

Question number	Answer	Notes	Marks
1	fossil; sulfur dioxide / nitrogen oxide / nitrogen dioxide; acid rain / sulphuric acid / nitric acid; carbon monoxide; haemoglobin; oxygen / O ₂ ; global warming; greenhouse; methane / CH ₄ ; CFCs / CFC's / CFC / chlorofluorocarbons / chlorinated fluorocarbons;		10

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2(a)	<ol style="list-style-type: none"> 1. other pollutants / nitrate / sediment in lake / eq; 2. only done once / reliability / different part of lake may vary / eq; 3. different sized disks may have been used; 4. different light conditions / time of day / time of year / weather / ripples / eq; 5. different people / different eyesight / poor vision / eq; 	<p>Ignore plants in lake / microorganisms</p> <p>Ignore human error</p>	2 max
(b)(i)	<ol style="list-style-type: none"> 1. as level of phosphate increases Secchi depth / visibility decreases / eq; 2. reference to Secchi depth levelling from 1990 / 5.0m / phosphate 140-142 onwards; 	<p>Allow 1993 / 4.5m / 155-157</p>	2
(ii)	<ol style="list-style-type: none"> 1. algal growth / plant growth / algal bloom / eq; 2. block light / eq; 3. plant death / no photosynthesis; 4. bacteria / microbes / decomposers / microorganisms / eq; 5. less oxygen / anoxic / eq; 6. respiration; 	<p>phosphate makes the water cloudy so no light can get through to plants = 1</p> <p>Ignore eutrophication</p>	5 max
(c)(i)	22;		1
(ii)	October;		1

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(d)(i)	depth is 0.5 / depth is less than 1.0 / less than minimum depth / disk not seen below 1.0m / eq;	allow idea of 'above' if clearly writing about nearer surface	1
(ii)	only one below 1.0 / second reading above 1.0 / <u>result</u> not repeated / could be an anomaly / some other months only had one reading / not enough readings made / eq;	Ignore only one reading made Ignore comments about change to turbidity / sand being disturbed Ignore human error	1

Total 13 marks

Question number	Answer	Notes	Marks
3 (a) (i)	deer;		1
(ii)	python;		1
(b) (i)	1. hear/listen to prey/predators / eq; 2. eat loss;	hear sound = 0	1
(ii)	camouflage / hide from prey/predators / eq;	ignore to keep warm	1
(iii)	see prey/predators/further / appear bigger / reach branches / climb trees / eq;	see alone = 0 ignore ideas about faster movement	1
(c)	1. idea of more carbon dioxide + less oxygen; 2. less) photosynthesis;	ignore carbon dioxide is not changed into oxygen	2

(Total for Question = 7 marks)

Question number	Answer	Notes	Marks
4	dioxide; acid; carbon; haemoglobin; carbon dioxide / water <u>vapour</u> ; fossil; methane; greenhouse; global warming; habitat;	ignore climate change	10
		Total	10

Question number	Answer	Notes	Marks
5	C different light periods / eq; O same species / same variety / age / eq; R repeat / eq; M1 time to produce flowers / number of flowers produced / how long to produce flowers / eq; M2 days / weeks / months / use watch / clock / eq; S1+S2 same temperature / light <u>intensity</u> / CO ₂ / water/ humidity / minerals / nutrients / soil / pH / eq;;	allow in light and in dark ignore different light intensities allow flowers as eq to plants	Max 6
		Total	6