Independent Schools Examinations Board

COMMON ENTRANCE EXAMINATION AT 13+

SCIENCE

BIOLOGY

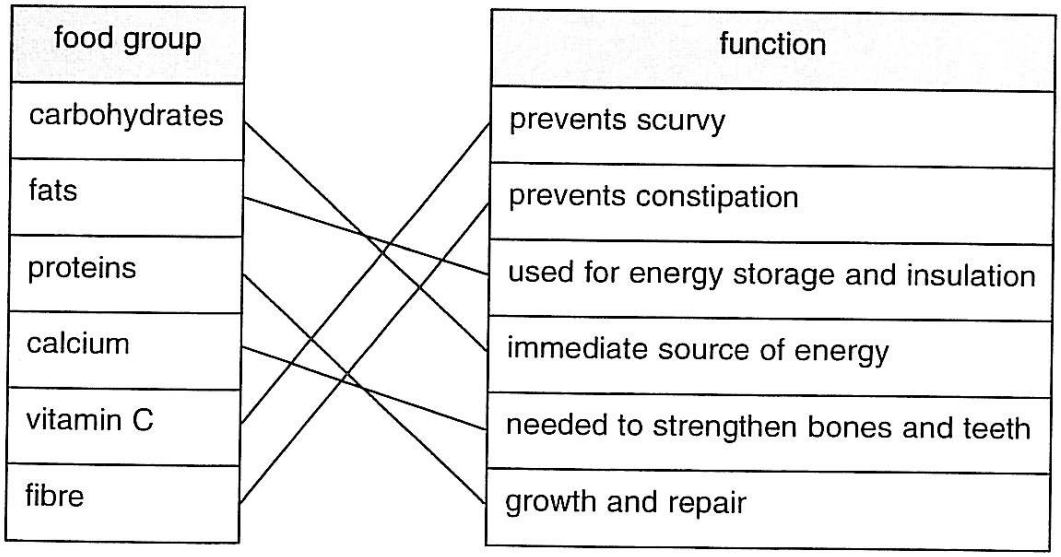
MARK SCHEME

This is a suggested, not a prescriptive, mark scheme.

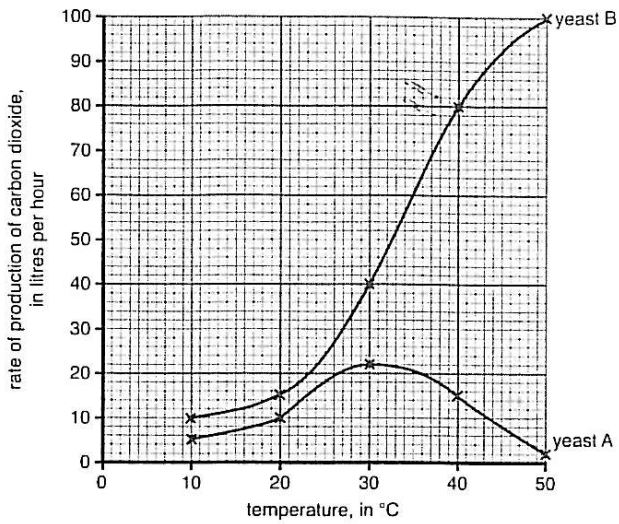
Monday 25 January 2010

283102M129

© Independent Schools Examinations Board

Q.	Answer	Mark	Additional Guidance
1. (a)	a bird	8	
(b)	the Sun		
(c)	food store		
(d)	a sperm cell		
(e)	controls the cell		
(f)	a habitat		
(g)	both animals and plants		
(h)	absorb minerals from the soil		
2. (a)		6	
(b)	the correct food types in the correct amounts to stay healthy	2	any two ideas
3. (a)	B = lung C = stomach D = (large) intestine	3	
(b)	enzyme	1	
(c)	digested food is absorbed into bloodstream across the wall of the small intestine (by diffusion)	2	any appropriate answer

Q.	Answer	Mark	Additional Guidance
4. (a)	each heart beat/contraction of the heart can be felt as a pulse (of blood) in the wrist	2	2 marks if there is a clear link between pulse rate and heart rate
(b) (i)	both pulse rates increased	1	
(ii)	during exercise the heart pumps faster to increase blood supplies more oxygen/food/glucose to muscles increases respiration and removes waste products	3	any three appropriate ideas
(c)	Louise is fitter than John Louise has a bigger heart errors in the experiment	1	one of these for 1 mark
(d)	Louise and John are different genders/they have different masses/different diets/different previous activity/different training/different measuring technique	2	any two appropriate ideas
5. (a)	hair/fur/mammary glands/warm blood/live young	2	any two suggestions
(b)	fewer predators/less competition for food/less hot/prey is nocturnal	1	any one suggestion
(c)	large eyes to see prey in dim light large ears to hear prey moving in the darkness	4	credit any suitable feature and explanation
(d)	breeding programme in zoos/moving them to other areas/protection orders on forest/ protection of bush babies/promoting alternatives to wood/different fuels being used	4	credit up to four ideas or two ideas fully explained
6. (a)	yeast cells use the energy to grow/repair damage/reproduce	1	
(b)	yeast makes the alcohol in beer and wine	1	

Q.	Answer	Mark	Additional Guidance
(c) (i) (ii)		**2** **1**	2 marks for all points correct 1 mark if there is one error 0 marks for more than one error
(d)	yeast **B** produces more carbon dioxide than yeast **A** at any temperature yeast **B** produces carbon dioxide at a higher temperature than yeast **A**	**2**	credit appropriate use of figures
(e)	yeast **B** it respires faster at higher temperatures than yeast **A** it will produce alcohol more efficiently than yeast **A** it produces more carbon dioxide/more alcohol	**2**	give credit for the explanation, not the prediction
7. (a)	men's consumption has increased between 2004–2006 women's consumption has increased between 2004–2006 men's level is higher (ora) women's increasing at faster rate figure quote	**4**	any four valid points
(b)	liver disease/increase fat/increase in heart disease/increased depression/ increased risk of accidents	**3**	any three valid points
(c)	stop smoking/take more exercise/eat more fruit/vegetables/eat less salt/less fat	**2**	any two valid points
Total		**60**	