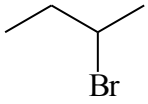
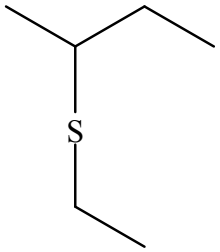
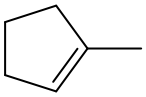
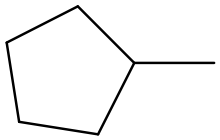
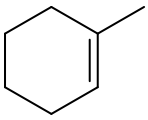
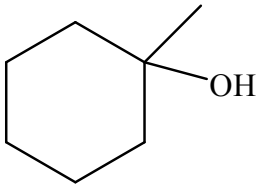
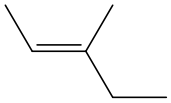
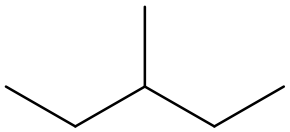
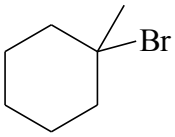
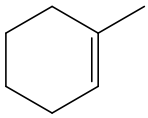
- Complete the following table.

Marks 4

STARTING MATERIAL NAME (where required)	REAGENTS/ CONDITIONS	CONSTITUTIONAL FORMULA(S) OF MAJOR ORGANIC PRODUCT(S)
 Name: **2-bromobutane**	$CH_3CH_2S^{\ominus}\ Na^{\oplus}$	
 Name: **1-methylcyclopent-1-ene**	H_2 / Pd on C ethanol solvent	
	dilute H_2SO_4 heat	 **Note – Markovnikov addition with OH adding to the more substituted end of double bond**

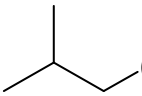
- Complete the following table. Make sure you complete the name of the starting material where indicated.

Marks 4

STARTING MATERIAL NAME (where required)	REAGENTS/ CONDITIONS	CONSTITUTIONAL FORMULA(S) OF MAJOR ORGANIC PRODUCT(S)
 **Name: (*E*)-3-methylpent-2-ene**	H_2 / Pd catalyst	
	**OH^- / heat** **(elimination rather than substitution required)**	

- Complete the following table. Make sure you complete the name of the starting material or major product where indicated.

Marks 3

STARTING MATERIAL	REAGENTS/ CONDITIONS	CONSTITUTIONAL FORMULA(S) OF MAJOR ORGANIC PRODUCT(S)
$CH_3CH{=}CHCH_3$	**dilute H_2SO_4 / heat**	$CH_3CH_2\underset{\displaystyle OH}{\underset{\vert}{C}}HCH_3$ **Name: 2-butanol**
	1. Na metal 2. CH_3CH_2Br