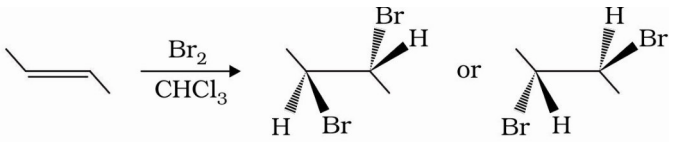
**106.(A)** $CH_3 - CH = CH_2 \xrightarrow[\text{Electrophilic addition}]{HO^{-\delta}-Cl^{+\delta}} CH_3 - \underset{\text{Intermediate}}{\overset{+}{C}H} - CH_2 - Cl \xrightarrow{OH^-} CH_3 - \underset{OH}{CH} - CH_2 - Cl$

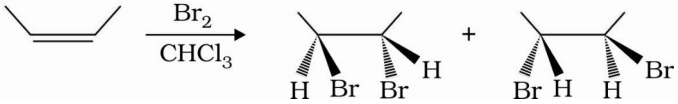
**107.(B)** Allylic bromination. Product is 3-Bromocyclohexene.

**108.(D)** It is dehydrobromination and major product is formed according to saytzeff's rule. Conjugated and more substituted diene is more stable.

$$CH_3 - \underset{Br}{CH} - CH_2 - \underset{Br}{CH} - CH_2 - CH_3 \xrightarrow[\text{Heat}]{KOH, CH_3OH} CH_3 - CH = CH - CH = CH - CH_3$$

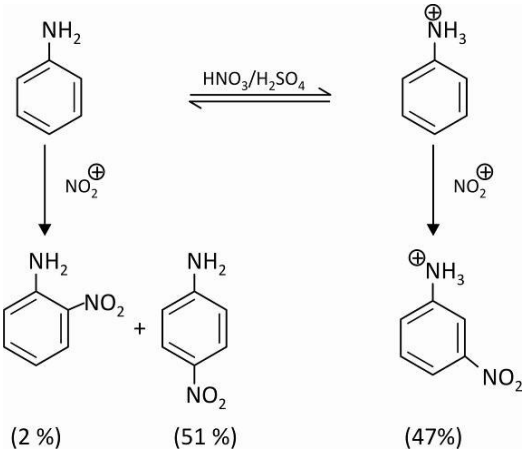
**109.(B)** Allylic bromination. Major product is 3-bromo-3-methyl cyclohexene.

**110.(CD)** (i) 


(ii) 


* Bromination (addition of $Br_2$) proceeds through trans-addition in both the reactions

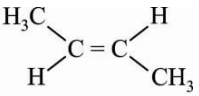
* (M and O) and (N and P) are two pairs of diastereomers.

**111.(D)** 


**112.(A)** $CH_3 - CH = \underset{CH_3}{C} - CH_2 - CH_3 \xrightarrow[\text{Peroxide}]{HBr} CH_3 - \overset{*}{\underset{Br}{CH}} - \overset{*}{\underset{CH_3}{CH}} - CH_2 - CH_3$

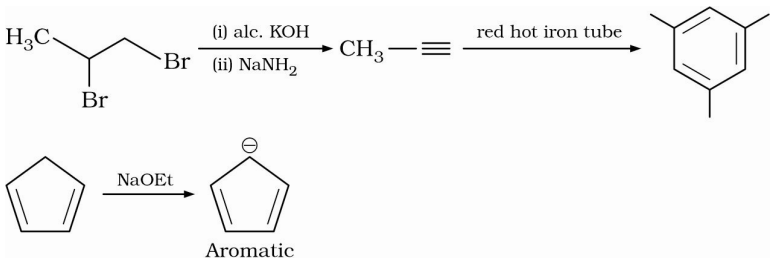
No. of stereoisomers $= 2^n = 2^2 = 4$ [n = No. of chiral carbon atoms]

**113.(B)** Vinyl chloride is not suitable for Friedel craft's reaction with benzene because of formation of unstable vinylic carbocation.

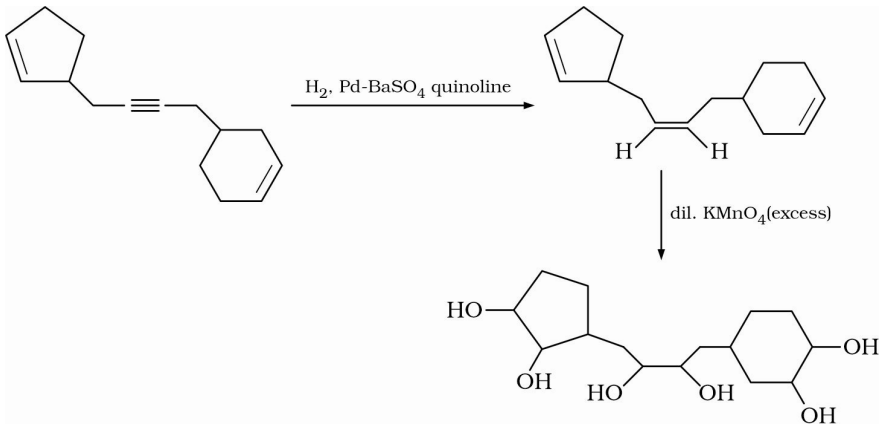
**114.(A)** $H_3C - C \equiv C - CH_3 \xrightarrow{Na \text{ in liq } NH_3}$ 

Trans alkene

**115.(AD)**


H3C
Br
Br
(i) alc. KOH
(ii) NaNH2
CH3
red hot iron tube
NaOEt
Aromatic

**116.(6)**


H2, Pd-BaSO4 quinoline
H
H
dil. KMnO4(excess)
HO
OH
HO
OH
OH
OH