

Practice Question Set For A-Level

Subject : Chemistry

Paper-2 Topic: Polymers

Name of the Student: _____

Max. Marks : 23 Marks

Time : 23 Minutes

Mark Schemes

Q1.

C

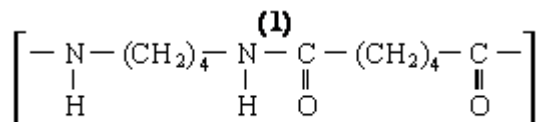
[1]

Q2.

- (a) 1, 4-diaminobutane or butane -1, 4-diamine **(1)**
 A: BrCH₂CH₂Br or ClCH₂CH₂Cl **(1)**
 B: NC CH₂CH₂CN
 Step 1: Br₂ or Cl₂ **(1)** **(ignore aq)**
 Step 2: KCN **(1)** **(NOT HCN)**
 Step 3: H₂ / Ni or LiAlH₄ or Na / C₂H₅OH **(1)** **(NOT NaBH₄)**
 Hydrogenation only for H₂ / Ni, or nucleophilic addition only for LiAlH₄**(1)**

OR reduction or addition

7



- (b) **(1)**

QL hydrogen bonding **(1)**

Polarity of H-bonding shown or discussed **(1)**

4

- (c) Polyamides / peptide link can be hydrolysed **(1)**
OR polyalkenes cannot be hydrolysed

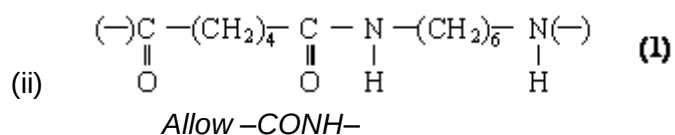
QL OH⁻ attacks peptide link or C^{δ+} **(1)**
 poly(ethene) non-polar **(1)**

3

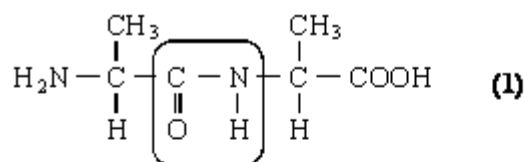
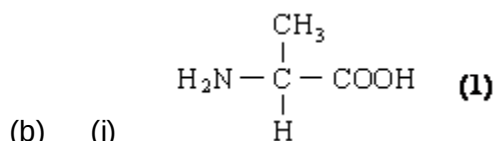
[14]

Q3.

- (a) (i) hexane-1,6-diamine or 1,6-diaminohexane (**allow ammine**)
or 1,6 hexan(e)diamine **(1)**

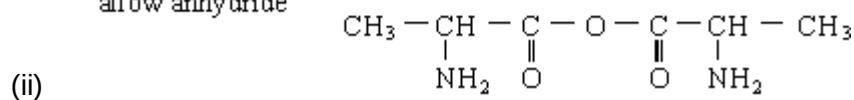


2



peptide link essential : the rest is consequential on b(i)
(allow CONH)

allow anhydride



2

- (c) (i) quaternary ammonium bromide salt **(1)**

(not ion, not compound)

Allow quaternary

- (ii) *Reagent:* CH₃Br or bromomethane **(1)**

penalise CH₃Cl but allow excess for any halomethane

Condition: excess (CH₃Br) **(1)**

- (iii) nucleophilic substitution **(1)**

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[8]