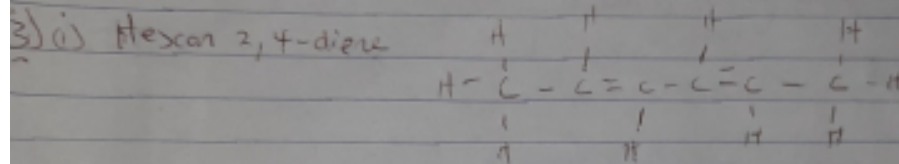


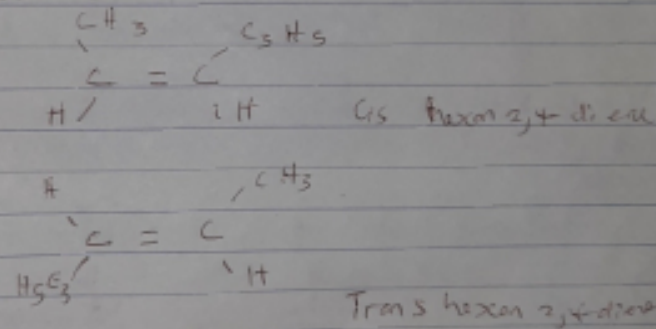
Name: O NALAJA HALEEMAH MOOVPELVUM  
 Matric no: 1911HS01346  
 Department: MBBS

(1) Name the functional groups present in each of the following molecules

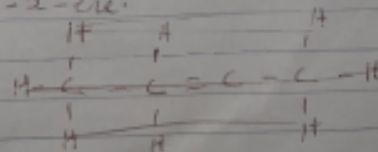
- (i)  $\text{CH}_2 = \text{C}(\text{OH})\text{HCHO}$  - Hydroxyl, aldehyde  
 $\text{C}_6\text{H}_5\text{CH}(\text{NH}_2)\text{COCH}_3$  - Amine, ketone  
 $\text{CH}_3\text{C}(\text{OH})\text{CH}_2\text{CHO}$  - hydroxyl, aldehyde



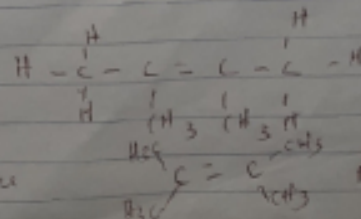
The geometric isomerism.



(ii) Dimethyl but-2-ene



Dimethyl but-2-ene



Dimethyl but-2-ene

NO geometric isomer

3

$$2.) [\alpha]_D^{20} = \frac{\alpha_{\text{observed}}}{c \times l}$$

in degrees  
g/ml      dm

$$[\alpha]_D^{20} = \frac{\alpha}{c \times l}$$

where  $\alpha$  is the specific rotation ( $^{\circ}$ )  
 $\alpha_0$  is the original observed ( $^{\circ}$ )  
 $c$  is the concentration

$T = 20^{\circ}\text{C}$      $l = 1\text{dm}$      $l$  is the path length cm

$\lambda =$      $T$  is the temperature and

$\alpha = 1^{\circ}$      $\lambda$  is the wavelength that

$c = \text{mass volume}$     result of in the new station

$$= \frac{0.856\text{g}}{10\text{cm}^3} = \frac{0.856\text{g}}{0.01\text{ml}} = 85.6\text{g/ml}$$

convert  $10\text{cm}^3$  to ml.

$$1000\text{cm}^3 = 1\text{ml}$$

$$10\text{cm}^3 = 10$$

$$10 = \frac{10}{100} = 0.01\text{ml}$$

$$[\alpha]_D^{20} = \frac{1}{85.6 \times 1}$$

$$85.6 \times 1$$

$$= +0.012$$

$$\approx +0.012$$

$$C = 2\text{M}, 3\text{P}$$

barbanca