Practice Question Set For A-Level
Subject : Chemistry
Paper-2 Topic: Polymers

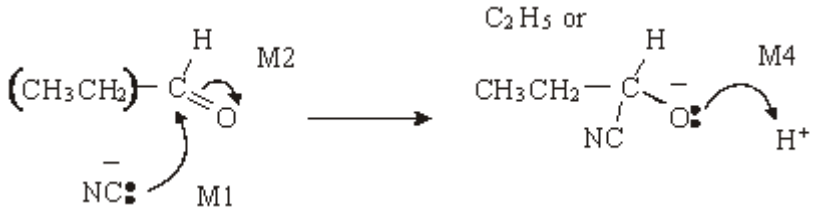
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Name of the Student:_____
Max. Marks : 23 Marks **Time : 23 Minutes**

Mark Schemes

Q1.

(a) necleophilic addition;



1

M3 structure;

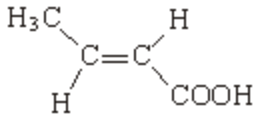
(be lenient on position of charge on CN–)
(M2 not allowed independent of M1,
but allow M1 for correct attack on C+
if M2 show as independent first.)
(+on C of C=O loses M2 but ignore δ+ if correct)
(M4 for arrow and lone pair (only allow for correct M3 or close))

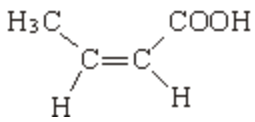
4

(b) (i) 2-hydroxybutanoic acid

1

(ii)



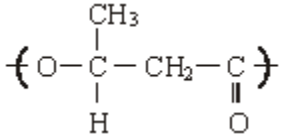


1

geometric(al) or cis-trans

1

(c) (i)



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(one unit only) (ignore brackets or n) (trailing bonds are needed)

1

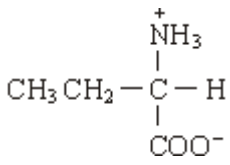
(ii) can be hydrolysed

OR

can be reacted with/attacked by acid/base/nucleophiles/H_2O/OH^-;

1

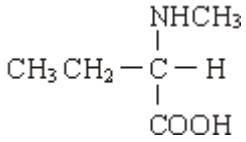
(d) (i)



(allow $-NH_3^+$)

1

(ii)



(or zwitterions product)

1

(iii) nucleophilic substitution;

1

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Q2.

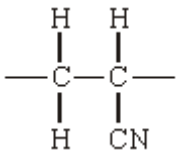
B

[1]

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Q3.

(a) (i)



(Ignore n or brackets, but trailing bonds are essential)

1

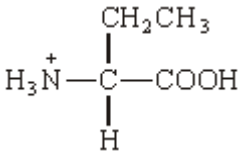
(ii) Addition or radical

1

(b) (i) 2-aminobutanoic (acid)

1

(ii)

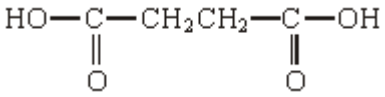


1

(c) (i) $C_3H_4O_2$

1

(ii)



1

(1,4-)butan(e)dioic (acid)

(allow succinic, but not dibutanoic nor butanedicarboxylic acid)

1

(iii) Can be hydrolysed / can react with acid or base or water / can react with nucleophiles

1

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