

		Marks
Question 32 — Forensic Chemistry (25 marks)		
(a)	(i) Identify the functional group in glycerol.	1
	(ii) Compare the reactions of both glycerol and 1-propanol when they react with cold dilute KMnO_4 .	3
(b)	Discuss the value of electron spectroscopy and scanning tunnelling microscopy in the analysis of small samples in forensic chemistry.	4
(c)	(i) What class of compounds is used to break proteins into fragments of different lengths?	1
	(ii) Describe the processes of electrophoresis and chromatography in separating organic compounds.	4
(d)	During your practical work you performed a first-hand investigation to describe the emission spectrum of sodium.	
	(i) Name the piece of equipment you used to analyse the emission spectrum of sodium in the laboratory.	1
	(ii) Outline the procedure that you used in this investigation.	2
	(iii) Explain how the emission spectrum was produced.	3
(e)	Discuss the uses of DNA analysis in forensic chemistry.	6

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