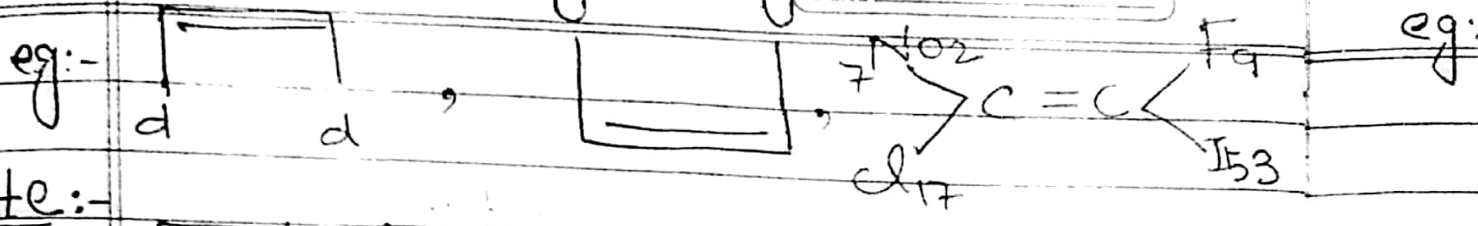
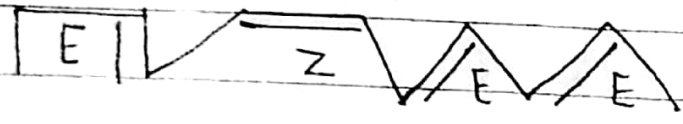


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Note:-

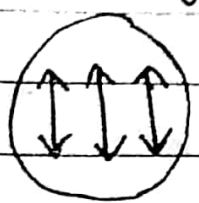


- It having less melting point, b. p and stability than trans isomer
- Cis-1,2-dicarboxylic acid form anhydride after loss of water due to reactive nature of cis but trans isomer can not make to stable nature.

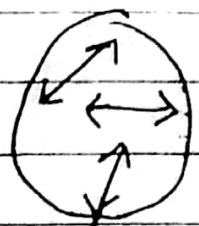
* Optical Isomerism

- When compd. rotates on passing plane polarised light through it
- When compound rotate clockwise then called dextro or d-form or positive form eg
- When compd. rotates anticlockwise then called leavo or L-form or negative form.

N.B →

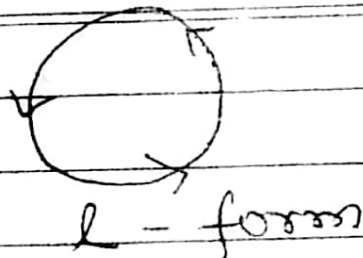
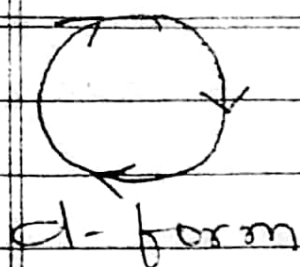


P.P.L ✓



P.P.L X

eg:-



* Optically active compound

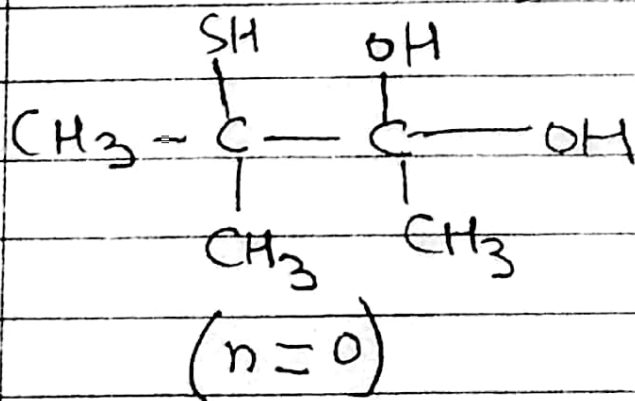
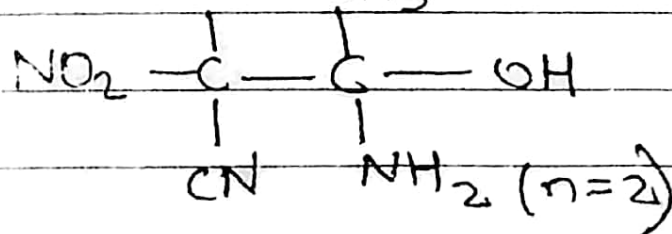
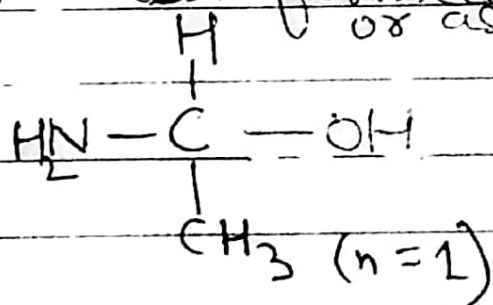
Compd. containing chiral centre or stereogenic centre or asymmetric centre. If chiral centre absent then compd. is called optically active.

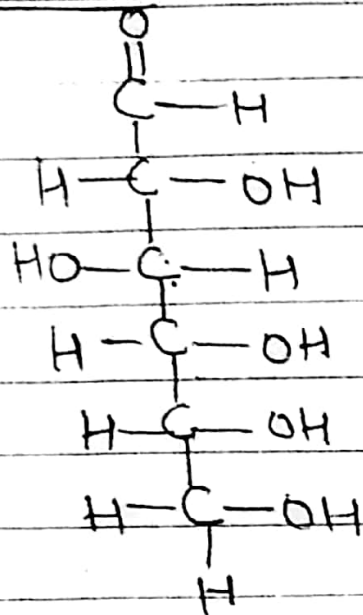
* Chiral Centre

When all the four valency of carbon filled by 4 different atom or group.

It is also called stereogenic centre or asymmetric centre

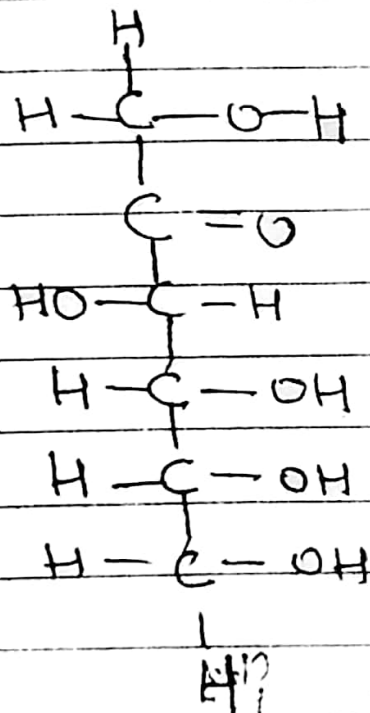
eg:-



Glucose

Chiral centre (n) = 4

$$\text{O.I} = 2^n = 2^4 = 16$$

Fructose

Chiral centre = 3

$$\text{O.I} = 2^3 = 8$$

*

Optical active compound without Chirality

Compd. can be optically active without presence of chiral centre. It shows optical activity due to unsymmetrical structure and different.