass scratches fluorite, glass is more than 4. If fluorite scratches glass, glass is less than 4.	B1 B1 B1
23	ai)	1.25 kg = 1250 g	B1
	aii)	1.44 km = 144000 cm	B1
	b)	 40 grid units (accept between 40 to 43 grids) Area = 18 km^2 x 40 = km^2 (accept range 720 km^2 to 774 km^2)	B2

		If the grid unit counting is wrong but the step is the area calculation is correct, award 1 mark. If no step is shown, 0 mark.	
24	a)	The landfill is lined with impermeable membrane, marine clay and rock layers.	B1
	(b)	To trap/filter/prevent the large waste particles from entering the soil or sea.	B1
	(c)	To trap/filter/prevent the fine waste particles from entering the soil or sea.	B1
	(d)	Not all the solid waste can be filtered or trapped by the clay and rocks. [1] This also stops waste liquid from passing into the ocean. [1]	B2
	(e)	Any 1 point: With limited landspace, space for dumping waste will run out/ not be enough. [1] Some waste takes up space for a long time to breakdown e.g. non-biodegradable waste. [1]	B1
25	ai)	Mass: electronic balance / beam balance R: weighing scale	B1
	aii)	Volume: Measuring cylinder Or Displacement can **and** measuring cylinder.	B1
	bi)	Density of shell (*H. physis)* = 9 /5.5 = 1.64 g/cm^3 Please note future assessments: students should expressed in **decimal place** **to 3 significant figures**	M1 A1
	bii)	O. olivacea floats on the ocean/ sea water. [1] O. olivacea has a density of 0.57 g/cm^3 which is lower than density of sea water. [1]	B2
	c)	5	B1
	d)	Any one: • Increase in temperature of the ocean (accept decrease in temperature of ocean) • Pollution of the ocean • Invasion of predator such as crown of thorns starfish R: Marine life cause damage (too generic)	B1
26	a)	Independent variable: size of the sodium chloride/ particle size [1] **R: type of sodium chloride** Dependent variable: rate of dissolving/ time taken for sodium chloride to dissolve [1]	B2
	b)	Beaker B. [1] Fine/small particles have larger surface area [1] that comes in contact with the solvent.	A1 B1

27	a)	 Position of X must be just before vapour enters the condenser.	B1
	bi)	Cools the vapour to liquid. (must have all the 3 keywords)	B1
	bii)	For efficiency/effective of cooling of vapour to obtain maximum amount of distillate. Accept : Effective of cooling of vapour To obtain maximum amount of distillate.	B1
	c)	Any one: Smooth boiling is required to prevent splattering [1] of the mixture which may affect the thermometer reading of vapour. [1] Smooth boiling is required to prevent splattering [1] of the mixture which may affect the quality/purity of the distillate collected. [1] Violent boiling may affect the stability of the apparatus set-up [1] and cause accidents e.g. burns or damage to the apparatus [1]	B2
28	a)	Dye 4	B1
	b)	Dyes 1, 3 and 4	B1
	c)	No. One of the component in fruit juice P matches dye 2 which is banned/illegal. Accept: Fruit juice P is unsafe as it contains dye 2 which is banned/illegal.	B1 B1