Question	Answer	Marks	Guidance
1.1	molecules made from a large number of monomers joined together	1	
1.2	D	1	
1.3	hydrolysis (reaction)	1	
2.1	precise — measurements are close to a mean value reproducible — another person gets the same results anomaly — value in a set of results is ruled out as erroneous accurate — result is close to true vale repeatable — original experimenter gets the same results if they do it again	2	2 marks for all correct 1 mark for two or three correct
2.2	B	1	
2.3	D	1	
3.1	D	1	
3.2	A	1	
4.1	glycosidic (bond)	1	

<table>
<tr><td>4.2</td><td>mix with sodium hydroxide solution and copper(II) sulfate solution
purple colour forms if protein present</td><td>1
1</td><td>Biuret test is insufficient</td></tr>
<tr><td>5.1</td><td><table><tr><th>prefix</th><th>index</th></tr><tr><td>micro</td><td>10^{-6}</td></tr><tr><td>micro</td><td>10^{-3}</td></tr><tr><td>centi</td><td>10^{-2}</td></tr><tr><td>nano</td><td>10^{-9}</td></tr><tr><td>kilo</td><td>10^{3}</td></tr></table></td><td>2</td><td>2 marks for all correct
1 mark for three or four correct</td></tr>
<tr><td>5.2</td><td>A</td><td>1</td><td></td></tr>
<tr><td>6.1</td><td>lowers the activation energy</td><td>1</td><td></td></tr>
<tr><td>6.2</td><td>Any three from:
temperature
pH
enzyme concentration
substrate concentration
inhibitor concentration</td><td>3</td><td></td></tr>
<tr><td>6.4</td><td>competitive inhibitors occupy the active site of the enzyme
non-competitive inhibitors change the shape of the active site by binding in another location.</td><td>2</td><td></td></tr>
</table>

7.1	**A:** 56 cm^3	1	Accept 55 cm^3
	± 0.5 cm^3	1	
	B: 96 cm^3	1	
	± 1 cm^3	1	
	C: 47 mm	1	
	± 1 mm	1	
7.2	**A:** 0.9% (0.89%)	1	
	B: 1.0% (1.04%)	1	
	C: 2.1% (2.13%)	1	