

# IGCSE Biology 4325/1F

## Mark Scheme (Results)

### November 2008

IGCSE

## IGCSE Biology (4325/1F)

The following acronyms are used

<b>owtte</b>	or words to that effect
<b>ecf</b>	error carried forward
<b>dop</b>	dependent on previous
<b>nwn</b>	no working necessary

Question Number	Correct Answer	Notes	Mark
1	(a) B		1
	(b) B		1
	(c) A		1
	(d) B		1
	(e) D		1
	(f) C		1
	(g) A		1
	(h) B		1
	(i) B		1
	(j) D		1
			<b>(10)</b>

(Total 10 marks)

Question Number	Correct Answer	Notes	Mark
2 (a) (i)	oxygen; carbon dioxide; water vapour; nitrogen / other correctly named gas;		<b>Max (2)</b>

Question Number	Correct Answer	Notes	Mark
2 (a) (ii)	bronchus; alveolus;		<b>(2)</b>

Question Number	Correct Answer	Notes	Mark
2 (b) (i)	peristalsis; muscles; contract / squeeze / eq;		<b>Max (2)</b>

Question Number	Correct Answer	Notes	Mark
2 (b) (ii)	stomach;		<b>(1)</b>

**(Total 7 marks)**

Question Number	Correct Answer		Notes	Mark
3	<b>Function of organ</b>	<b>Name of organ</b>		
	Removes carbon dioxide from the body	lung;		
	Stores urine	bladder;		
	Removes urea from blood	kidney;		
	Releases sweat from the body	skin;		
				<b>(4)</b>

(Total 4 marks)

Question Number	Correct Answer	Notes	Mark
4 (a)	line showing positive correlation;		(1)

Question Number	Correct Answer	Notes	Mark
4 (b) (i)	as pH increases, number of birds increases / eq;		(1)

Question Number	Correct Answer	Notes	Mark
4 (b) (ii)	low ph decreases insects/food; less birds; OR high ph increases insects/food; more birds;		(2)

Question Number	Correct Answer	Notes	Mark
4 (c)	sulphur dioxide / nitrous oxide / carbon dioxide;		(1)

(Total 5 marks)

Question Number	Correct Answer	Notes	Mark
5 (a)	less light; photosynthesis;		(2)

Question Number	Correct Answer	Notes	Mark
5 (b)	water; minerals / ions / named mineral;		(2)

Question Number	Correct Answer	Notes	Mark
5 (c) (i)	10;		(1)

Question Number	Correct Answer	Notes	Mark
5 (c) (ii)	0.31;;		(2)

Question Number	Correct Answer	Notes	Mark
5 (c) (iii)	better yield with herbicide;		(1)

(Total 8 marks)

Question Number	Correct Answer	Notes	Mark
6	fungi; Accept decomposers ONCE bacteria; increases / eq; oxygen; gasp / die / eq;		(5)

(Total 5 marks)



Question Number	Correct Answer		Notes	Mark
7 (a)	<b>Body part harmed by cancer</b>	<b>Section</b>		<b>(5)</b>
	Pancreas	(B)		
	Mouth	A;		
	Bladder	C;		
	Stomach	B;		
	Lung	B;		
	Testis	D;		

Question Number	Correct Answer	Notes	Mark
7 (b) (i)	all correct = 2 / two or one correct = 1;;		<b>(2)</b>

Question Number	Correct Answer	Notes	Mark
7 (b) (ii)	group 1 / non smoker who does not work with asbestos;		<b>(1)</b>

Question Number	Correct Answer	Notes	Mark
7 (b) (iii)	increases risk; 5times;		<b>(2)</b>

Question Number	Correct Answer	Notes	Mark
7 (b) (iv)	smoker versus non smoker has increased risk;		<b>(1)</b>

**(Total 11 marks)**

Question Number	Correct Answer	Notes	Mark
<b>8 (a) (i)</b>	cell wall; cytoplasm; nucleus; vacuole;		<b>(4)</b>

Question Number	Correct Answer	Notes	Mark
<b>8 (a) (ii)</b>	amylase / carbohydrase; amino acids / polypeptides / peptides; lipase;		<b>(3)</b>

Question Number	Correct Answer	Notes	Mark
<b>8 (b)</b>	digestion / breakdown / decay / eq; nitrate / phosphate / other named mineral ion; carbon dioxide; respiration; photosynthesis;		<b>(5)</b>

**(Total 12 marks)**

Question Number	Correct Answer	Notes	Mark
9 (a) (i)	plasma;		(1)

Question Number	Correct Answer	Notes	Mark
9 (a) (ii)	transport cells / salts / vitamins / hormones / carbon dioxide / urea / digested food / maintain blood volume / pressure / eq;		Max (1)

Question Number	Correct Answer	Notes	Mark
9 (b) (i)	white blood cells / leucocytes / phagocytes / lymphocytes;		(1)

Question Number	Correct Answer	Notes	Mark
9 (b) (ii)	engulf / eq; produce antibodies; destroy/kill/digest pathogens/bacteria / eq;		Max (2)

Question Number	Correct Answer	Notes	Mark
9 (c)	red cells / erythrocytes;		(1)

Question Number	Correct Answer	Notes	Mark
9 (d)	lack of oxygen; lack of glucose; respiration; to brain / heart / other named organ / cells; low blood pressure;  <i>Ignore lungs/body</i>		Max (2)

(Total 8 marks)

Question Number	Correct Answer	Notes	Mark
<b>10 (a)</b>	A; warm + oxygen + water; enzyme; respiration; dissolve/digest/mobilise/activate;		<b>1</b>  <b>Max 3</b> <b>(4)</b>

Question Number	Correct Answer	Notes	Mark
<b>10 (b) (i)</b>	starch;		<b>(1)</b>

Question Number	Correct Answer	Notes	Mark
<b>10 (b) (ii)</b>	digestion / breakdown / hydolysis; maltose / glucose; respiration / energy; synthesis (eg cell walls);		<b>Max</b> <b>(2)</b>

**(Total 7 marks)**

Question Number	Correct Answer	Notes	Mark
11 (a) (i)	aphids in middle; arrows correct;		(2)

Question Number	Correct Answer	Notes	Mark
11 (a) (ii)	reduce (yield) /less tomatoes; eat/feed on leaves/plants / sugars; less photosynthesis;		Max (2)

Question Number	Correct Answer	Notes	Mark
11 (a) (iii)	biological control;		(1)

Question Number	Correct Answer	Notes	Mark
11 (b)	affects <u>other</u> species / not specific; affects humans/ poisonous to humans / affects taste; bioaccumulation; food chain disruption; pollution; needs reapplication; resistance; Ignore immune		Max (3)

(Total 8 marks)

Question Number	Correct Answer	Notes	Mark
12	enucleated egg cell / egg nucleus removed / empty egg cell; nucleus; from skin / from father's cell; electric treatment / stimulation of cell division; in vitro/eq; mitosis; <u>embryo</u> ; uterus / womb; surrogate (mother);		<b>(5)</b>

**(Total 5 marks)**

Question Number	Correct Answer	Notes	Mark
13 (a)	two / both / same; h / hh / not dominant / not showing;		(2)

Question Number	Correct Answer	Notes	Mark
13 (b)	hh and Hh; h and H and h; Hh and hh; Huntington and normal;		(4)

Question Number	Correct Answer	Notes	Mark
13 (c) (i)	brain; spinal cord; Ignore spine		(2)

Question Number	Correct Answer	Notes	Mark
13 (c) (ii)	neurones / nerve <u>cells</u> / sensory; electrical / impulses; synapses;		Max (2)

(Total 10 marks)