1

1

1

1

1

1

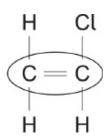
1

1

Mark schemes

Q1.

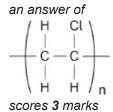
(a)



(b) C-C bond

3x C-H and 1x C-Cl bonds

2x single bonds extending through brackets and n below halfway



- composites (c)
- (d) water

allow H₂O

 $(M_r \text{ of NH}_2 \text{ and COOH}) = (2 \times 1) + 14 + 12 + (2 \times 16) + 1 =) 61$ (e)

 $(M_r \text{ of section} = 75 - 61) = 14$ allow correct use of incorrectly determined M_r of NH₂ and COOH

1

1

1

$$\begin{array}{c} \text{(f)} \\ & \begin{array}{c} \text{CH}_2\text{OH} \\ & \\ \text{H} \\ \text{C} \\ \text{O} \\ \text{O} \\ \text{H} \\ \text{O} \\ \text{O} \\ \text{O} \\ \text{H} \\ \text{O} \\ \text{$$

(g) starch

allow cellulose allow glycogen allow polysaccharide

(h) nucleotides

(i) double helix

ignore DNA

[12]