



CHEMISTRY

BOOKS - NEET PREVIOUS YEAR (YEARWISE + CHAPTERWISE)

AMINES

Mcq

1. Which of the following reactions is appropriate for converting acetamide to methamine?

A. Carbylamine reaction

B. Hofmann hypobromamide reaction

C. Stephens reaction

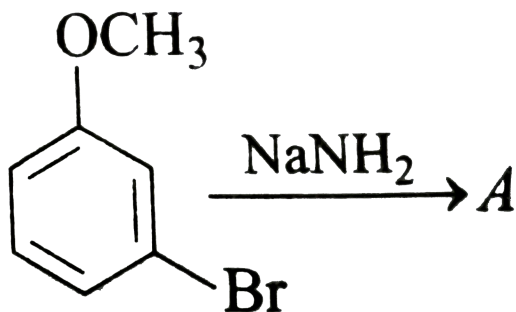
D. Gabriels phthalimide synthesis

Answer: B



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
2. Identify *A* and predict the type of reaction





A.



and substitution reaction

B.  and elimination addition reaction

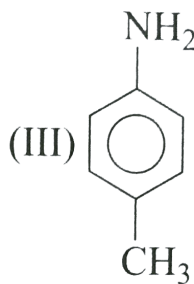
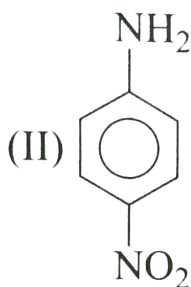
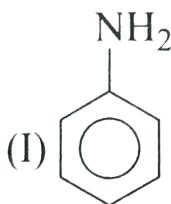
C.  and cine substitution reaction

D.  and cine substitution reaction

Answer: A



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3.

The correct increasing order of basic strength for the following compounds is :

A. $II < III < I$

B. $III < I < II$

C. $III < II < I$

D. $II < I < III$

Answer: D



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4. Consider the nitration of benzene using mixed conc. H_2SO_4 and HNO_3 . If a large amount of $KHSO_4$ is added to the mixture, the rate of nitration will be :

A. slower

B. unchanged

C. doubled

D. faster

Answer: A



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5. The correct statement regarding the basicity of arylamines is

A. Arylamines are generally more basic than alkylamines because the nitrogen lone-pair

electrons are not delocalized by interaction with the aromatic ring π -electron system

B. Arylamines are generally more basic than alkylamines because of aryl group

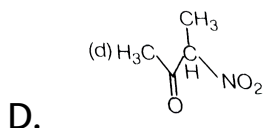
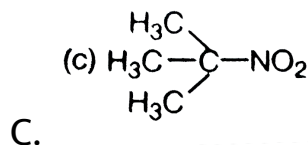
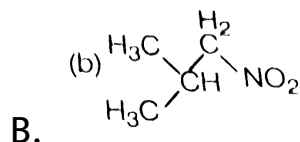
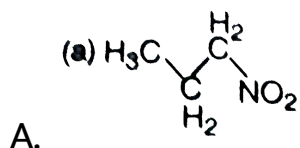
C. Arylamines are generally more basic than alkyamines, because the nitrogen atom in arylamines is sp -hybridized

D. Arylamines are generally less basic than alkylamines because the nitrogen lone-pair electrons are delocalized by interaction with the aromatic ring π -electron system.

Answer: D



6. Which one of the following -compounds does not react with nitrous acid ? .

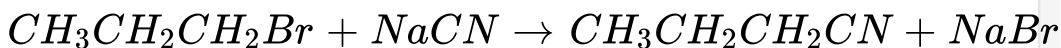


Answer: C



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7. Consider the reaction :



This reaction will be the fastest in :

A. ethanol

B. methanol

C. N,N'-dimethylformamide (DMF)

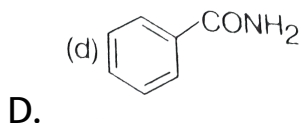
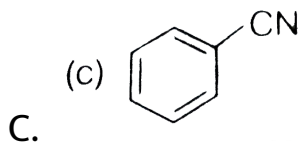
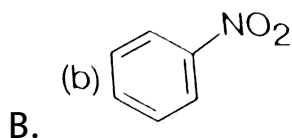
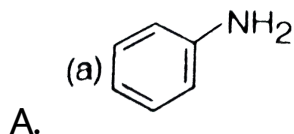
D. water

Answer: C



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8. A given nitrogen-containing compound A reacts with Sn/HCl followed by HNO_2 to give an unstable compound B. B on treatment with phenol forms a beautiful coloured compound C with the molecular formula $\text{C}_{12}\text{H}_{10}\text{N}_2\text{O}$. The structure of compound A is .



Answer: B

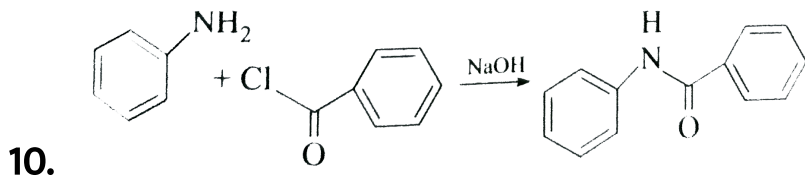


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9. Method by which aniline cannot be prepared is:

- A. hydrolysis phenyl isocyanide with acidic solution
- B. degradation of benzamide with bromine in alkaline solution
- C. reduction of nitrobenzene with H_2 / Pd in ethanol
- D. potassium salt of phthalimide treated with chlorobenzene followed by the hydrolysis with aqueous NaOH solution

Answer: D



The following reaction is known by the name:

- A. Fridel-Crafts reaction
- B. Perkins reaction
- C. Acetylation reaction
- D. Schotten-Baumann reaction

Answer: D

11. How many structural isomers are possible from molecular formula C_3H_9N

A. 4

B. 5

C. 2

D. 3

Answer: D



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12. The electrolytic reduction of nitrobenzene in strongly acidic medium produces .

A. p-aminophenol

B. azoxybenzene

C. azobenzene

D. aniline

Answer: A



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13. Which of the following will be most stable diazonium salt $RN_2^+ X^-$?

A. $CH_3N_2^+ X^-$

B. $C_6H_5N_2^+ X^-$

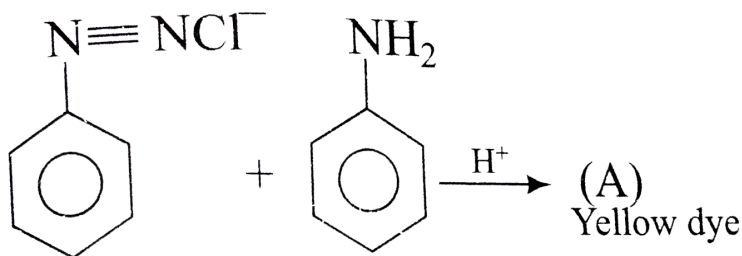


Answer: B

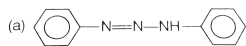


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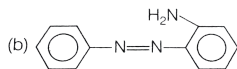
14. In the following reaction the product (A) is



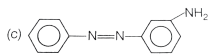
A.



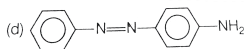
B.



C.



D.



Answer: D



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15. Nitrobenzene on reaction with conc HNO_3 / H_2SO_4 at $80 - 100^\circ C$ forms which one of the following products .

A. 1,2-dinitrobenzene

B. 1,3-dinitrobenzene

C. 1,4-dinitrobenzene

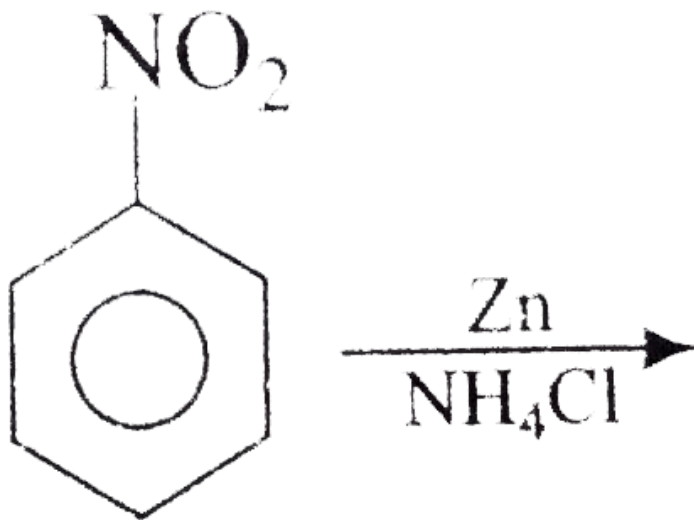
D. 1,2,4-trinitrobenzene

Answer: B

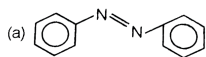


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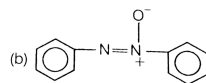
16. What is the product obtained in the following reaction



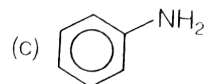
A.



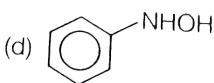
B.



C.



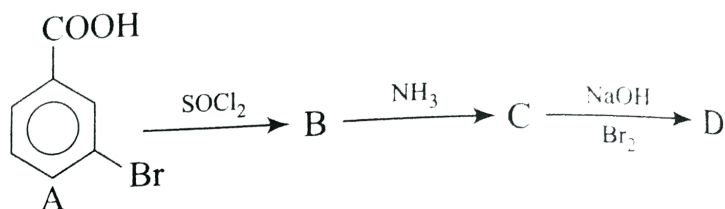
D.

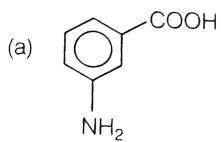


Answer: D

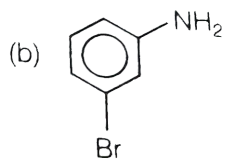
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17. In a set of reaction m-bromobenzoic acid gives a product *D*. Identify the product *D*

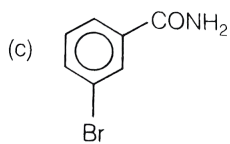




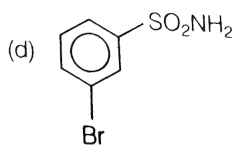
A.



B.



C.



D.

Answer: B



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18. Acetamide is treated separately with the following reagents. Which one of these would give methyl amine ?



B. Sodalime

C. Hot conc. H_2SO_4



Answer: A



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19. Which of the following statements about primary amines is false ? .

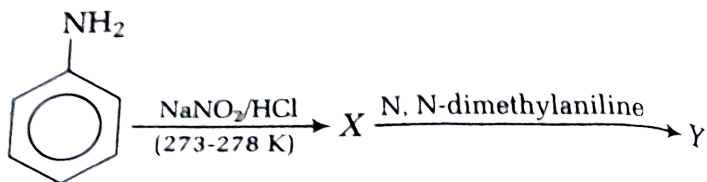
- A. Alkyl amines are stronger bases than aryl amines
- B. Alkyl amines react with nitrous acid to produce alcohols
- C. Aryl amines react with nitrous acid to produce phenols
- D. Alkyl amines are stronger bases than ammonia

Answer: C

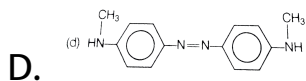
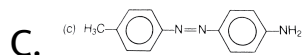
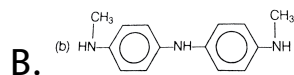
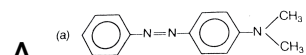


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20. Aniline in a set of the following reactions yielded a coloured product Y.



The structure of Y would be

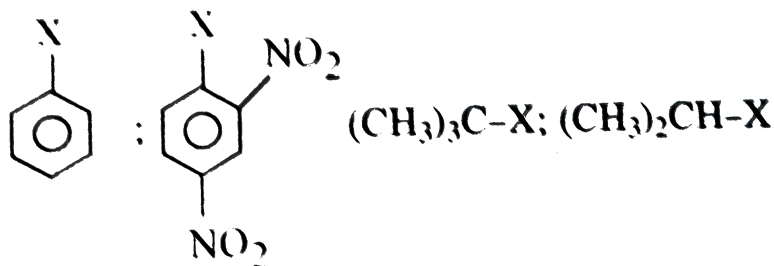


Answer: A



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21. The correct order of increasing reactivity of C-X bond towards nucleophile in the following compounds is :



A. $I < II < IV < III$

B. $II < III < I < IV$

C. $IV < III < I < II$

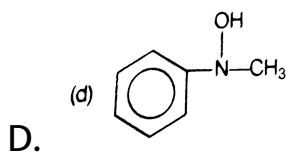
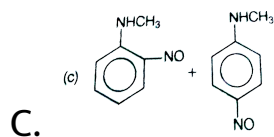
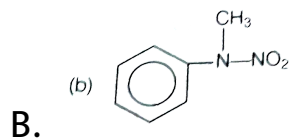
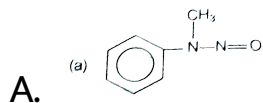
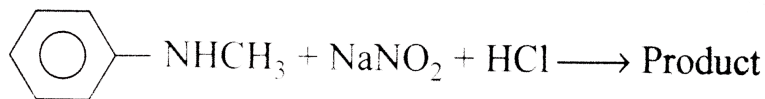
D. $III < II < I < IV$

Answer: A



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22. Predict the product



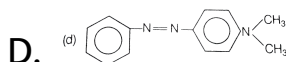
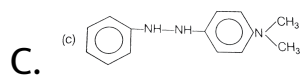
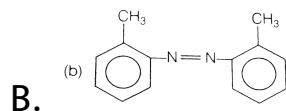
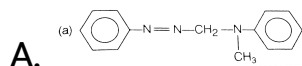
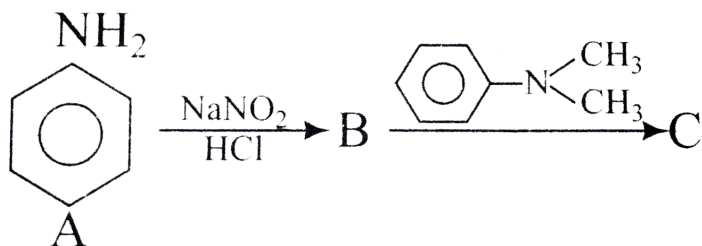
Answer: A



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23. In a reaction a coloured product *C* was obtained

The structure of *C* would be



Answer: D



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24. Which one of following on reduction with lithium aluminium hydride yields a secondary amine ? .

A. Methyl isocyanide

B. Acetamide

C. Methyl cyanide

D. Nitroethane

Answer: A



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25. Which of the following is more basic than aniline?

A. Diphenylamine

B. Triphenylamine

C. p-nitroaniline

D. Benzylamine

Answer: D



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26. Electrolytic reduction of nitrobenzene in weakly acidic medium gives .

A. aniline

B. nitrosobenzene

C. N-phenyl hydroxylamine

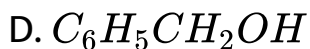
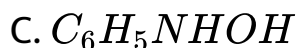
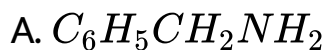
D. p-hydroxyaniline

Answer: A



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27. Aniline in a set of reactions yielded a product



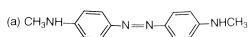
Answer: D



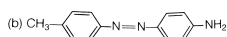
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28. Aniline when diazotized in cold and then treated with dimethyl aniline gives a coloured product. Its structure would be

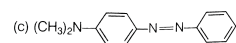
A.



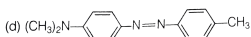
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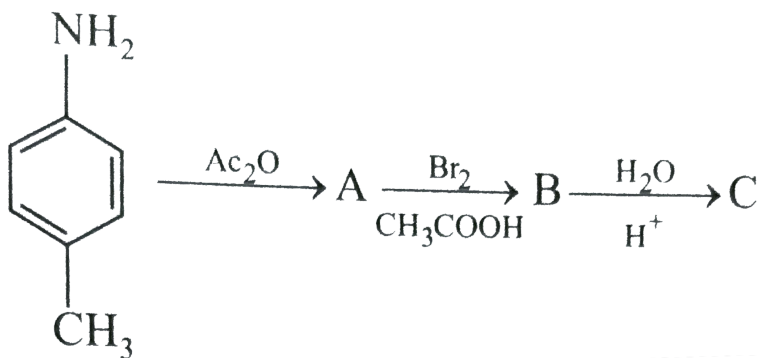
C.



D.

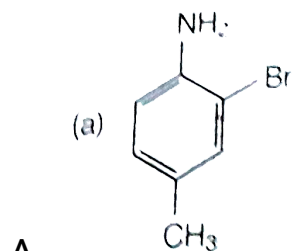


Answer: C

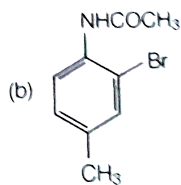


29.

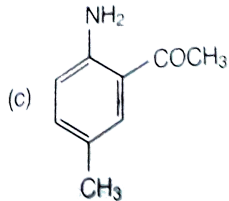
The final product C, obtained in this reaction



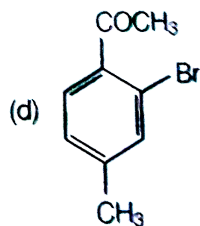
A.



B.



C.



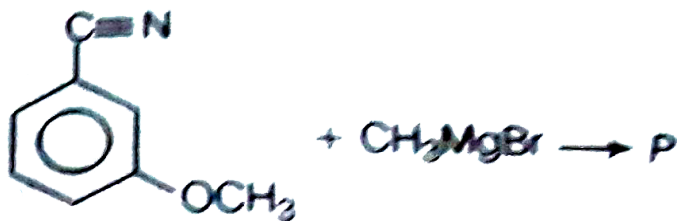
D.

Answer: A

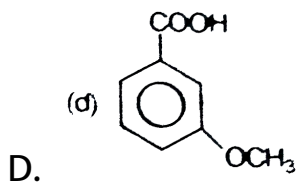
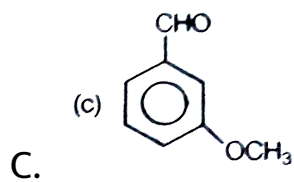
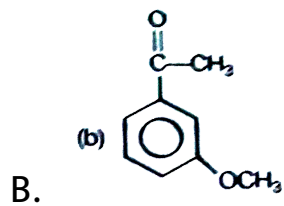
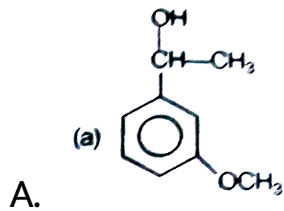


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30.



Product P in the above reaction is



Answer: B



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31. The intermediates formed during the reaction of

$R - \overset{\overset{O}{||}}{C} - NH_2$ with Br_2 and KOH are :

A. $RCONHBr$ and $RNCO$

B. $RNHCOBr$ and $RNCO$

C. $RNHBr$ and $RCONHBr$

D. $RCONBr_2$

Answer: A



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32. An organic compound P on reduction gives compound Q which on reaction with chloroform and potassium hydroxide forms R. The compound R on catalytic reduction gives N-methylaniline. The compound P is

- A. nitrobenzene
- B. nitromethane
- C. methylamine
- D. aniline

Answer: A



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33. Amides may be converted into amines by reaction named after

A. Perkin

B. Claisen

C. Hofmann

D. Kekule

Answer: C



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34. The decomposition of organic compounds, in the presence of oxygen and without the development of

odoriferous substances, is called

- A. decay
- B. N_2 -fixation
- C. nitrification
- D. denitrification

Answer: A



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35. Phenyl isocyanides are prepared from which of the following reaction ?

- A. Rosenmund's reaction

B. Carbylamine reaction

C. Reimer-Tiemann reaction

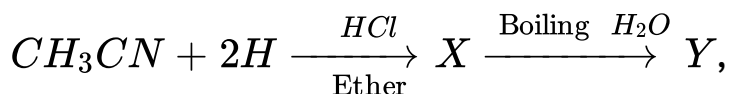
D. Wurtz reaction

Answer: B



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36. In the reaction



the term Y is

A. acetone

B. ethanamine

C. acetaldehyde

D. dimethyl amine

Answer: C



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37. Aniline is reacted with bromine water and the resulting product is treated with an aqueous solution of sodium nitrite in presence of dilute hydrochloric acid. The compound so formed is converted into. The compound so formed is converted into a tetrafluoroborate which is subsequently heated. The final product is

- A. 1,3,5-tribromobenzene
- B. p-bromofluorobenzene
- C. p-bromoaniline
- D. 2,4,6-tribromofluorobenzene

Answer: D



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38. The compound obtained by heating a mixture of 1° amine and chloroform with ethanolic potassium hydroxide (KOH) is

- A. an alkyl isocyanide

B. an alkyl halide

C. an amide

D. an amide and nitro compound

Answer: A



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39. Consider the following sequence of reactions

Compounds $[A] \xrightarrow{\text{reduction}} [B] \xrightarrow{HNO_2} CH_3CH_2OH$ The compound $[A]$ is .

A. CH_3CH_2CN

B. CH_3NO_2

C. CH_3NC

D. CH_3CN

Answer: D



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40. A reagent suitable for the determination of N-terminal residue of a peptide is

A. p-toluene sulphonyl chloride

B. 2,4-dinitrophenyl hydrazine

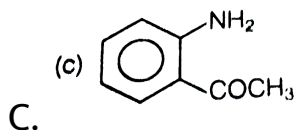
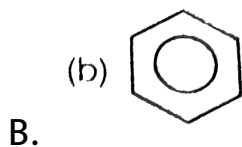
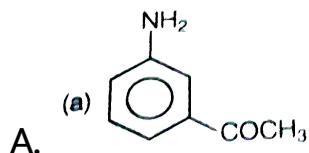
C. carboxypeptidase

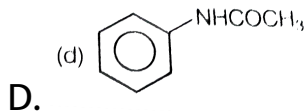
D. 2,4-dinitrofluorobenzene

Answer: D

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41. Aniline is an activated system for electrophilic substitution. The compounds formed on heating aniline with acetic anhydride is .





Answer: D



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42. When aniline reacts with oil of bitter almonds (C_6H_5CHO) condensation takes place and benzal derivative is formed This is known as .

A. Millon's base

B. Schiff's reagent

C. Schiff's base

D. Benedict's reagent

Answer: C



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43. Which of the following is formed when acetonitrile is hydrolysed partially with cold conc *HCl* ? .

A. Acetic acid

B. Acetamide

C. Methyl cyanide

D. Acetic anhydride

Answer: B



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44. Acetamide and ethylamine can be distinguished by reacting with .

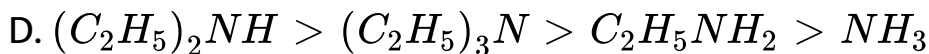
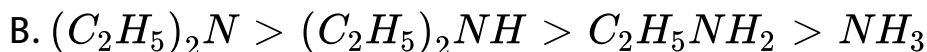
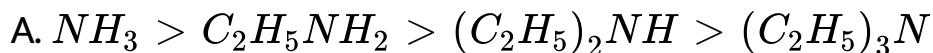
- A. aq. HCl and heat
- B. aq. NaOH and heat
- C. acidified $KMnO_4$
- D. bromine water

Answer: B



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45. What is the decreasing order of basicity of 1° , 2° and 3° ethyl amines and ammonia ?



Answer: D



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46. For carbylamine reaction, we need hot alc. KOH and

- A. any primary amine and chloroform
- B. chloroform and silver powder
- C. a primary amine and an alkyl halide
- D. a mono alkyl amine and trichloromethane

Answer: A



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47. Indicate which nitrogen compound amongst the following would undergo Hofmann reaction ? .



C. $RCONH_4$

D. $RCONHOH$

Answer: C



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48. Mark the correct statement

A. Methyl amine is slightly acidic

B. Methyl amine is less basic than ammonia

C. Methyl amine is a stronger base than NH_3

D. Methyl amine forms salts with alkalies

Answer: C



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