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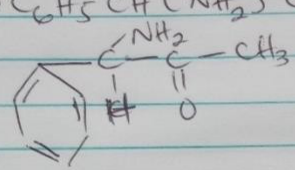
Department: MBBS

Matric No:19/MHS01/057

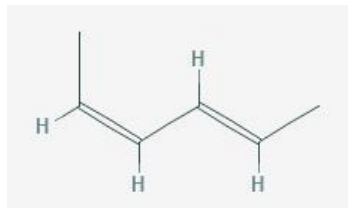
Subject: CHM 102

CHM 102 ASSIGNMENT

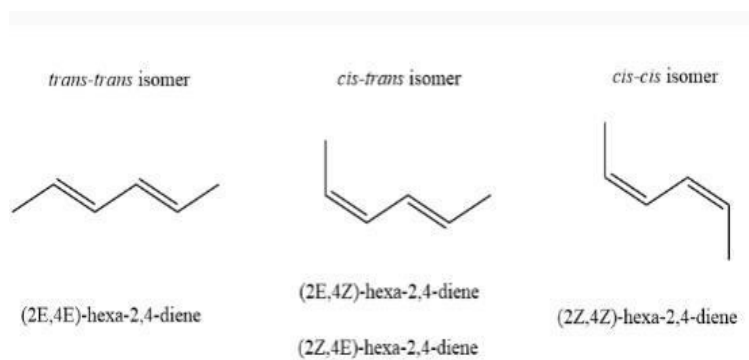
1&2.

CHM 102	
1. a) $\text{CH}_2 = \text{C}(\text{OH})\text{HCHO}$ functional group present: - Double bond chain (Alkene) - OH (Hydroxyl group) - $\text{C}=\text{O}$ (Alkanol)	2) mass of tartaric acid = 0.856g Vol. of water diluted in = 10 $\text{cm}^3$ Recall, mass conc. (c) = $\frac{\text{mass}}{\text{vol}} = \frac{0.856\text{g}}{10\text{cm}^3}$ = 0.0856 $\text{g/cm}^3$
b) $\text{C}_6\text{H}_5\text{CH}(\text{NH}_2)\text{COCH}_3$ 	Vol. of polarimeter tube = 1 $\text{dm}^3$ ∴ length of tube = 1 $\text{dm}$ Observed rotation ( $\alpha$ ) = +1.0° at 20°C
Functional group present: - Phenol group with double bonds - Amine ( $\text{NH}_2$ ) - Alkanone / ketone $\text{C}=\text{O}$	Specific rotation $[\alpha] = ?$ $[\alpha] = \frac{\alpha}{c \times l}$ = $\frac{+1.0^\circ}{0.0856\text{g cm}^{-3} \times 1\text{dm}}$
c) $\text{CH}_3\text{C}=\text{CHCH}(\text{OH})\text{CHO}$ functional group present - Double bond (=) - $\text{C}=\text{O}$ Alkanol - OH Hydroxyl group.	$[\alpha] = \frac{+1}{0.0256} = +11.6882^\circ$

3A. Hexa-2,4-diene – has only 3 isomers



Isomers



B. 2,3 dimethyl but-2-ene. - does not have geometric isomers because there are two identical groups attached to the same carbon of the double bond.

