

Question number	Answer	Notes	Marks																				
1	<table border="1"> <thead> <tr> <th>Structure</th> <th colspan="3">Organism</th> </tr> <tr> <td></td> <td>bacteria</td> <td>fungi</td> <td>viruses</td> </tr> </thead> <tbody> <tr> <td>cell wall</td> <td>✓</td> <td>✓</td> <td>x;</td> </tr> <tr> <td>nucleus</td> <td>x</td> <td>✓</td> <td>x;</td> </tr> <tr> <td>chloroplast</td> <td>(✓)</td> <td>x</td> <td>x;</td> </tr> </tbody> </table>	Structure	Organism				bacteria	fungi	viruses	cell wall	✓	✓	x;	nucleus	x	✓	x;	chloroplast	(✓)	x	x;	<p>If no X s and all ✓ in correct places allow Max 2</p>	3
Structure	Organism																						
	bacteria	fungi	viruses																				
cell wall	✓	✓	x;																				
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Total 3 marks

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2 (a)	<table border="1"> <thead> <tr> <th rowspan="2">Group</th> <th colspan="4">Fe re</th> </tr> <tr> <th>Cell wall</th> <th>Plasmid</th> <th>Cytoplasm</th> <th>Nucleus</th> </tr> </thead> <tbody> <tr> <td>bacteria</td> <td>✓</td> <td>✓</td> <td>(✓)</td> <td>✗</td> </tr> <tr> <td>fungi</td> <td>✓;</td> <td>✗;</td> <td>✓</td> <td>(✓)</td> </tr> <tr> <td>protocists</td> <td>(✗)</td> <td>✗)</td> <td>✓;</td> <td>✓;</td> </tr> </tbody> </table>	Group	Fe re				Cell wall	Plasmid	Cytoplasm	Nucleus	bacteria	✓	✓	(✓)	✗	fungi	✓;	✗;	✓	(✓)	protocists	(✗)	✗)	✓;	✓;	<p>one mark for each correct column</p> <p>hybrid cross tick = 0</p> <p>empty box = 0</p>	4
Group	Fe re																										
	Cell wall	Plasmid	Cytoplasm	Nucleus																							
bacteria	✓	✓	(✓)	✗																							
fungi	✓;	✗;	✓	(✓)																							
protocists	(✗)	✗)	✓;	✓;																							
(b) ()	virus / eq;	<p>allow named virus</p> <p>allow prion</p> <p>allow nematodes</p> <p>allow helminths</p>	1																								
(ii)	malaria / dysentery / sleeping sickness / giardiasis / toxoplasmosis / eq;		1																								

Total 6 marks

Question number	Answer	Notes	Marks
3 (a)	E; C;		2
(b)	1. can be used in the production of beer; 2. cell wall is made of chitin;	3 ticks max 1 4 ticks or more = 0	2

Question number	Answer	Notes	Marks
4		<p>5 = 4 4 = 3 3 or 2 = 2 1 = 1</p>	4

Total 4 marks

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5 (a)	Group	Can carry out photosynthesis	Have a cell wall	Can be pathogenic	hybrid cross tick = 0 blank = 0 8 = 4 7/6 = 3 5/4 = 2 3/2 = 1 1/0 = 0	4														
	bacteria	✓	✓	✓																
	fungi		✓	✓																
	viruses		X	✓																
(b)	<table border="1"> <thead> <tr> <th>Characteristic</th> <th>Example of this process</th> </tr> </thead> <tbody> <tr> <td>they require nutrition</td> <td>eating food</td> </tr> <tr> <td>they respire</td> <td>releasing energy from carbohydrate</td> </tr> <tr> <td>movement / eq;</td> <td>some animals can fly</td> </tr> <tr> <td>they control their internal conditions</td> <td>blood glucose / blood pressure / body temperature / sweating / osmoregulation / eq;</td> </tr> <tr> <td>reproduce / eq;</td> <td>increase of the population of foxes</td> </tr> <tr> <td>they grow</td> <td>cells divide / increase in mass / size / get bigger / increase in height / eq;</td> </tr> </tbody> </table>				Characteristic	Example of this process	they require nutrition	eating food	they respire	releasing energy from carbohydrate	movement / eq;	some animals can fly	they control their internal conditions	blood glucose / blood pressure / body temperature / sweating / osmoregulation / eq;	reproduce / eq;	increase of the population of foxes	they grow	cells divide / increase in mass / size / get bigger / increase in height / eq;		4
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5 (c)	receptor / nerve ending; sensory neurone / sensory nerve; impulse / message / signal; CNS / spinal cord / grey matter; synapse; relay neurone / relay nerve; motor neurone ; muscle / effector; contract;	sensory or motor not in correct order = 0 ignore brain allow intermediate / association;	5
		Total	13