



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



283102M29

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Q.	Answer	Mark	Additional Guidance
1. (a)	a bird (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	8	
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	any three appropriate ideas
(ii)	during exercise the heart pumps faster to increase blood supplies more oxygen/food/glucose to muscles increases respiration and removes waste products	3	
(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)	<p>yeast B produces more carbon dioxide than yeast A at any temperature</p> <p>yeast B produces carbon dioxide at a higher temperature than yeast A</p>	2	credit appropriate use of figures
(e)	<p>yeast B</p> <p>it respire faster at higher temperatures than yeast A</p> <p>it will produce alcohol more efficiently than yeast A</p> <p>it produces more carbon dioxide/more alcohol</p>	2	give credit for the explanation, not the prediction
7. (a)	<p>men's consumption has increased between 2004–2006</p> <p>women's consumption has increased between 2004–2006</p> <p>men's level is higher (ora)</p> <p>women's increasing at faster rate</p> <p>figure quote</p>	4	any four valid points
(b)	<p>liver disease/increase fat/increase in heart disease/increased depression/increased risk of accidents</p>	3	any three valid points
(c)	<p>stop smoking/take more exercise/eat more fruit/vegetables/eat less salt/less fat</p>	2	any two valid points
Total		60	