

# Respiration

## Mark Scheme 2

<b>Level</b>	IGCSE(9-1)
<b>Subject</b>	Biology
<b>Exam Board</b>	Edexcel IGCSE
<b>Module</b>	Single Award (Paper 2B)
<b>Topic</b>	Structure and Functions in Living Organisms
<b>Sub-Topic</b>	Respiration
<b>Booklet</b>	Mark Scheme 2

**Time Allowed:** 20 minutes

**Score:** /16

**Percentage:** /100

**Grade Boundaries:**

9	8	7	6	5	4	3	2	1
>90%	80%	70%	60%	50%	40%	30%	20%	10%

Question number	Answer	Notes	Marks
1 (a) (i)	1. distribute food / nutrients / eq; 2. distribute oxygen; 3. even out temperature / distribute heat;	2. ignore air 3. ignore maintain temperature constant	2
(ii)	1. optimum / best / suitable for enzymes; 2. prevent denaturation / prevent change to active site;	2. ignore death of microbes	2
(iii)	insulin / antibiotics / enzymes / hormones / yeast / amino acids / clotting factors / gibberellin / eq;	reject ethanol / beer / biogas / yoghurt / medicine / drugs	1
(b)	1. stop air supply / stop oxygen supply; 2. open pressure release valve / have exit pipe (for biogas) / eq;	1. ignore reduce air supply / remove air filter	2

**Total 7 marks**

Question number	Answer	Notes	Marks
2 (a)	1. enzymes; 2. <u>optimum</u> (pH); 3. <u>denatured</u> ; 4. <u>active site</u> altered / eq; 5. maintain production / affect production / eq;	Ignore destroyed	3 max
(b)	1. water jacket / cooling water / eq; 2. insulation / eq; 3. temperature sensor / temperature probe / temperature recorder / thermostat / eq;	Ignore thermometer	max 2
(c)	1. oxygen ; 2. <u>aerobic</u> respiration / eq; 3. mix / eq;		max 2

(d)	1. sterilise / aseptic / kills microorganisms / eq; 2. cools to) water / condenses; 3. prevent competition from unwanted organisms / produce different product / eq; 4. prevent chemical contamination of product;		2 max
			Total 9 marks