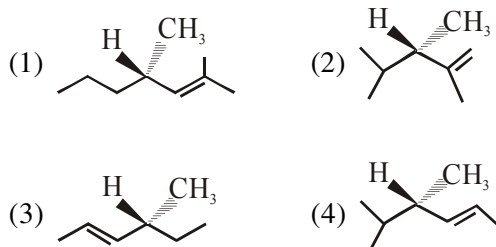
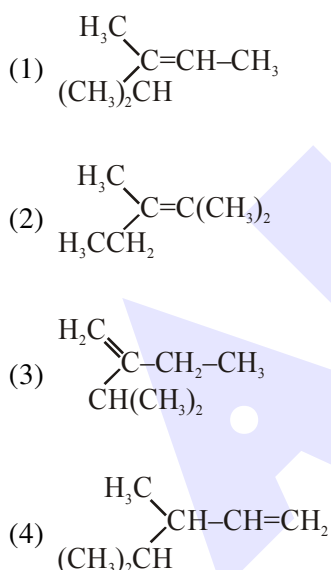
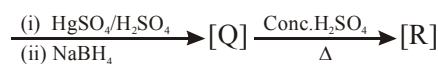
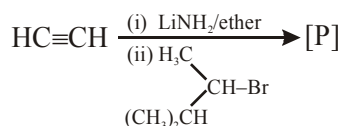


## REDUCTION

1. Which of the following compounds produces an optically inactive compound on hydrogenation ?



2. The major product [R] in the following sequence of reactions is :-

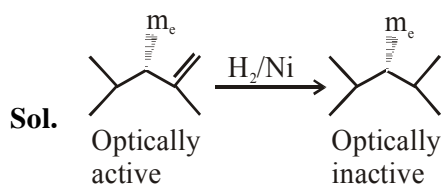
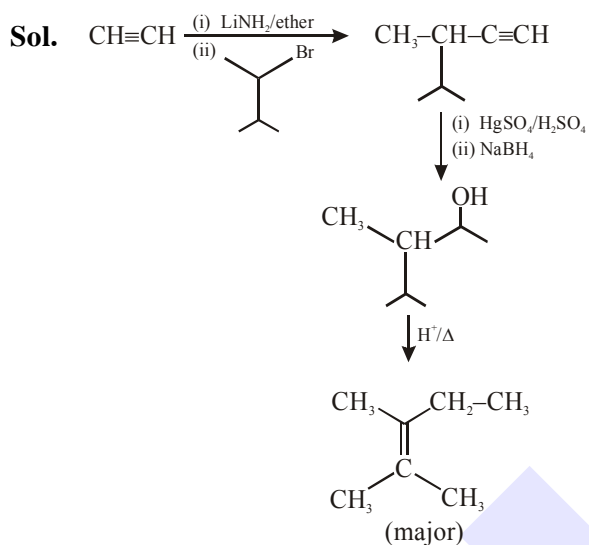


3. The most appropriate reagent for conversion of  $\text{C}_2\text{H}_5\text{CN}$  into  $\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$  is :

- (1)  $\text{Na}(\text{CN})\text{BH}_3$   
 (2)  $\text{LiAlH}_4$   
 (3)  $\text{NaBH}_4$   
 (4)  $\text{CaH}_2$

4. The correct match between **Item-I** (starting material) and **Item-II** (reagent) for the preparation of benzaldehyde is :

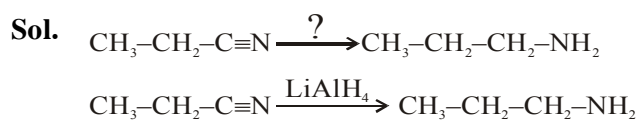
Item-I	Item-II
(I) Benzene	(P) $\text{HCl}$ and $\text{SnCl}_2, \text{H}_3\text{O}^+$
(II) Benzonitrile	(Q) $\text{H}_2$ , $\text{Pd}-\text{BaSO}_4$ , $\text{S}$ and quinoline
(III) Benzoyl Chloride	(R) $\text{CO}$ , $\text{HCl}$ and $\text{AlCl}_3$
(1) (I)-(Q), (II)-(R) and (III)-(P)	
(2) (I)-(R), (II)-(Q) and (III)-(P)	
(3) (I)-(R), (II)-(P) and (III)-(Q)	
(4) (I)-(P), (II)-(Q) and (III)-(R)	

**SOLUTION****1. Official Ans. by NTA (2)****2. Official Ans. by NTA (2)**

Now :- (i)  $\text{HgSO}_4/\text{dil. H}_2\text{SO}_4$

(ii)  $\text{NaBH}_4$

is convert triple bond into ketone and formed ketone is reduced by  $\text{NaBH}_4$  and convert into Alcohol.

**3. Official Ans. by NTA (2)****4. Official Ans. by NTA (3)**