



CHEMISTRY

BOOKS - DISHA CHEMISTRY (HINGLISH)

HALOALKANES AND HALOARENES

Mcq

1. o-Methoxybromobenzene is treated with sodamide and then with ammonia. The product formed is

A. o-Methoxyaniline

B. Aniline

C. Methoxybenzene

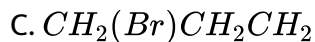
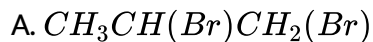
D. m-Methoxyaniline

Answer: D



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2. Gem - dibromide is



Answer: B



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3. Arrange the following compounds in order of increasing dipole moment .

Toluene (*I*) m-dichlorobenzene (*II*)

o-dichlorobenzene (*III*) . P-dichlorobenzene (*IV*) .

A. $I < IV < II < III$

B. $IV < II < III < I$

C. $IV < I < III < II$

D. $IV < II < I < III$

Answer: B

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4. The compounds formed on heating chlorobenzene with chloral in the presence of concentrated sulphuric acid, is

A. freon

B. DDT

C. gammexene

D. Hexachloroethene

Answer: B

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5. Which among MeX , RCH_2X , R_2CHX and R_3CX is most reactive towards S_n2 reaction?

A. MeX

B. RCH_2X

C. R_2CHX

D. R_3CX

Answer: A

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6. In the preparation of chlorobenzene from aniline, the most suitable reagent is

A. Chlorine in the presence of ultraviolet light

B. Chlorine in the presence of $AlCl_3$

C. Nitrous acid followed by heating with Cu_2Cl_2

D. HCl and Cu_2Cl_3

Answer: C

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7. On sulphonation of C_6H_5Cl

A. m-Chlorobenzenesulphonic acid is formed

B. Benzenesulphonic acid is formed

C. o-Chlorobenzenesulphonic acid is formed

D. O- and p-Chlorobenzenesulphonic acid is formed

Answer: D

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8. Compound (A), C_8H_9Br , gives a white precipitate when warmed with alcoholic $AgNO_3$. Oxidation of (A) gives an acid (B) $C_8H_6O_4$. (B) easily forms anhydride on heating. Identify the compound (A).

A. 

B. 

C. 

D. 

Answer: D

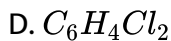
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9. The reaction of $C_6H_5N_2^+ Cl^-$ with $CuCl$ gives

A. C_6H_5Cl

B. C_6H_6

C. $C_6H_5 - C_6H_5$



Answer: A

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10. Conant Finkelstein reaction for the preparation of alkyl iodide is based upon the fact that

- A. Sodium iodide is soluble in methanol, while sodium chloride is insoluble in methanol
- B. Sodium iodide is soluble in methanol, while NaCl and NaBr are insoluble in methanol
- C. Sodium iodide is insoluble in methanol, while NaCl and NaBr are soluble
- D. The three halogens differ considerably in their electronegativity

Answer: B

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11. Tertiary alkyl halides are practically inert to substitution by S_N2 mechanism because of

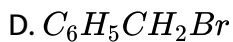
- A. Steric hindrance
- B. inductive effect
- C. instability
- D. insolubility

Answer: A

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12. What one is used reactive towards S_N1 reaction?

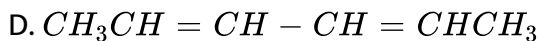
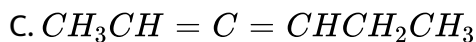
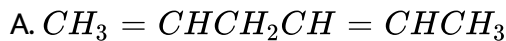
- A. $C_6H_5CH(C_6H_5)Br$
- B. $C_6H_5CH(CH_3)Br$



Answer: C

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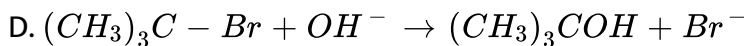
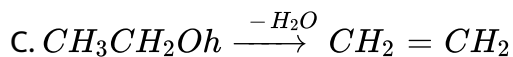
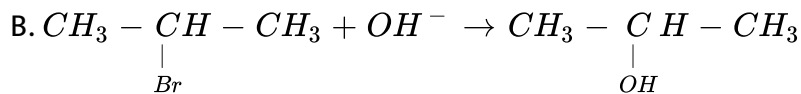
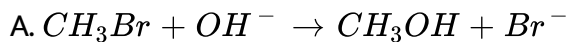
13. The major product of the following reaction is:



Answer: D

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14. Which of the following is an example of S_N2 reaction?



Answer: A

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15. What would be the product formed when 1-bromo-3-chlorocyclobutane reacts with two equivalents of metallic sodium in ether?

A. 

B. 

C. 

D. 

Answer: D

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16. Chlorination of toluene in the presence of light and heat followed by treatment with aqueous NaOH gives

A. o-Cresol

B. p-Cresol

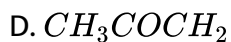
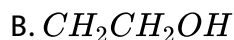
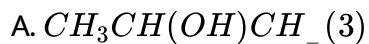
C. 2,4-Dihydroxytoluene

D. Benzoic acid

Answer: D

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17. The starting substance for the preparation of iodoform is any one of the following, except

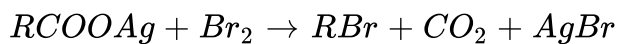


Answer: C



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18. The following reaction proceeds through the intermediate

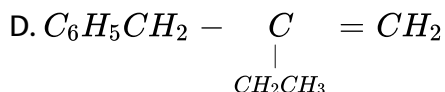
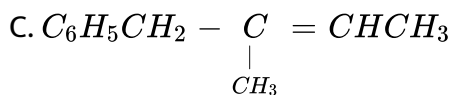
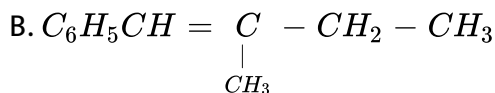
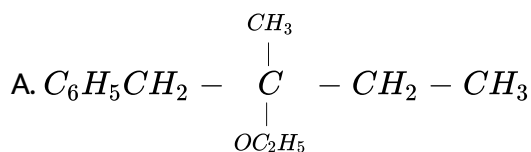
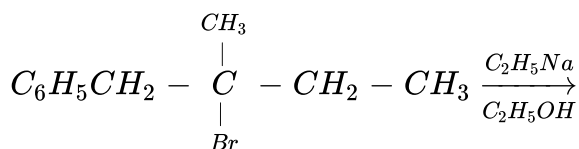


D. All

Answer: D

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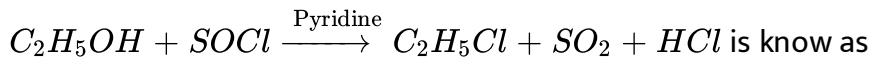
19. The major product of the following reaction is:



Answer: B

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20. The reaction :



- A. Kharasch effect
- B. Williamson's synthesis
- C. Darzen's procedure
- D. Hunsdiecker reaction

Answer: C



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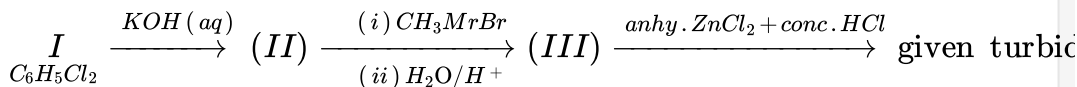
21. If chloroform is left open in air in the presence of sunlight, it gives

- A. carbon tetrachloride
- B. carbonyl chloride
- C. mustard gas lewisie
- D.

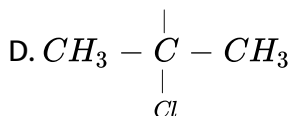
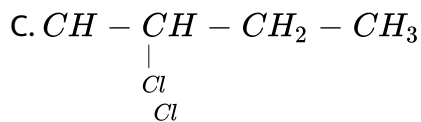
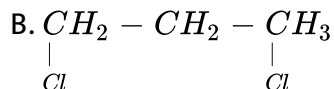
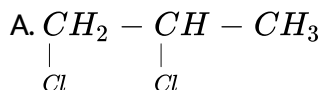
Answer: B

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22. In the following reaction sequence:



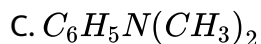
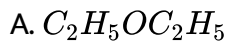
The compounds 1 is :



Answer: D

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23. Mg reacts with RBr best in



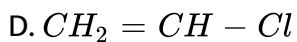
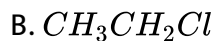
D. Equally in all the three

Answer: A



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24. Which chloride is least reactive with the hydrolysis point of view?



Answer: D



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25. $CH_3 - CH_2 - CH(Cl) - CH - CH_3$ obtained by chlorination of n-butane will be

A. l-form

B. d-form

C. Meso form

D. Racemic mixture

Answer: D



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26. the reaction of toluene with Cl_2 in presence of $FeCl_3$ gives 'X' and reaction in presence of light gives 'Y'. Thus, 'X' and 'Y' are:

A. X= Benzal chloride, Y = o-Chlorotoluene

B. X= m-Chlorotoluene, Y = p -Chlorotoluene

C. X = o -and p-Chlorotoluene, Y = Trichloromethylbenzene

D. X= Benzyl chloride, Y = m-Chlorotoluene

Answer: C

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27. Which reagent cannot be used to prepare an alkyl halide from an alcohol?

A. $HCl + ZnCl_2$

B. $NaCl$

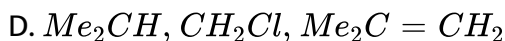
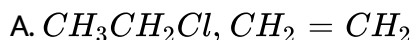
C. PCl_5

D. $SOCl_2$

Answer: B

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28. A is an optically inactive alkyl chloride which on reaction with aqueous KOH gives B. B on heating with Cu at 300°C gives an alkene C, what are A and C



Answer: C

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29. $CH_3Br + Nu^- \rightarrow CH_3 - Nu + Br^-$. The decreasing order of the rate of the above reaction with nucleophiles (Nu^-) A to D is $[Nu^- = (A)PhO^-, (B)AcO^-, (C)HO^-, (D)CH_3O^-]$

A. $A > B > C > D$

B. $B > D > C > A$

C. $D > C > A > B$

D. $C > C > B > A$

Answer: C

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30. Which of the following will have a mesoisomer also?

A. 2,3-Dichloropentane

B. 2,3-Dichlorobutane

C. 2-Chlorobutane

D. 2-Hydroxypropanoic acid

Answer: D

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31. The major product formed when 1, 1, 1-trichloro-propane is treated with aqueous potassium hydroxide is:

- A. Propyne
- B. 1-Propanol
- C. 2-Propanol
- D. Propionic acid

Answer: D



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



- $(\pm)C_6H_5CH(O^tBu)CH_2C_6H_5$
- $C_6H_5CH = CHC_6H_5$
- $(+)C_6H_5CH(O^tBu)CH_2C_6H_5$
- $(-)C_6H_5CH(O^tBu)CH_2C_6H_5$

Answer: B

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33. A major component of Borsch reagent is obtained by reacting hydrazine hydrate with which of the following?

A. 

B. 

C. 

D. 

Answer: C

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34. Bottles containing C_6H_5I and $C_6H_5CH_2I$ lost their original labels. They were labelled A and B for testing. A and B were separately taken in

test tubes and boiled with NaOH solution. The end solution in each tube was made acidic with dilute HNO_3 and then some $AgNO_3$ solution was added. Substance B gave a yellow precipitate. Which one of the following statements is true for this experiment?

- A. A and $C_6H_5CH_2I$
- B. B and C_6H_5I
- C. Addition of HNO_3 was unnecessary
- D. A was C_6H_5I

Answer: D

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35. Aryl fluoride may be prepared from arene diazonium chloride using :


- A. BF_3/Δ
- B. $HNF_4/NaNO_3, Cu, \Delta$
- C. CuF/HF

D. Cu/HF

Answer: A



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36. The reagent(s) for the following conversion, 

is/are

A. Alcoholic KOH

B. alcoholic KOH followed by $NaNH_2$

C. aqueous KOH followed by $NaNH_2$

D. Zn/CH_3OH

Answer: B



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37. An organic compound A (C_4H_9Cl) on reaction with Na/diethyl ether gives a hydrocarbon which on monochlorination gives only one chloro derivative, then A is

- A. tert-butyl chloride
- B. sec-butyl chloride
- C. isobutyl chloride
- D. n-butyl chloride

Answer: A



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38. Read the following statements and choose the correct answer

- (i) The boiling points of isomeric haloalkanes decrease with increase in branching.
- (ii) Among isomeric dihalobenzenes the para-isomers have higher melting point than their ortho and meta isomers.

(iii) The isomeric dihalobenzene have large difference in their boiling and melting points

(iv) The isomeric dihalobenzene have nearly same boiling point.

A. (i), (ii) and (iii) are correct

B. (i) and (iii) are correct

C. (ii) and (iv) are correct

D. (i), (ii) and (iv) are correct

Answer: D



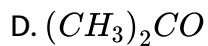
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39. Chloroform cannot be prepared from which of the following?

A. CH_3OH

B. C_2H_5OH

C. CH_3CHO

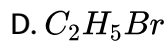


Answer: A



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40. Silver benzoate reacts with bromine to form



Answer: D



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41. Benzene reacts with n-propyl chloride in the presence of anhydrous $AlCl_3$ to give (c) No reaction (d) Isopropylbenzene

A. 3 -Propyl- 1 -chlorobenzene

B. n-Propylbenzene

C. No reaction

D. Isopropylbenzene

Answer: D



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42. Match the columns



A. A-II, B-IV, C-I, C-III

B. A-II, B-III, C-I, D-IV

C. A-III, B-I, C-IV, D-II

D. A-IV, B-III, C-I, D-II

Answer: A

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43. Which of the following statements is correct?

- A. S_{N2} reactions of optically active halides are accompanied by inversion of configuration.
- B. S_{N1} reactions of optically active halides are accompanied by inversion of configuration.
- C. Carbocation formed in S_{N1} reaction is sp^2 hybridized.
- D. All of these

Answer: D

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44. The reaction is described as



A. S_{E2}

B. S_{N1}

C. S_{N2}

D. S_{N0}

Answer: C



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45. Which of the following is not used in Friedel-Crafts reaction?

A. N-Phenyl acetanilide

B. Bromobenzene

C. Benzene

D. Chlorobenzene

Answer: A



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