

Mark scheme

Question			Answer/Indicative content	Marks	Guidance
1			D	1	<p><u>Examiner's Comments</u></p> <p>The question requires knowledge of the structure and function of a liver lobule. Candidates that determined option D as the correct response were able to correctly identify labelled structures in the diagram. Identifying I as the hepatic vein, G as the hepatic portal vein and H as the hepatic artery (recalling that arteries have a narrower lumen).</p>
			Total	1	
2			B	1	<p><u>Examiner's Comments</u></p> <p>Candidates who were able to interpret a stained section of the liver and correctly identify structure J as (a branch of) the hepatic portal vein chose option B as the correct response.</p> <p> Assessment for learning</p> <p>Showing students images of photomicrographs from which they need to identify structures and describe what they see may help them to answer similar questions in the future.</p>
			Total	1	
3			C	1	<p><u>Examiner's Comments</u></p> <p>Many candidates were able to apply knowledge of the ornithine cycle to select option C as a correct response.</p>

					Some candidates chose incorrect option D , perhaps thinking that the ornithine cycle makes urea less harmful. Other chose option A , possibly failing to recall the fact that amino acids need to be deaminated before the product, ammonia, enters the ornithine cycle.										
			Total	1											
4	a	body fat / glycogen , broken down / used for respiration ✓ (respired to) produce carbon dioxide and water ✓ carbon dioxide / water / waste products from respiration , excreted (so body mass is lost) ✓		max 2 (AO2.5)	IGNORE urea ALLOW e.g. carbon dioxide removed from the lungs / exhaled Examiner's Comments Good responses used correct scientific terminology to describe that body fat would be respired (aerobically) to form carbon dioxide which would then be excreted, hence losing mass. Some responses were too vague, referring to the breakdown of fat (from diet) without identifying this as stored body fat.										
	b	<table border="1"> <thead> <tr> <th>True</th> <th>False</th> </tr> </thead> <tbody> <tr> <td>✓</td> <td></td> </tr> <tr> <td></td> <td>✓</td> </tr> <tr> <td>✓</td> <td></td> </tr> <tr> <td>✓</td> <td></td> </tr> </tbody> </table>	True	False	✓			✓	✓		✓		✓ ✓	2 (AO1.2)	All four correct for 2 marks Two or three correct for 1 mark Examiner's Comments Scripts showed evidence of the correction from the erratum notice and there was no evidence to show any impact on responses. Only high attaining candidates achieved both marks for this question. Erratum notice <div style="border: 1px solid black; padding: 5px;"> <p><small>Instructions to Invigilators:</small> Before the start of the exam, please read the following notice out twice to candidates:</p> <p>Turn to page 26 of the question paper and look at question 19(a).</p> <p>The third row of the table reads: 'Urea is less soluble and less toxic than ammonia.'</p> <p>Cross out the word 'that' and replace with 'than'.</p> <p>The third row of the table should now read: Urea is less soluble and less toxic than ammonia.</p> </div>
True	False														
✓															
	✓														
✓															
✓															
		Total		4											