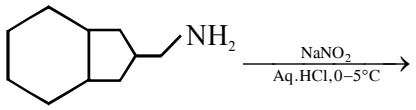
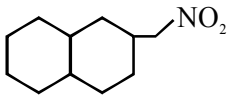
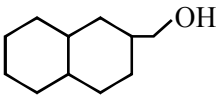
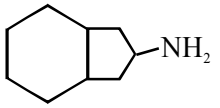
AMINE

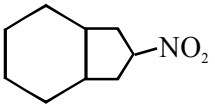
1. The major product formed in the reaction given below will be :



(1) 

(2) 

(3) 

(4) 

2. A compound 'X' on treatment with Br_2/NaOH, provided C_3H_9N, which gives positive carbylamine test. Compound 'X' is :-

(1) $CH_3COCH_2NHCH_3$

(2) $CH_3CH_2COCH_2NH_2$

(3) $CH_3CH_2CH_2CONH_2$

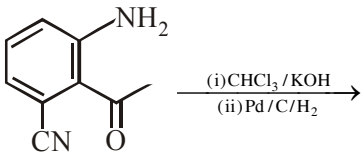
(4) $CH_3CON(CH_3)_2$

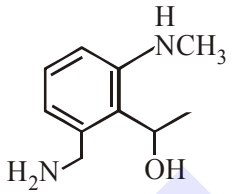
3. Which of the following amines can be prepared by Gabriel phthalimide reaction ?

(1) Neo-pentylamine (2) n-butylamine

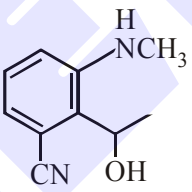
(3) triethylamine (4) t-butylamine

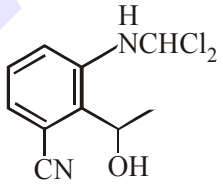
4. The major product obtained in the following reaction is :



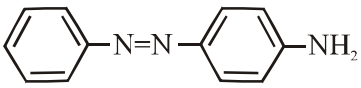
(1) 

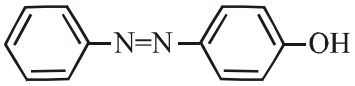
(2) 

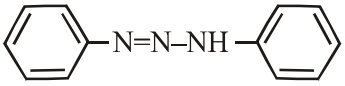
(3) 

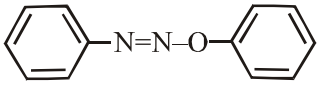
(4) 

5. Aniline dissolved in dilute HCl is reacted with sodium nitrite at 0ºC. This solution was added dropwise to a solution containing equimolar mixture of aniline and phenol in dil. HCl. The structure of the major product is :

(1) 

(2) 

(3) 

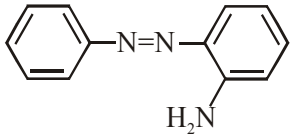
(4) 

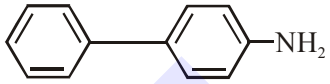
6. Ethylamine ($C_2H_5NH_2$) can be obtained from N-ethylphthalimide on treatment with :

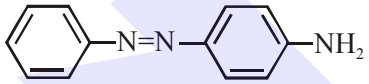
(1) $NaBH_4$ (2) CaH_2

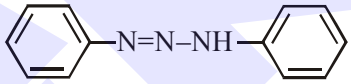
(3) H_2O (4) NH_2NH_2

7. Benzene diazonium chloride on reaction with aniline in the presence of dilute hydrochloric acid gives :

(1) 

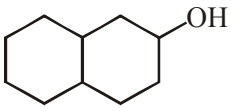
(2) 

(3) 

(4) 

SOLUTION

1. (Bonus)

Answer should be 

2. Ans. (3)

$$[X] \xrightarrow[NaOH]{Br_2} C_3H_9N \xrightarrow[KOH]{CHCl_3} CH_3CH_2CH_2{-}NC$$

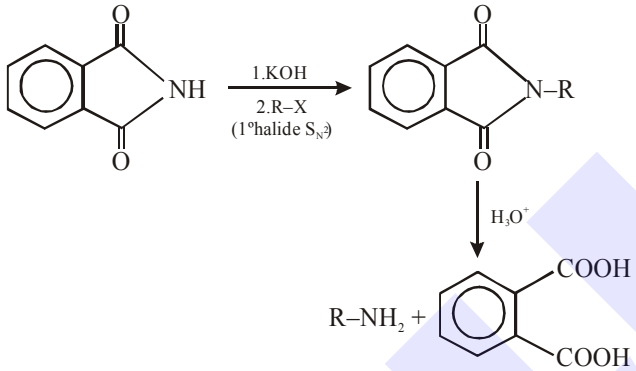
Hoff mann's Bromaide degradation — Carbylamine Reaction

Thus [X] must be aride with oen carbon more than is amine.

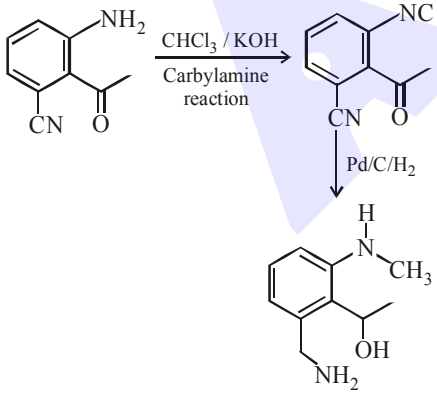
Thus [X] is $CH_3CH_2CH_2CONH_2$

3. Ans. (2)

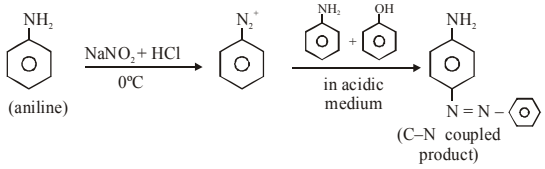
Sol. Gabriel phthalimide synthesis :



4. Ans. (1)

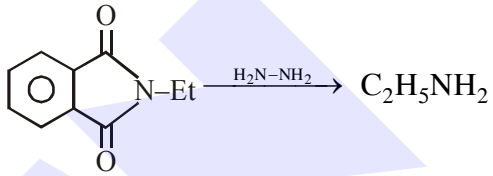
Sol. 

5. Ans. (1)

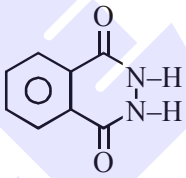
Sol. 

Aniline undergoes diazo coupling in acidic medium with $Ph\overset{+}{N}_2$

6. Ans. (4)

Sol. 

reagent is $NH_2{-}NH_2$ byproduct will be



7. Ans. (3)

Sol.