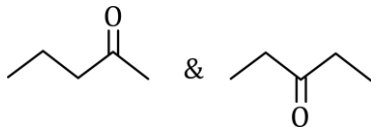
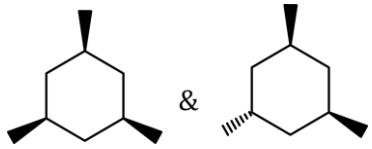
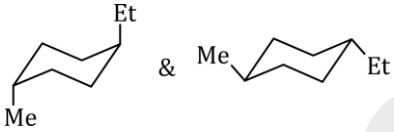
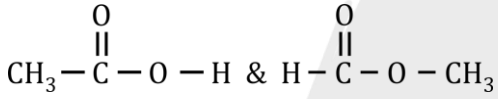
Conformational Isomerism

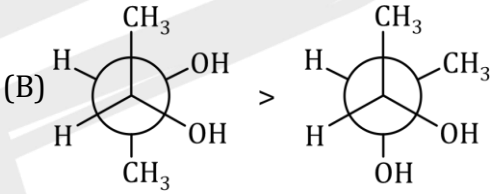
DPP-01

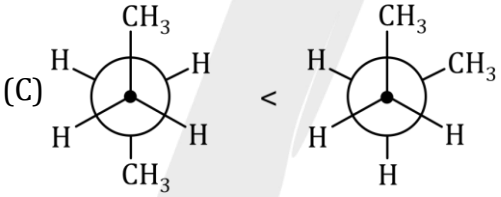
1.

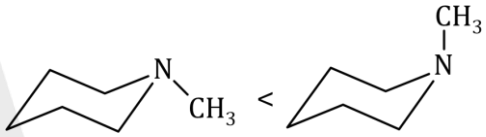
Column-I (Compound)	**Column-II (Statement)**
(A) 	**(P)** Functional isomers
(B) 	**(Q)** Geometrical isomers
(C) 	**(R)** Metamer
(D) 	**(S)** Conformational isomers **(T)** Structural isomers

2. Correct stability order is :

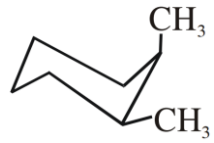
(A) $CH_3SO_3^- > CH_3CO_2^- > CH_3CH_2^- > CH_3O^-$

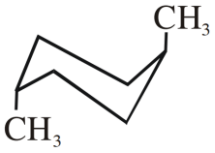
(B) 

(C) 

(D) 

3.

Column – I	**Column – II**
(A) 	**(P)** cis-form
(B) 	**(Q)** trans-form
(C) 	**(R)** K_{eq} is greater than one when compound undergo flipping. **(S)** K_{eq} is less than one when compound undergo flipping

(D) 

(T) K_{eq} is equal to one when compound undergo flipping

4. Select the correct statement for the following species.

(I) 

(II) 

(III) 

(IV) 

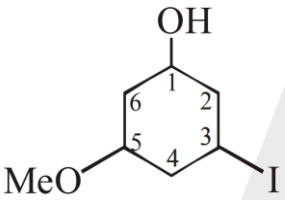
(A) I & II are geometrical isomers

(B) II & III are geometrical isomers

(C) III & IV are conformers

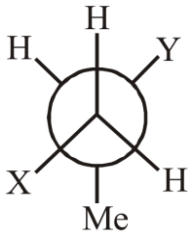
(D) I & IV are conformers

5. Which is the most stable conformation of



(Where –OH, –I, –OMe at C – 1, C – 3 and C – 5 positions)

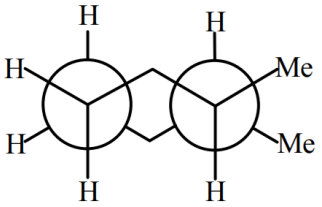
(A) e, e, a (B) a, e, a (C) e, e, e (D) a, e, e

6. Newmann projection representation of $CH_3–CH_2–\underset{\displaystyle CH_3}{\underset{|}{CH}}–Et$ about $C_2 - C_3$ is  Then X & Y are respectively :

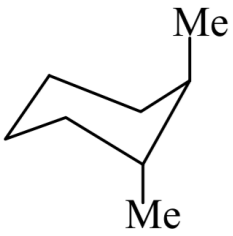
(A) Me, Et (B) H, Et (C) Et, H (D) Et, Me

7. The correct stability order of the following species is :-

(a)



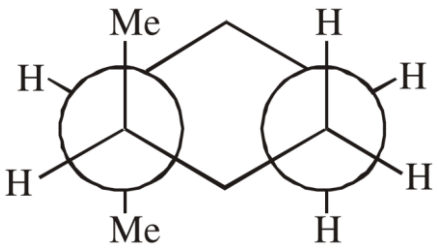
(b)

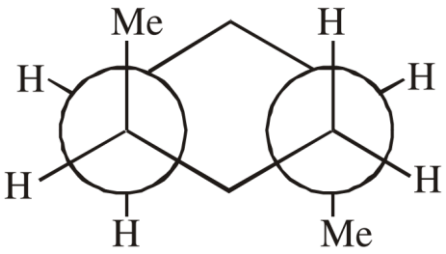


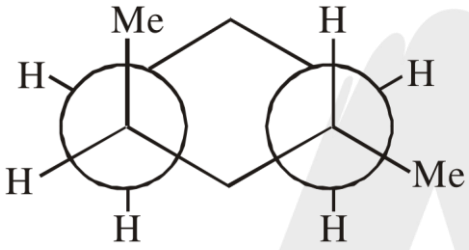
(c)

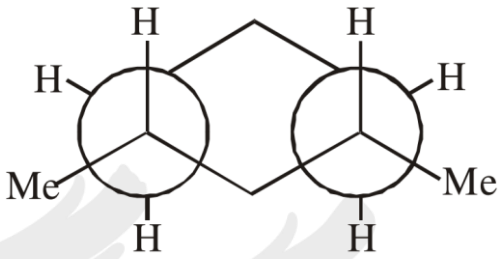
(A) c < a < b (B) c = b < a (C) c < a = b (D) a = b = c

8. Which of the following isomeric structure have lowest energy

(A) 

(B) 

(C) 

(D) 

9. Which of the following isomeric structure have lowest energy?

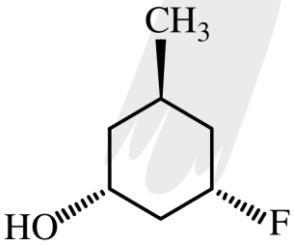
(I) (II) (III) (IV)

(A) II > I > IV > III

(B) II > III > IV > I

(C) II > IV > III > I

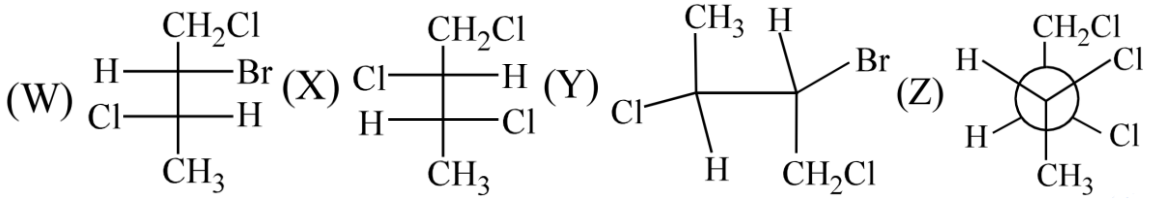
(D) II > IV > I > III

10. 

In the most stable conformation of the above compound attached groups OH, F & CH_3 are at respectively:

(A) a a a (B) a a e (C) e e e (D) e e a

11. Consider the following statements regarding the given projection and select the correct statement(s) :



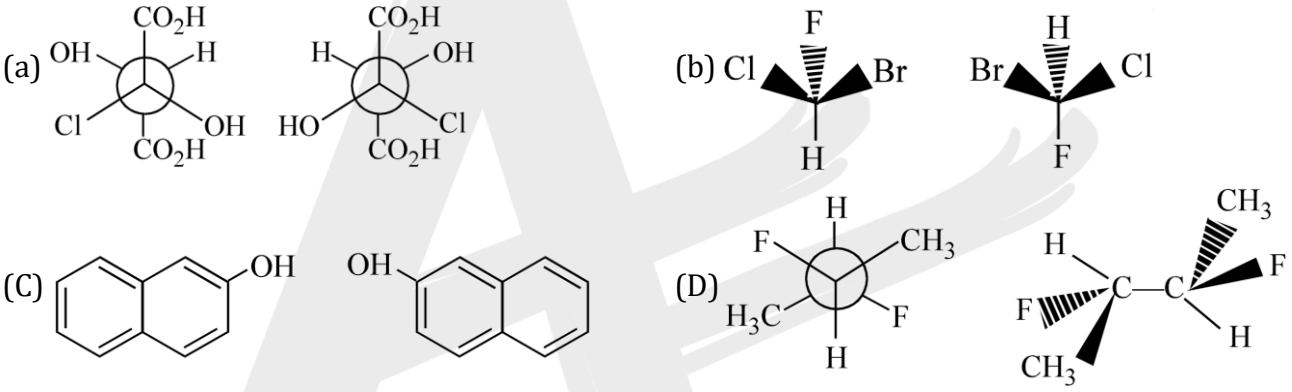
(A) W & Y are diastereoisomers

(B) Z is the newmann projection of X

(C) W, X, Y and Z are optically active

(D) Y & Z are meso.

12. Select the relationship between following pairs :



If they are enantiomer answer will be 1 , if they are diastereomers answer will be 2 , if they are constitutional isomers answer will be 3 and if they are identical present 4 as the answer.

Present sum of answer of each part a + b + c + d in OMR sheet.

(for example if a, b, c, d are enantiomer then final answer is a + b + c + d = 4).