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

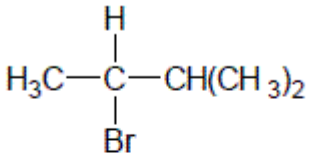
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**Name of the Student**:_____
**Max. Marks : 17 Marks** **Time : 17 Minutes**

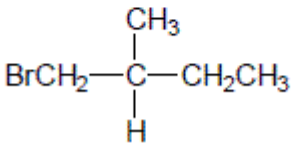
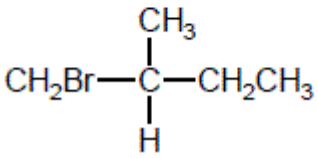
Mark Schemes

Q1.

(a) (i)



must be **branched** and chiral

or  or 

*not allow $C_3H_7$*
*allow $C_2H_5$ bonded to C either way round*

**1**

(ii) elimination
*allow base – elimination*
*but penalise any other qualification*

**1**

(iii) Z-pent-2-ene or cis-pent-2-ene either Z or cis is necessary
(allow Z-2-pentene or cis-2-pentene)
*with or without brackets around Z*
*with or without hyphens*

**1**

(b) (i) C

**1**

(ii) A

**1**

(iii) B

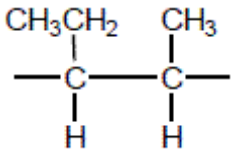
**1**

(iv) D

**1**

(c)

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*allow $C_2H_5$ bonded via C or H*
*must have both trailing bonds*
*ignore brackets or n*

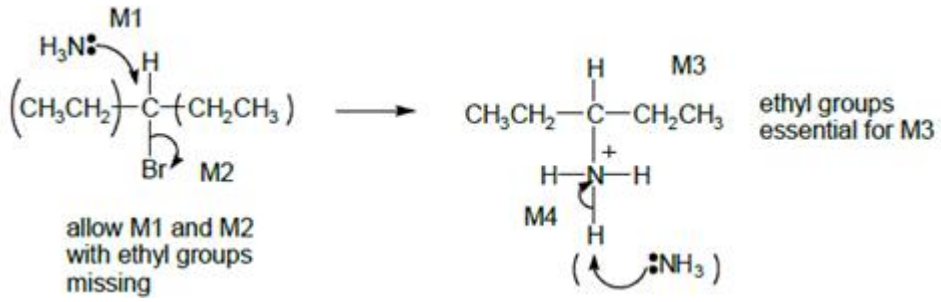
**1**

addition or radical or step or chain growth

*QOL not additional*

**1**

(d) (i)




*Allow SN1, i.e M2 first then attack of $NH_3$ on carbocation.*
*Allow $C_2H_5$ in M3 bonded either way*
*Allow with or without $NH_3$ to remove $H^+$ in M4, but lose mark if $Br^-$ used.*
*ignore δ+ or δ– unless wrong*
*+ on central C instead of δ + loses M2*

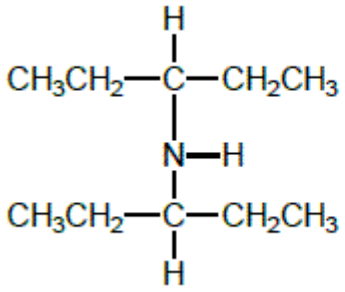
**4**

(ii) excess $NH_3$

*ignore reflux*
*allow conc ammonia in sealed tube*

**1**

(iii)

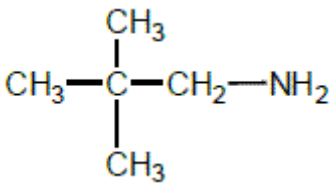


NOT $-C_5H_{11}$

*Allow $C_2H_5$ bonded either way*

**1**

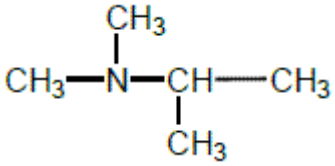
(e) (i)



**1**

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(ii)



*NOT $(C_2H_5)_2NCH_3$ which is tertiary with 3 peaks but its spectrum has no doublet.*

**1**

**[17]**

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