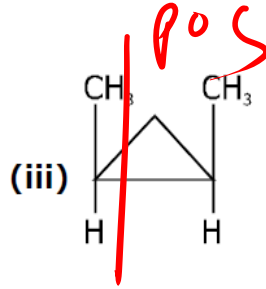
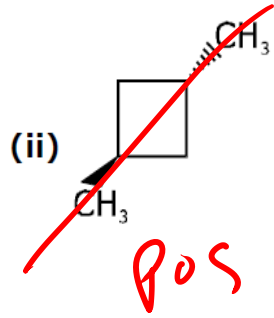
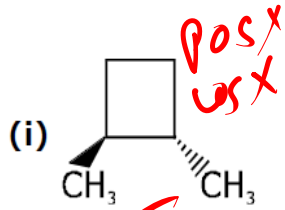


Which of the following structures are chiral



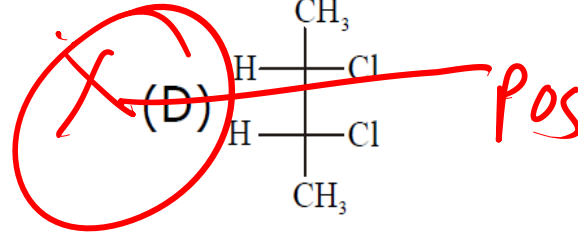
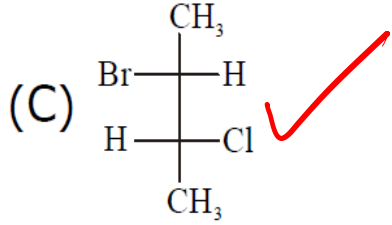
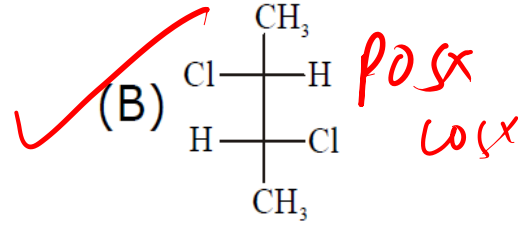
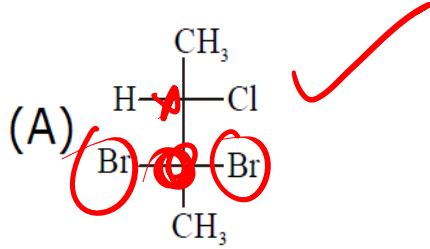
(A) i

(C) ii, iii

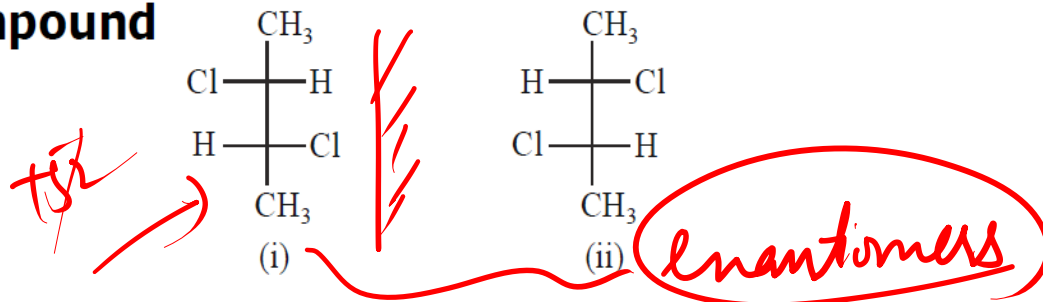
(B) i, ii, iii

(D) i, ii

Which of the following is not optically active ?



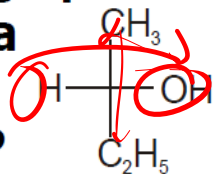
If optical rotation produced by the compound



(i) is $+52^\circ$ then that produced by the compound (ii) is

- (A) -52° (B) $+52^\circ$
(C) 0° (D) Unpredictable

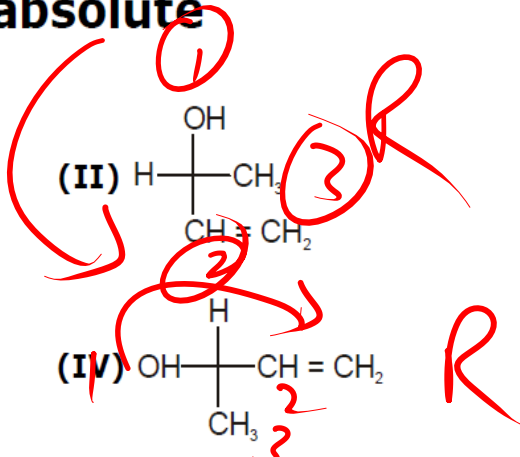
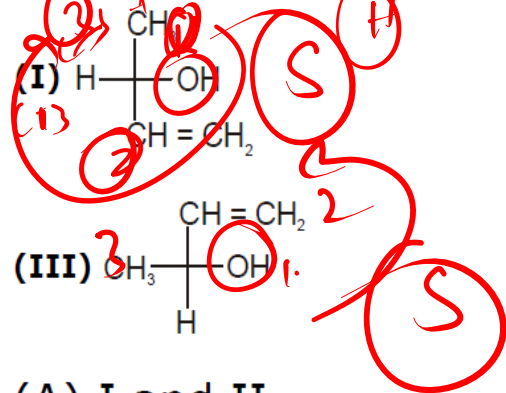
Which of the following operations on the Fischer formula does not change its absolute configuration?



R, S

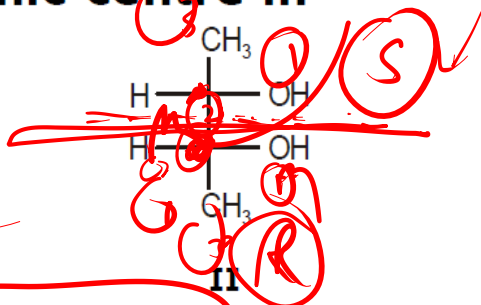
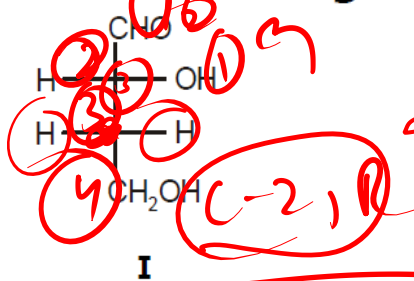
- (A) Exchanging ligands across the horizontal bond. X
- (B) Exchanging ligands across the vertical bond. X
- (C) Exchanging ligands across the horizontal bond and also across the vertical bond. ✓
- (D) Exchanging a vertical and horizontal ligand.

Which of the following combinations amongst the four Fischer projections represents the same absolute configuration ?



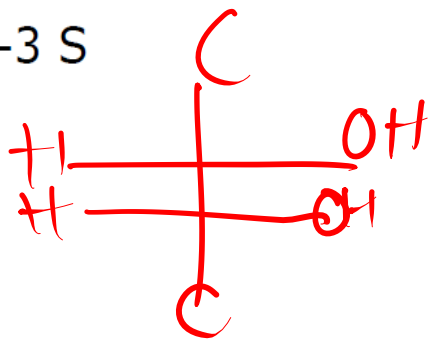
- (A) I and II
- (B) I and III
- (C) I and IV
- (D) III and IV

What is the configuration 'R' or 'S' at each stereogenic centre in-

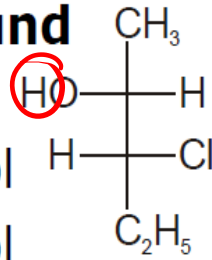


- (A) I. C-2, R, II. C-2 S, C-3 R
- (B) I. C-2 S, II. C-2 S, C-3 R
- (C) I. C-2 R, II. C-2 R, C-3 R
- (D) I. C-2 R, II. C-2 S, C-3 S

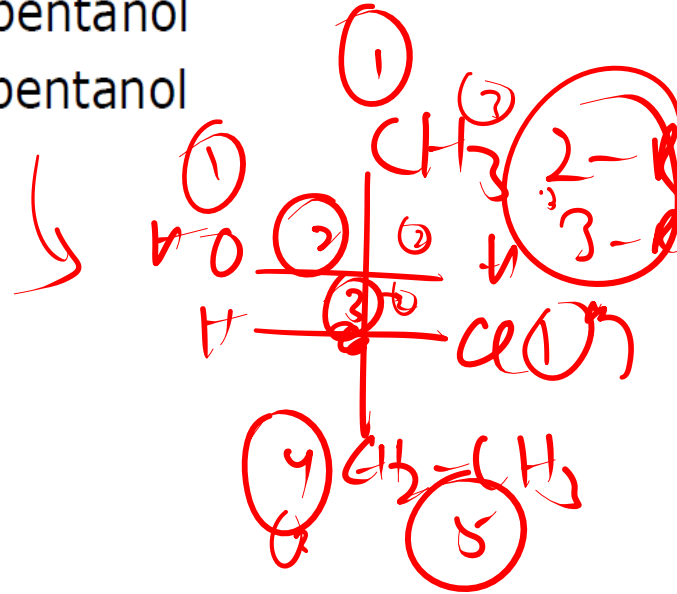
Handwritten notes: "I C-2 II" and "C-2 R C-3 S" (circled in red).



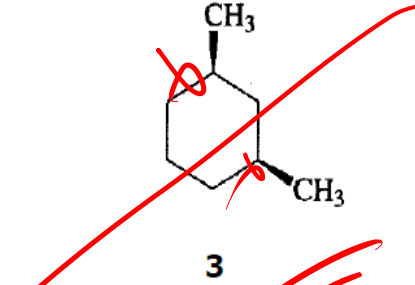
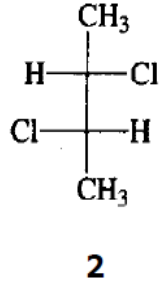
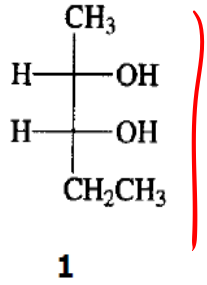
The full name of the compound is-



- (A) (2R, 3R)-3-chloro-2-pentanol
 (B) (2R, 3S)-3-chloro-2-pentanol
 (C) (2S, 3R)-3-chloro-2-pentanol
 (D) (2S, 3S)-3-chloro-2-pentanol



Which of the following compounds are meso forms ?



(A) 1 only

(C) 1 and 2

~~(B) 3 only~~

(D) 2 and 3

A meso compound

- (A) Is an achiral molecule that contains
chirality centers.
- (B) Contains a plane of symmetry or a
center of symmetry.
- (C) Is optically inactive.
- (D) Is characterized by all of these.

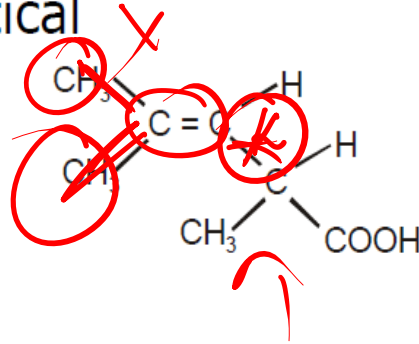
The following compound can exhibit

(A) Geometrical isomerism

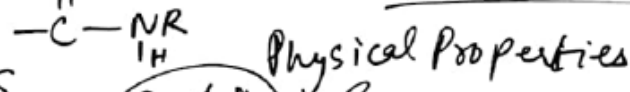
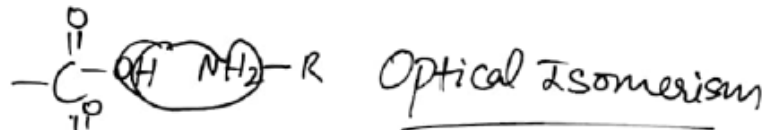
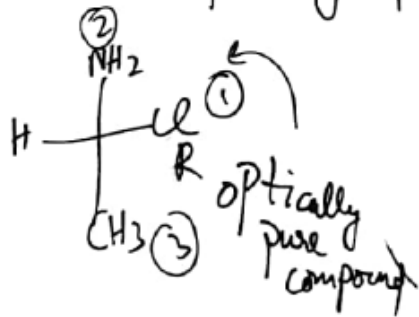
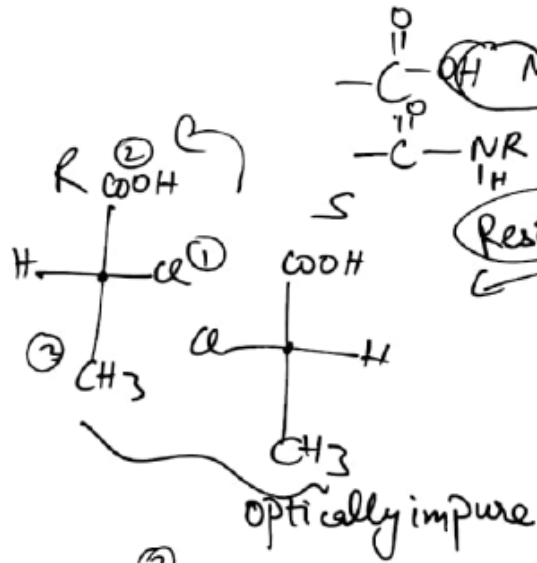
(B) Geometrical and optical isomerism

(C) Optical isomerism

(D) Tautomerism



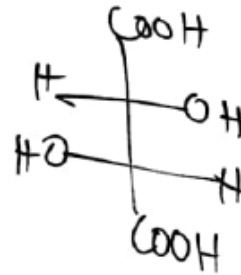
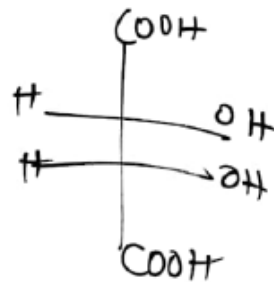
1	2	3	4	5	6	7	8	9	10
A	D	A	C	B	A	A	B	D	C



Resolution

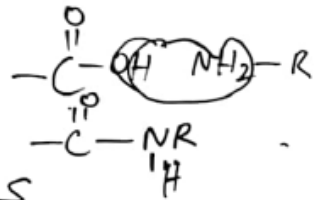
Enantiomers → They have same physical properties (M.P, B.P, solubility)

Diastereomers → They have different Physical properties



Fractional Distillation
Can be used to separate them.

Optical Isomerism



Resolution \rightarrow only for chiral compounds

