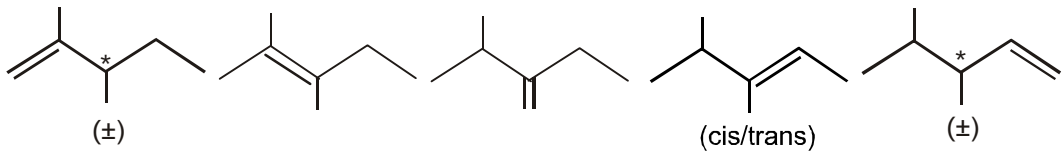
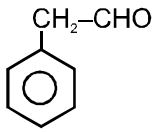
CHEMISTRY

6. Correct name is 5-Bromo-2,2-dimethylcyclopent-3-en-1-one.

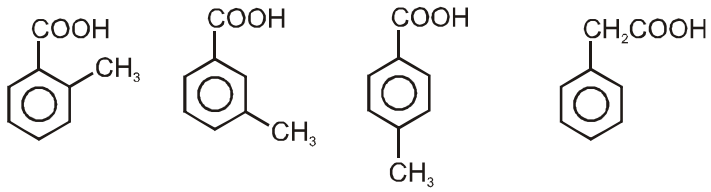
7.



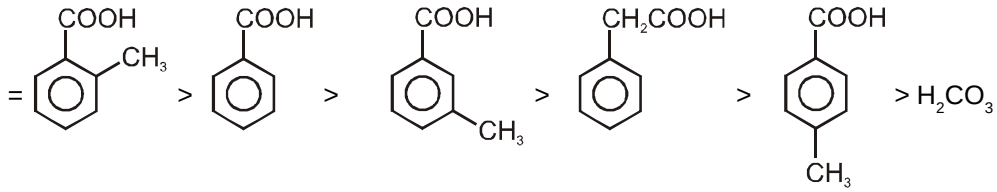
9.



16. M.F. = $C_8H_8O_2$
Isomers =

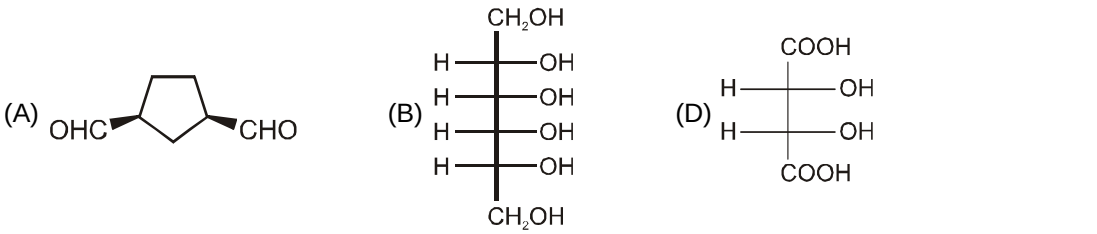


Acid strength order

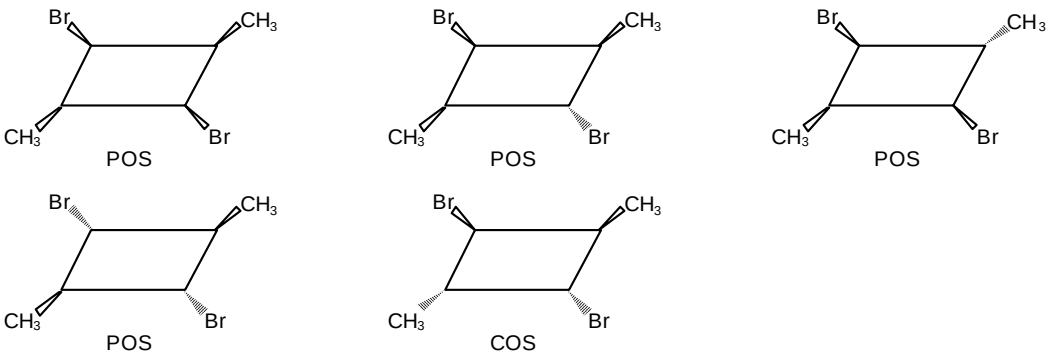


17. It is keto-enol tautomerisation reaction which involves recemisation in the product mixture.

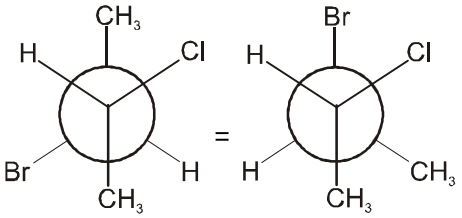
19.



20.

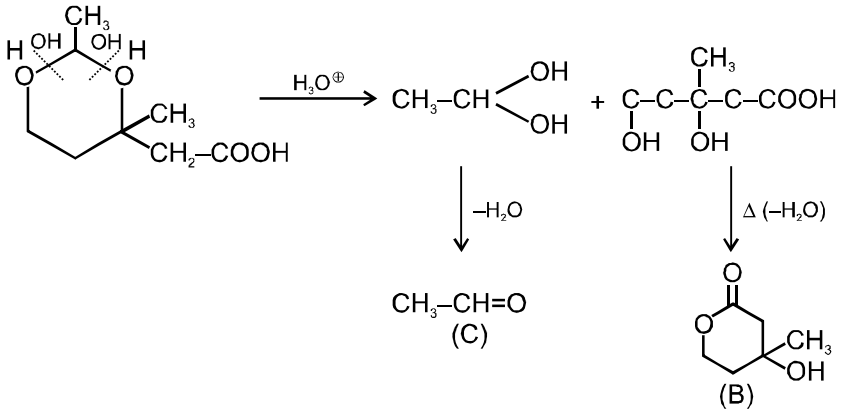


All of these are optically inactive.

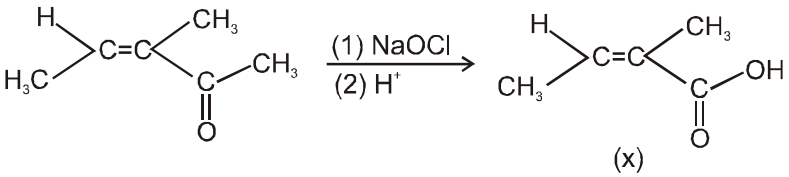
21. 

(B) (P)

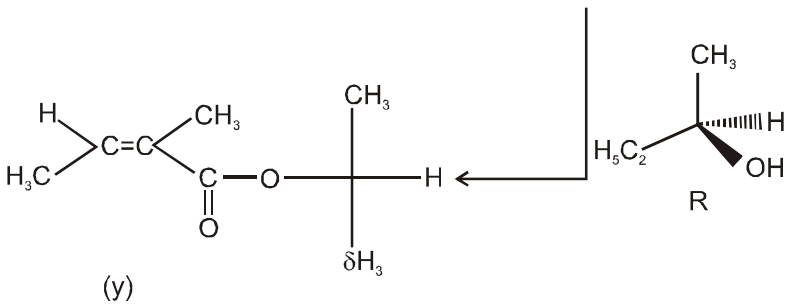
(P) is identical with (B).

30. 

33. All 5 stereoisomers are achiral.

35. 

(x)



(y)

no. of product is one.

38. 

40. X = 4 (i , iii , iv , vi) and Y = 2 (ii , vi) **;** Sum of X and Y = 4 + 2 = 6

41. 2M glyceraldehyde = 2 x 90 = 180 g/L = 0.18 g/ml

length of polarimeter tube = 100 mm = 10 cm = 1dm

α_{obs} = 7.2° ; $[\alpha]_D^T = \frac{7.2}{0.18 \times 1}$ **= +40°**