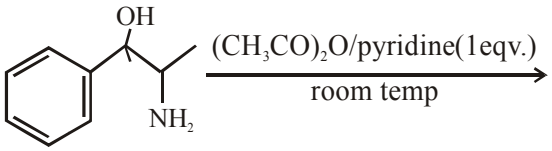
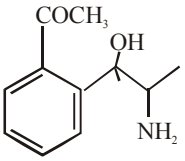
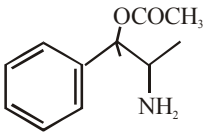
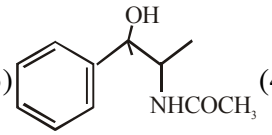
CAD

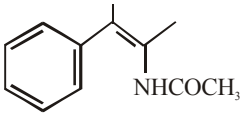
1. The major product obtained in the following reaction is :



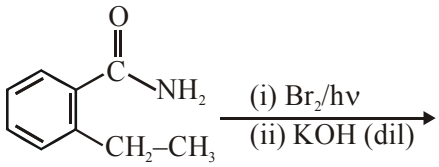
(1) 

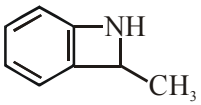
(2) 

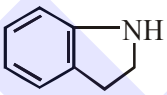
(3) 

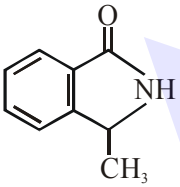
(4) 

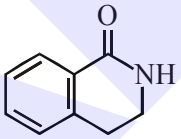
2. The major product of the following reaction is :



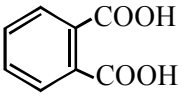
(1) 

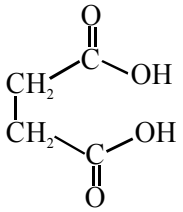
(2) 

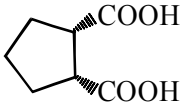
(3) 

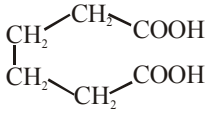
(4) 

3. Which dicarboxylic acid in presence of a dehydrating agent is least reactive to give an anhydride :

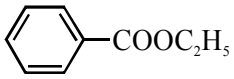
(1) 

(2) 

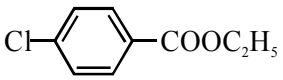
(3) 

(4) 

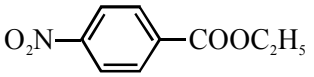
4. The decreasing order of ease of alkaline hydrolysis for the following esters is :



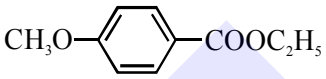
I



II



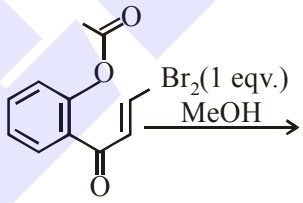
III

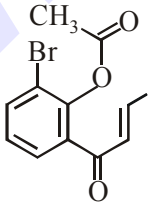


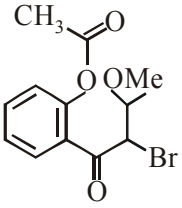
IV

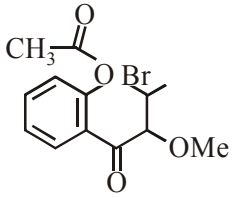
(1) IV > II > III > I (2) III > II > I > IV
(3) III > II > IV > I (4) II > III > I > IV

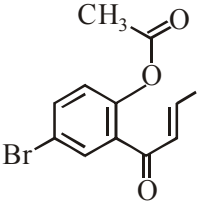
5. The major product obtained in the following conversion is :-



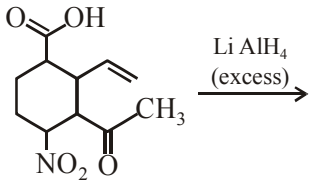
(1) 

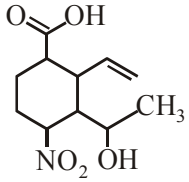
(2) 

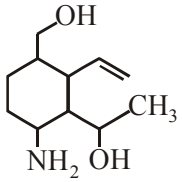
(3) 

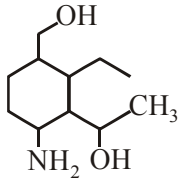
(4) 

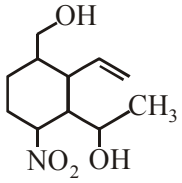
6. The major product obtained in the following reaction is :-



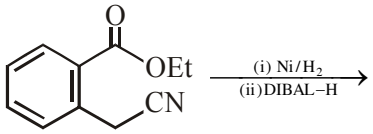
(1) 

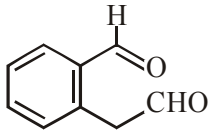
(2) 

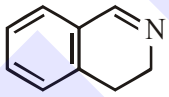
(3) 

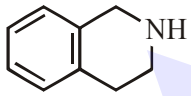
(4) 

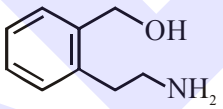
7. The major product of the following reaction is:



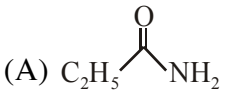
(1) 

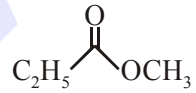
(2) 

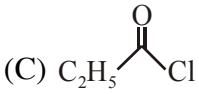
(3) 

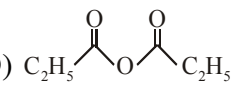
(4) 

8. The increasing order of the reactivity of the following with $LiAlH_4$ is :

(A) 

(B) 

(C) 

(D) 

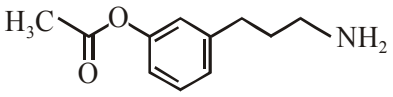
(1) (A) < (B) < (D) < (C)

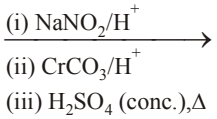
(2) (A) < (B) < (C) < (D)

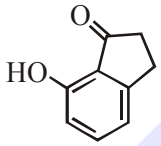
(3) (B) < (A) < (D) < (C)

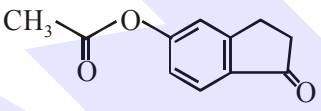
(4) (B) < (A) < (C) < (D)

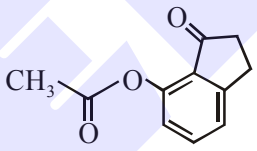
9. The major product of the following reaction is:

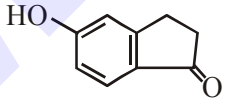




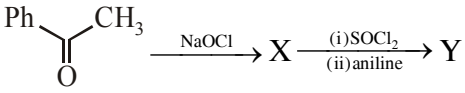
(1) 

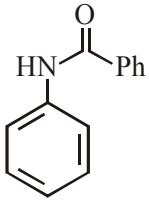
(2) 

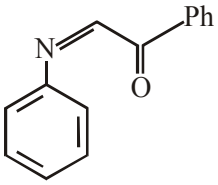
(3) 

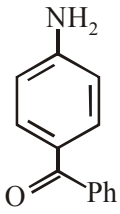
(4) 

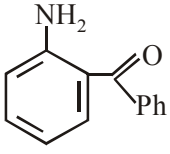
10. The major product 'Y' in the following reaction is:-



(1) 

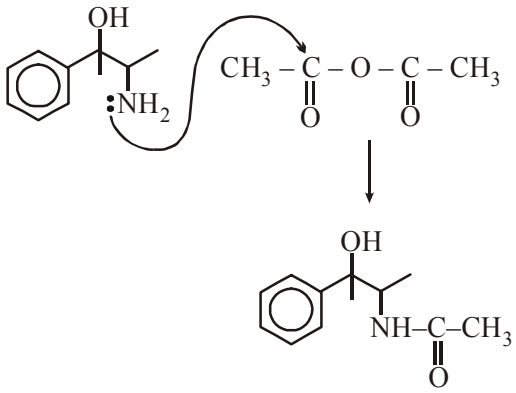
(2) 

(3) 

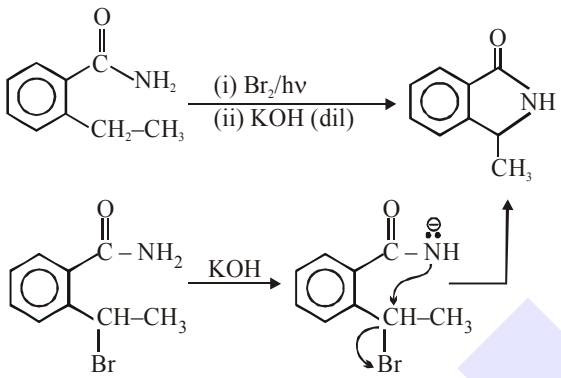
(4) 

SOLUTION

1. Ans. (3)



2. Ans.(3)



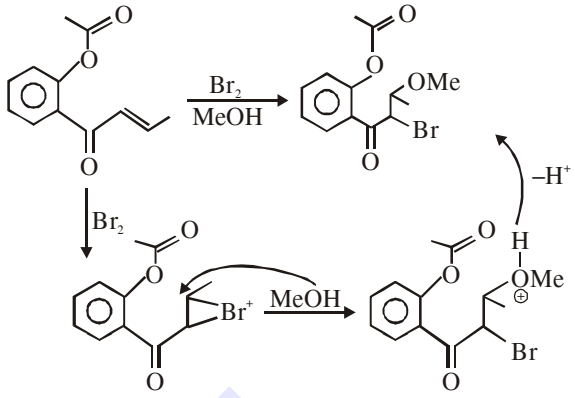
3. Ans.(4)

Adipic acid $CO_2H-(CH_2)_4-CO_2H$ $\xrightarrow[\text{agent}]{\text{dehydrating}}$ 7 membered cyclic anhydride (Very unstable)

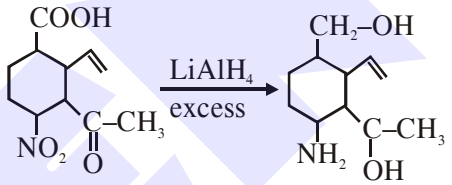
4. Ans. (2)

More is the electrophilic character of carbonyl group of ester faster is the alkaline hydrolysis.

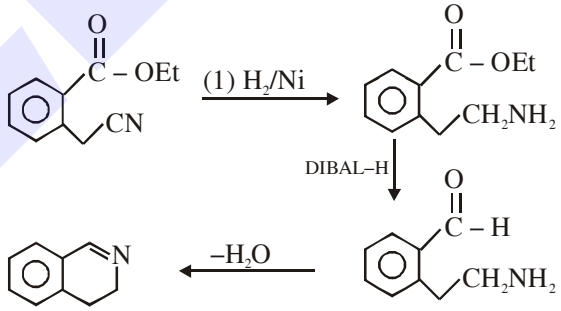
5. Ans. (2)



6. Ans. (2)

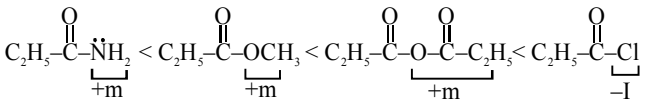


7. Ans. (2)

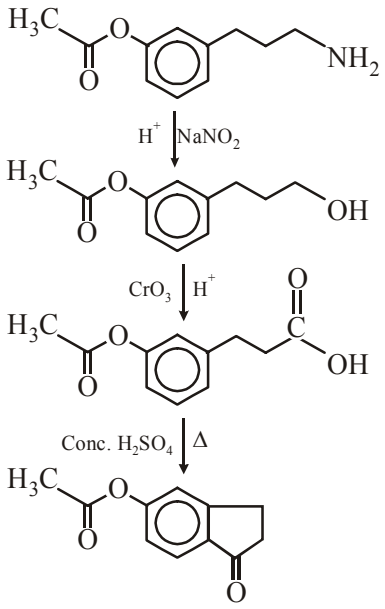


8. Ans. (1)

Rate of nucleophilic attack on carbonyl $\propto$ Electrophilicity of carbonyl group



9. Ans. (4)



10. Ans. (1)

Sol.