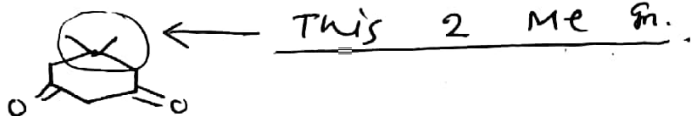


Answer of Mock Test (P-V)

1 (c) MCQ → Michael acceptor for dimedone synthesis is

(i) $Me_2CH=CH.COME$ (mesityl oxide).

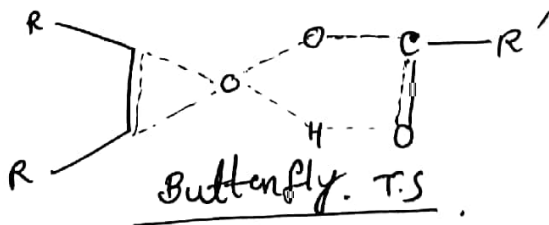
as it is electron deficient alkene the gem dimethyl gr. will appear in final prod



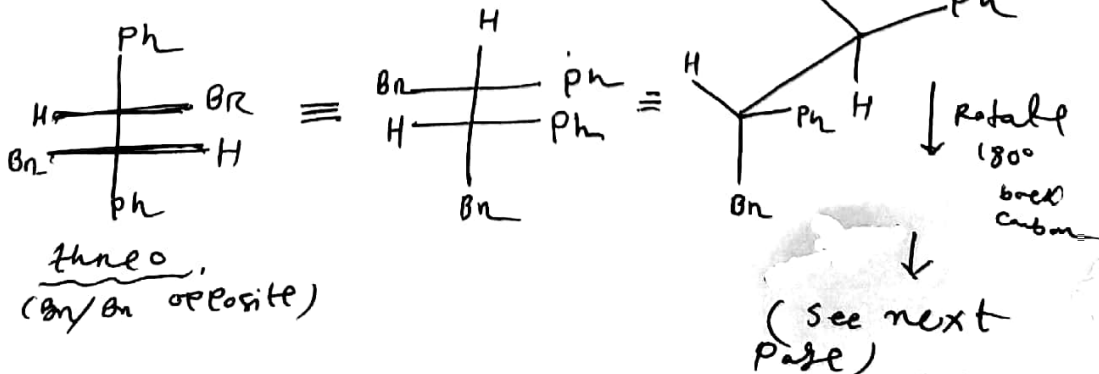
(d) MCQ → HIO_4 is used (ii) sucrose has many vicinal OH gr's and both sucrose and HIO_4 are water soluble.

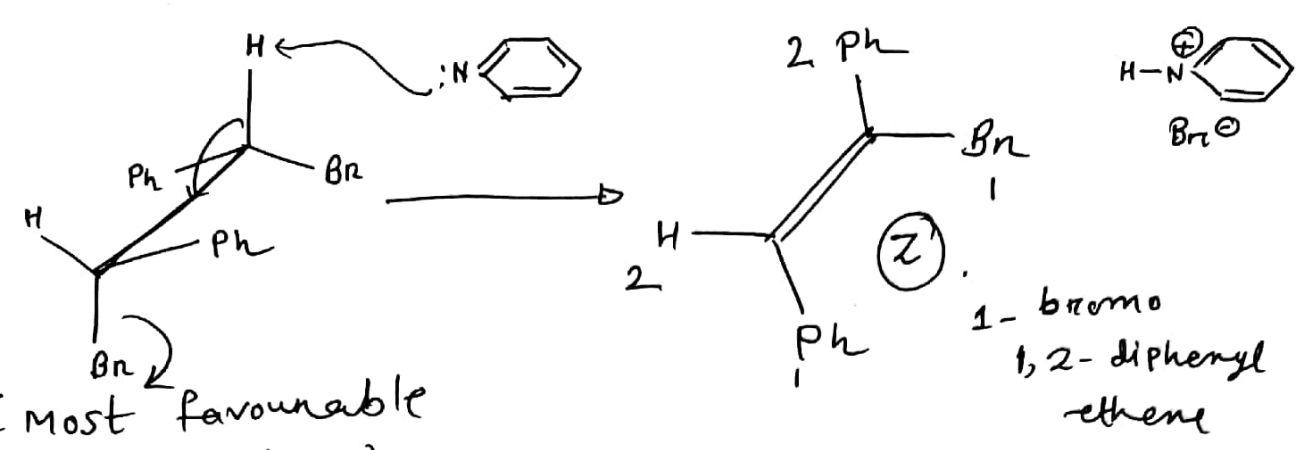
(e) MCQ → Answer is (ii) (±) Base. as Butucine is a chiral base so it can't be used for resolution or separation of (±) base. (Base/Base → no reaction no salt formation)

(f) Butterfly T.S → Answer - (iv) Prileschajev's rxn

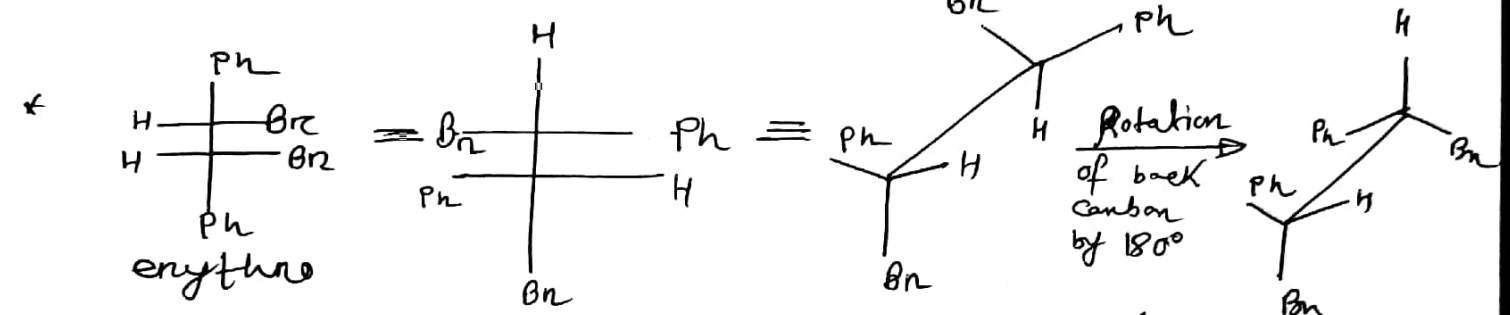


2. (b) Hints :-

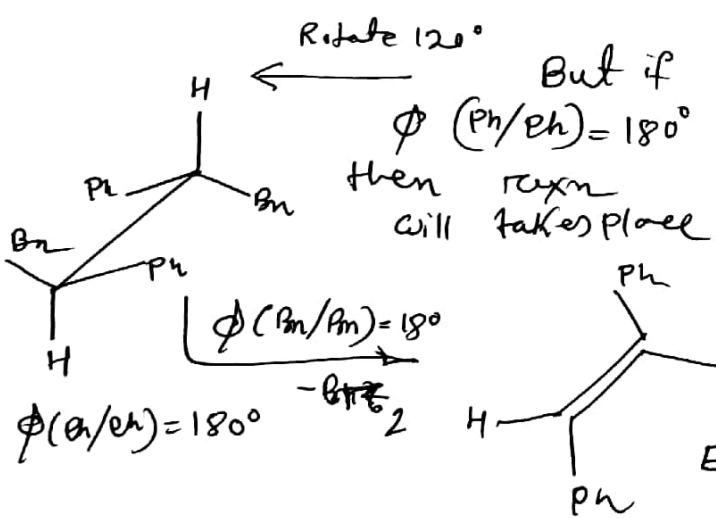




(Most favourable for E2 elimⁿ)
 $\phi(\text{Ph/Ph}) = 180^\circ$
 $\phi(\text{H/Br}) = 180^\circ$

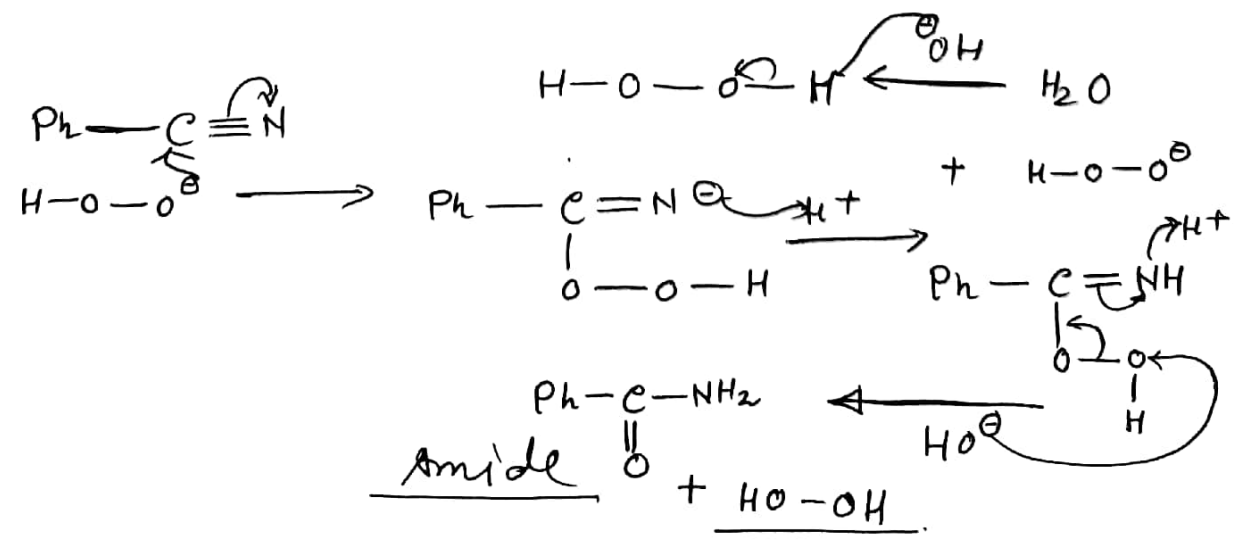


(not favourable)
 $\phi(\text{Ph/Ph}) = 60^\circ$
 (Repulsion).



So HBr elimⁿ will not occur from this str.

3. (b)



4. a)

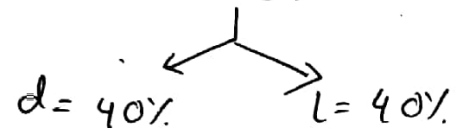
$$ee = \frac{d-l}{d+l} \times 100\%$$

$$= \frac{6-4}{6+4} \times 100\% = \frac{2}{10} \times 100\%$$

$d = 6\%$
 $l = 4\%$
 $= 20\%$ wt
 (+) on d' isomer
 $\Rightarrow d > l$

RME $(100-20)\%$

$= 80\%$



$d = (40+20)\%$
 $= 60\%$

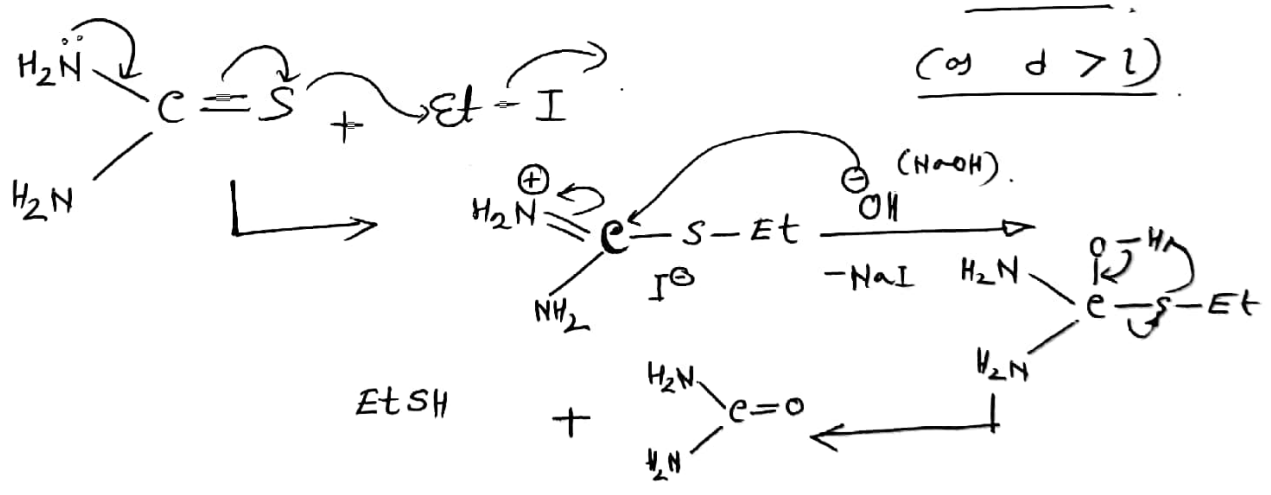
again, $ee = \frac{\text{sp. rotation of mix}}{\text{sp. rotation of pure enantiomer}} \times 100\%$

$20\% = \frac{[\alpha]_D \text{ of mix}}{13.5^\circ} \times 100\%$

$\Rightarrow [\alpha]_D \text{ of the mix} = \frac{13.5 \times 20}{100}$
 $= +2.7^\circ$

($\because d > l$)

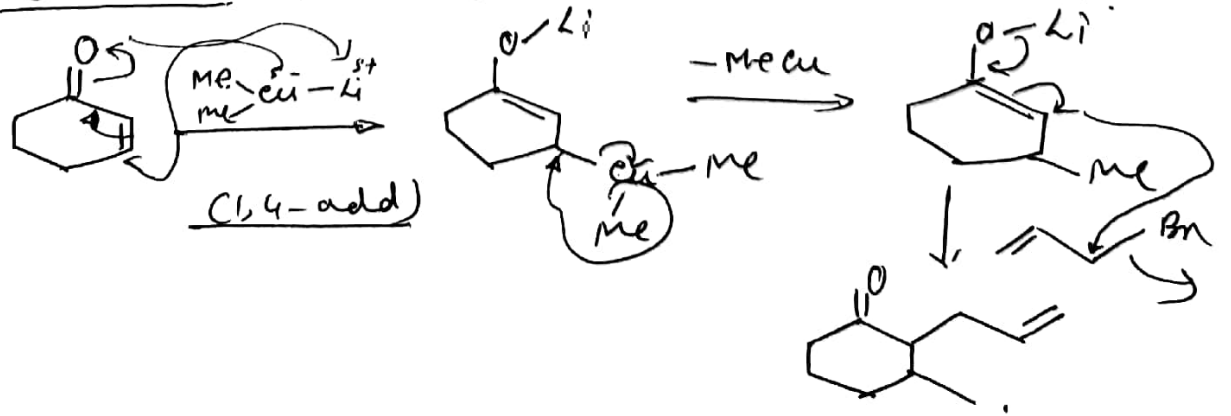
b)



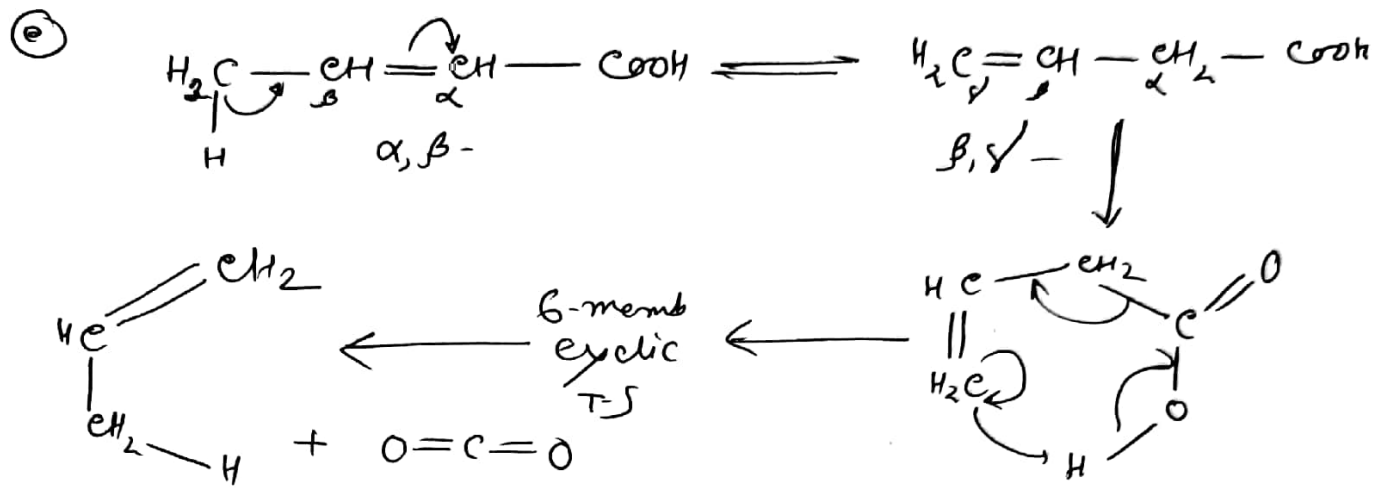
c)

see book \rightarrow why need this answer??

d)

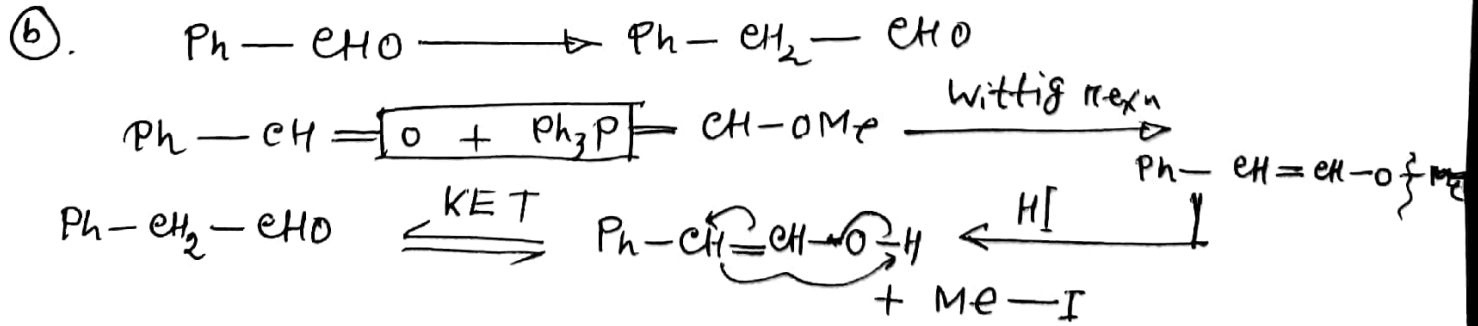


5. (a) → Swern oxidation.
 (b) → AAL1 hydrolysis of ester because of 3° Gr. (tBu Gr).



But $(\text{R}_3\text{C}) - \text{CH} = \text{CH} - \text{COOH} \rightarrow$ no β, γ -unsaturated carboxylic acid
 As there is no γ -H for isomerisation.

6. (a) Cross Benzoin. First split benzoin to 2 molecules of PhCHO (Reversible rxn) then do mix Benzoin with PhCHO + p-methyl benzaldehyde.



7. (a) → Claisen Rearr.
 (b) → You did (✓).
 (c) → Diene-ene phenol rxn.
 (d) → Sommelet rearr. rxn.