# JEE: Mock test

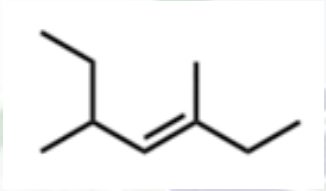
# Part-4

## Organic Chemistry

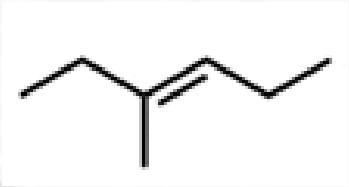
# Chemistry Affinity

## Conceptual, Real world, Happy Learning

**1. Mention following compound is E or Z?**



**2. What is the IUPAC name of the following compound?**



**(a) (Z)-3-methylhex-3-ene, (b) (E) -3-methylhex-3-ene, (c) (E)-3-methylhex-3-ene, (d) (E)-4-methylhex-4-ene**

**3. An alkane has a C/H ration of 5.14 by mass. Its molecular formula is (a) $C_5H_{12}$. (b) $C_6H_{14}$, (c) $C_8H_{18}$, (d) $C_7H_{10}$**

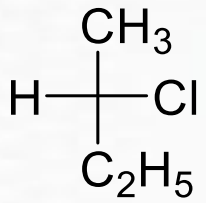
**4. An organic mixture is dissolved in a solvent in which two components have different solubility. The process is (a) sublimation, (b) distillation, (c) fractional crystallization, (d) simple crystallization**

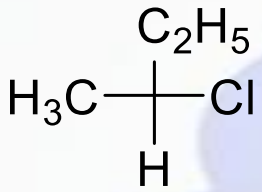
**5. Which of the following cannot be purified by steam distillation (a) Salicylaldehyde, (b) benzoic acid, (c) o-nitrophenol, (d) o-hydroxyacetophenone**

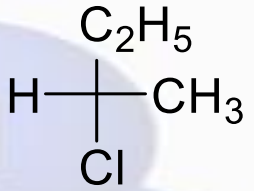
!

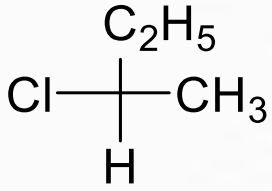
**6. An organic substance can be separated from its aqueous solution by (a) distillation, (b) steam distillation, (c) solvent extraction, (d) fractional distillation**

**7. $CH_3$-CHCl-$CH_2$-$CH_3$ has a chiral center. Which one of the following represents R configuration**

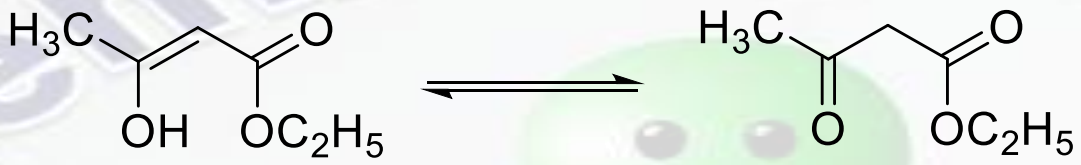
(a) 


(b) 


(c) 


(d) 

**8. The enolic form of ethyl acetoacetate is shown below. It has**



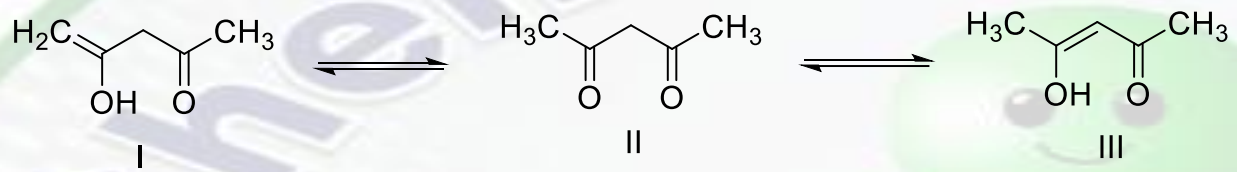

**(a) 16 sigma bonds and 1 pi bond**

**(b) 9 sigma bonds and 2 pi bonds**

**(c) 9 sigma bonds and 1 pi bond**

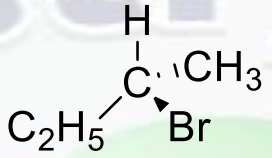
**(d) 18 sigma bonds and 2 pi bonds**

**9. The order of stability of the following tautomeric compound is**



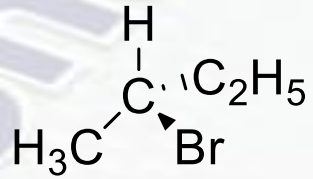

**(a) I > II > III, (b) III > II > I, (c) II > I > III, (d) II > III > I**

**10. Which of following structure is enantiomer with the molecules A given below?**

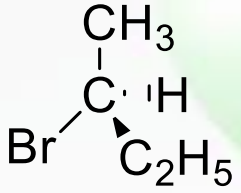



A

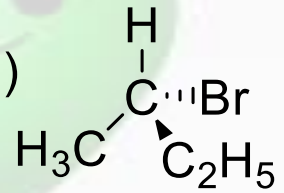
(a)



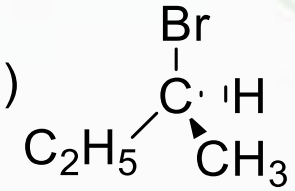

(b)




(c )

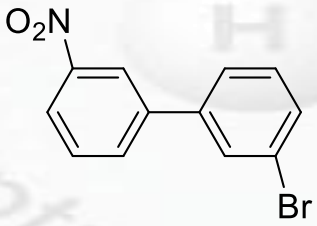



(d)

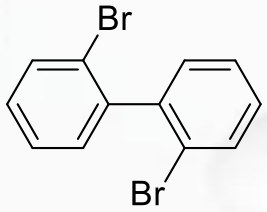



**11. Which of the following biphenyls is optically active?**

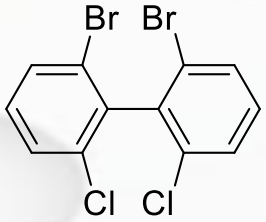
(a)



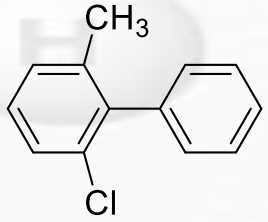

(b)



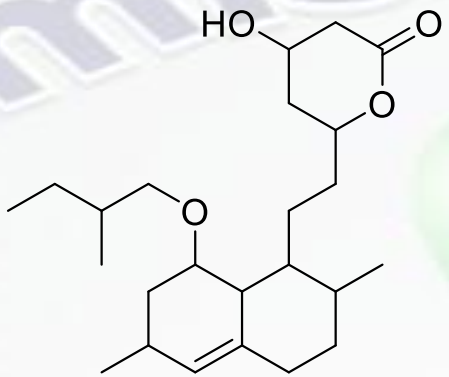

(c)




(d)

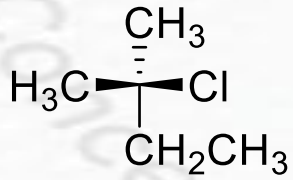


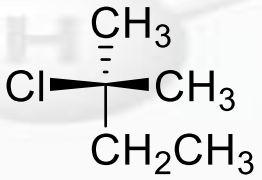
**12. How many stereogenic centres are there in the following compounds?**

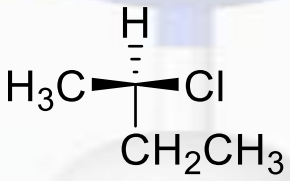


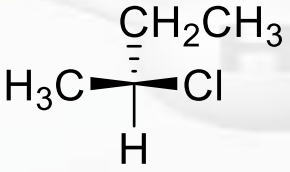

**(a) 8, (b) 5, (c) 6, (d) 7**

**13. (R) – 2-Chlorobutane is represented by**

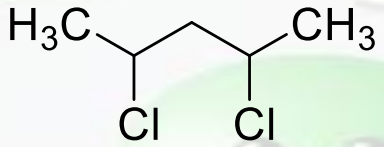
(a) 


(b) 


(c) 


(d) 

**14. For the given compound what is number of optically active and meso compounds respectively**

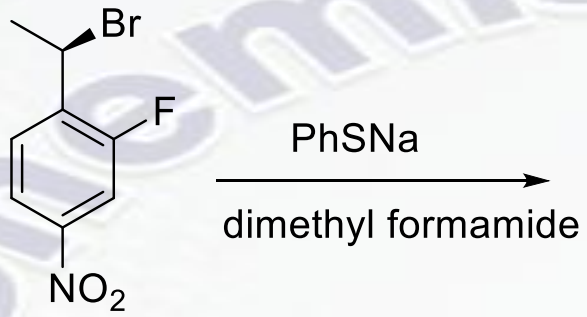


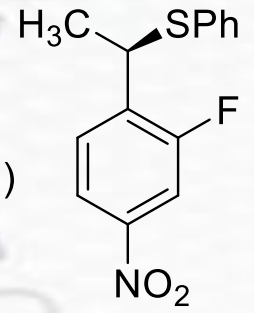

**15. Five alcohols can be drawn for formula $C_4H_{10}O$. How many of these are optically active? (a) 1, (b) 2, (c) 3, (d) 4**

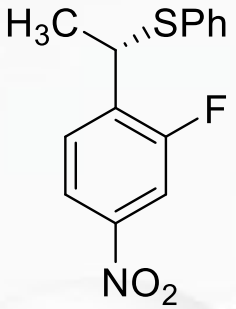
**16. The empirical formula of compound is $CH_2$. The mass of one mole of the compound is 42 g. The structural formula is**

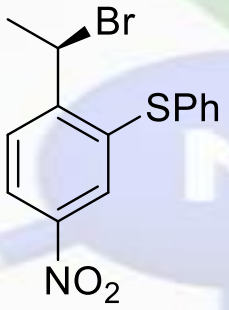
(a) $CH_3CH_2CH_3$, (b) $CH_3$-CH=$CH_2$, (c) $CH_2$=CH-CH=$CH_2$, (d) $CH_3$-C≡CH

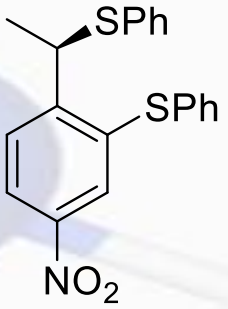
**17.** The major product of the following reaction is



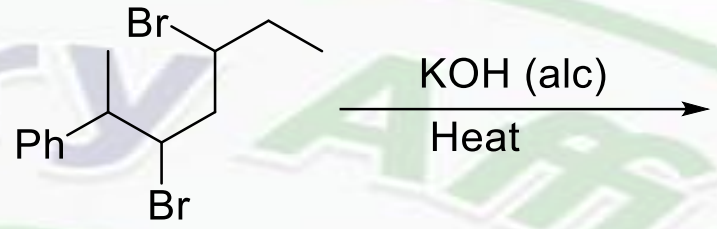

(a) 

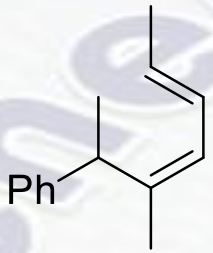

(b) 

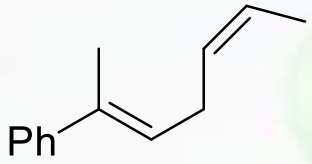

(c) 

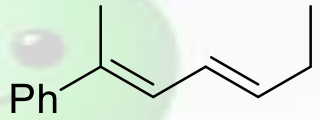

(d) 

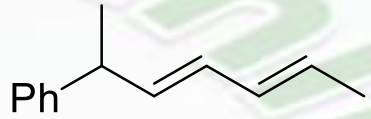
**18.** The major product of the following reeaction is



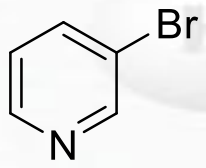

(a) 

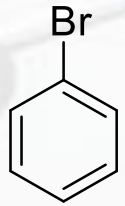

(b) 

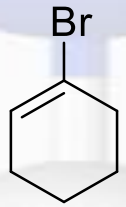

(c) 

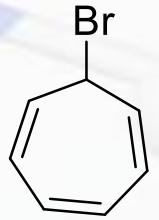

(d) 


**19.** **Which of the following compounds will produce a precipitate with $AgNO_3$ ?**

(a) 

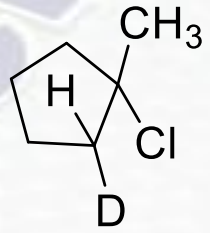

(b) 

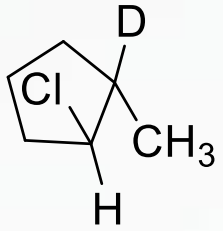

(c) 

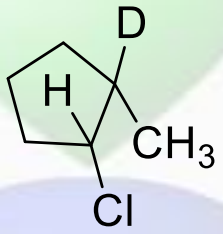

(d) 

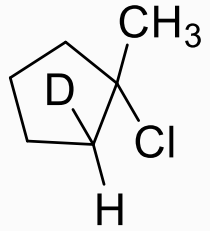
**20.** **What is the major product expected from the following reaction?**


D = isotope of hydrogen

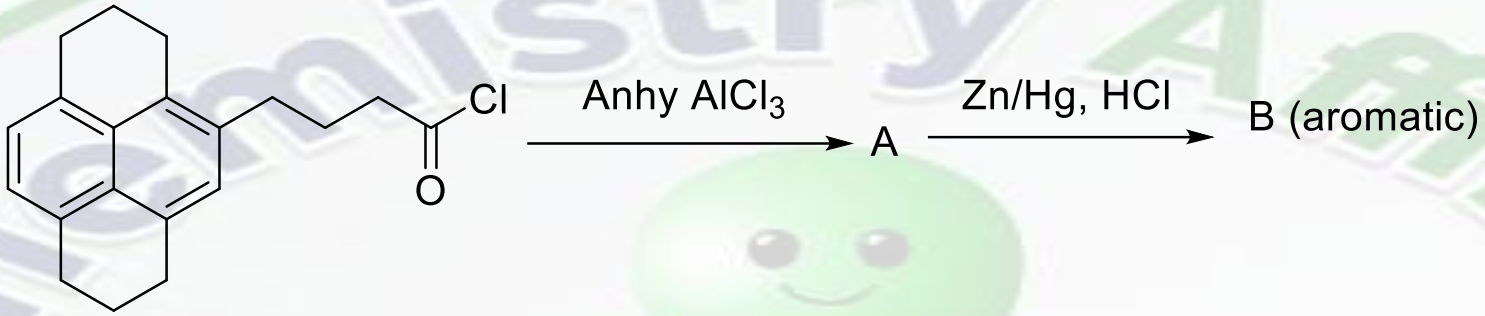
(a) 


(b) 


(c) 

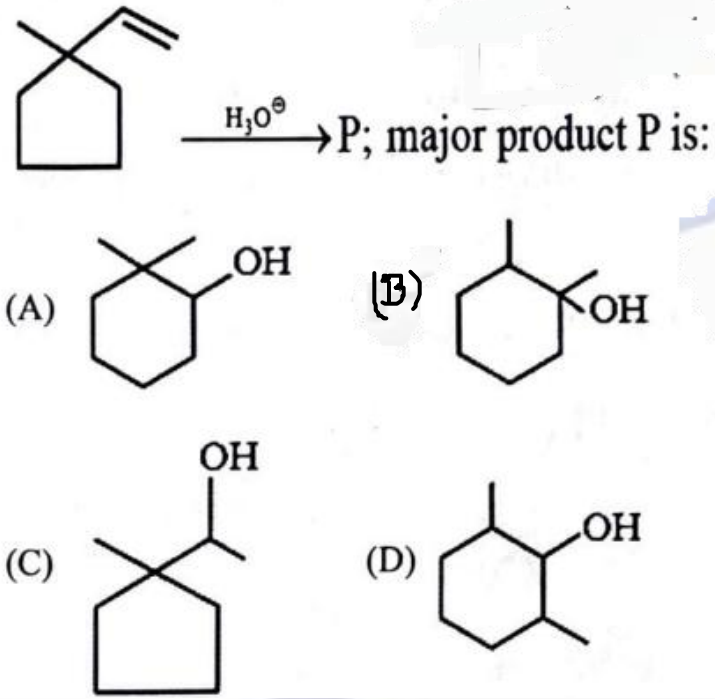

(d) 

**21.** **Consider the following reaction**

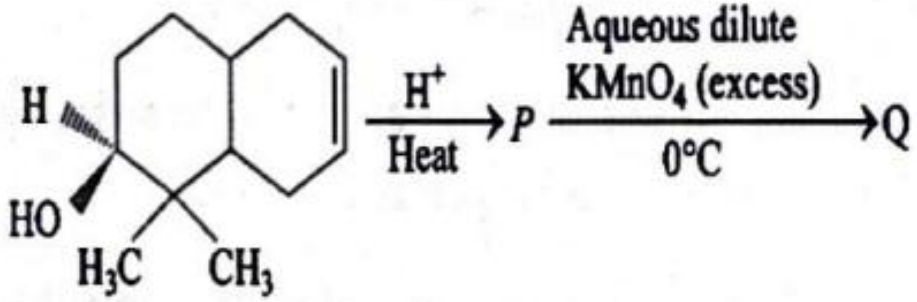



**Degree of unsaturation of product B is .....**

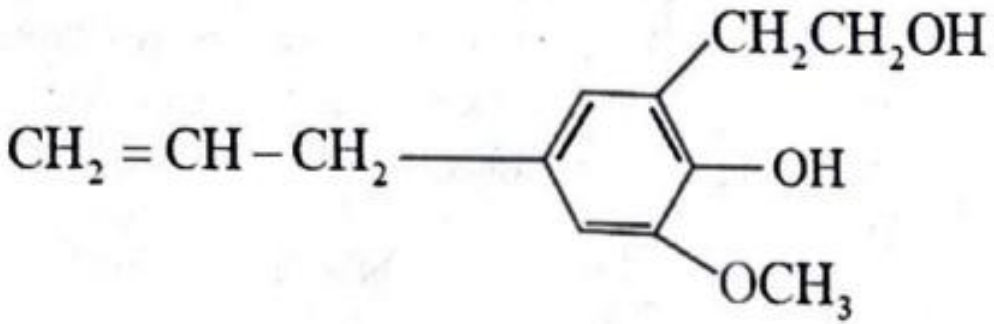
**22.**



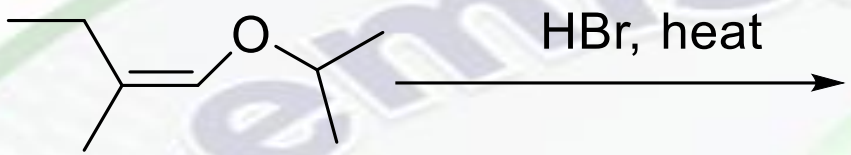
**23.** The number of hydroxyl group(s) in Q is




**24.** Number of moles of HI required to react with one mole of the given compound is



**25.** The total number of optically active compounds formed in the following reaction is



# All the Best