Question 1



BEYOND SCIENCE

Question	Answers	Extra information	Mark
01.1	Level 3: There is a clear and detailed description of the steps, including the correct names for each part of the microscope.		5 - 6
	Level 2: Most of the steps are described. Some parts of the microscope may not be named.		3 - 4
	Level 1: There are simple statements that give some steps of the method.		1 - 2
	Two marks can be given for two correct statements.		
	No relevant content.		0
	Indicative content:		
	 place the dinoflagellate onto a sli suitable container 	de/into a Petri dish/	
	 place the slide on the stage 		
	 centre the dinoflagellate/slide/specimen and secure with the stage clips 		
	• turn on the microscope lamp or angle the mirror		
	 turn the objective lens to the lowest magnification 		
	 look down the eyepiece lens 		
	 use the focusing wheel(s) to bring the dinoflagellate/ specimen into focus 		
	 turn the objective lens to a higher magnification 		
01.2	the site of (aerobic) respiration/ where respiration takes place	Allow correct equation for aerobic respiration.	1
		Do not allow anaerobic respiration.	
01.3	Any one from:		1
	• it does not have a (cell) wall		
	 it has a flagellum or tail to help it move/swim 	Accept it can move or swim.	
		Accept it has a tail.	
	 it has a pusule for taking in food 	Accept it takes in food or eats.	
		Accept it has a mouth- like structure.	

01.4	Any one from:		1
	 it has a chloroplast 	Accept chlorophyll.	
	• it has a vacuole		
01.5	in the dinoflagellate, (the genetic material) is stored in the nucleus	Assume 'it' refers to the genetic material.	1
	in a bacterial cell, (the genetic material) is free in the cytoplasm	Allow it has (circular) DNA <u>instead of a</u> <u>nucleus.</u>	1
		Allow (the genetic material) is not in a nucleus.	
Total			11

Question 2

Question Extra information Mark Answers 02.1 Do **not** allow produce/ to release energy 1 make/create energy. (so) the <u>cilia</u> can move 1 1 02.2 tissue (sperm cells) do not work together 1 02.3 02.4 reproductive system 1 (the cilia can) carry/move the egg 02.5 1 cell (through the tubes) Total 6

Question 3

Question	Answers	Extra information	Mark
03.1	to protect organs	Allow named organ	1
	or	protected by the ribs.	
	to keep organs in place		
03.2	to make/help you move	Allow named movement	1
	or	that involves the legs.	
	to support the body		
03.3	the elbow is a hinge joint		1
	(so) can move forwards and backwards		1
	the shoulder is a ball and socket joint		1
	(so) can move in all directions		1
03.4	cartilage protects/cushions/covers the ends of the bones	Allow acts as a shock absorber.	1
	fluid reduces friction in the joint	Allow keeps the cartilage slippery.	1
	without them the (ends of the) bones will rub against each other		1
Total			9