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INDIAN SCHOOL MUSCAT SECOND PERIODIC ASSESSMENT

CHEMISTRY

CLASS: XII

Sub. Code: 043

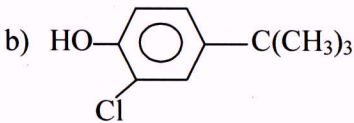
Time Allotted: 50 mts

12 .05.2019

Max. Marks: 20

GENERAL INSTRUCTIONS:

- a. All questions are compulsory.
- b. Mark for each question is indicated against it.

1. Give a chemical test to distinguish between propan-1-ol and 2-Methylpropan-2-ol 1
2. Draw the structure of 3-Chloromethyl-2-isopropylpentan-1-ol 1
3. Arrange the following in the increasing order of acidity.
2,4,6 -Trinitrophenol , 4-methyl phenol , phenol , butan-1-ol. 1
4. Write the equations involved in the following reactions: 2
 - a) Reimer-Tiemann reaction
 - b) Friedel-Craft's acylation of anisole
5. a) What is denatured alcohol? 2
b) Write equation for the preparation of ethoxybenzene by Williamson's synthesis.
6. Predict the product of the following reaction: 2
 - a) $\text{C}_6\text{H}_5\text{CH}_2\text{OC}_6\text{H}_5 + \text{HI} \longrightarrow$
 - b) $(\text{CH}_3)_3\text{C-OH} \xrightarrow{\text{Cu, 573K}}$
7. Write the IUPAC name of the following compounds: 2
 - a) $(\text{CH}_3)_3\text{C-OC}_2\text{H}_5$
 - b) 
8. Account for the following: 3
 - a) Ortho nitro phenol is more acidic than ortho-methoxy phenol.
 - b) Reaction of alcohol with acid chloride is carried out in the presence of pyridine.
 - c) Unlike phenols, alcohols are easily protonated.

9. Effect the following conversions: 3
- a) Phenol to salicylic acid
 - b) Aniline to phenol
 - c) Propan-2-one to 2-methylpropan-2-ol
10. Write the mechanism for the acid dehydration of ethanol to yield ethene. 3

End of the Question Paper



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1. Arrange the following in the increasing order of acidity. 1
4-Methylphenol, 3,5-dinitrophenol, tert-butylalcohol, butan-1-ol.
2. Give a chemical test to distinguish between phenol and propan-1-ol. 1
3. Draw the structure of methyl isopropyl ether. 1
4. a) What is wood spirit? Why is it so called? 2
b) Write equation for the preparation of 2-methyl-2-methoxypropane by Williamson's synthesis.
5. Write the equations involved in the following reactions: 2
a) Kolbe's reaction b) Hydroboration – oxidation reaction
6. Write the IUPAC name of the following compounds: 2
a) $\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_2\text{Cl})\text{CH}_2\text{CH}_2\text{OH}$
b) $\text{CH}_3\text{O}-\text{C}_6\text{H}_4-\text{COCH}_3$
7. Predict the product of the following reaction: 2
a) $\text{C}_6\text{H}_5\text{OCH}_3 + \text{HI} \xrightarrow{\quad}$
b) $\text{CH}_3\text{CH}=\text{CHCH}_2\text{OH} \xrightarrow{\text{PCC}}$
8. Effect the following conversions: 3
a) Phenol to anisole
b) Ethanol to isopropyl alcohol
c) Benzene sulphonic acid to benzoquinone
9. Write the mechanism for the hydration of ethene to yield ethanol. 3
10. Account for the following: 3
a) Unlike phenols, alcohols are easily protonated.
b) The reaction of alcohol with acid is carried out in the presence of small amount of concentrated H_2SO_4 .
c) C – O – H bond angle in alcohol is lesser than the tetrahedral bond angle.

End of the Question Paper



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SECOND PERIODIC ASSESSMENT

CHEMISTRY

CLASS: XII

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Time Allotted: 50 mts

12.05.2019

Max. Marks: 20

GENERAL INSTRUCTIONS:

- a. All questions are compulsory.
- b. Mark for each question is indicated against.

1. Draw the structure of 1,2-dimethoxyethane. 1
2. Arrange the following in the decreasing order of acidity. 1
2,4,6-Trinitrophenol , 4-methyl phenol , phenol , butan-1-ol.
3. Give a chemical test to distinguish between butan-2-ol and 2-methylbutan-2-ol. 1
4. Write the IUPAC name of the following compounds: 2
 - a) $\text{CH}_3\text{OCH}_2\text{CH}(\text{CH}_3)_2$
 - b) $\text{CH}_3\text{CH}(\text{OH})\text{CH}_2\text{CH}(\text{OH})\text{CH}(\text{C}_2\text{H}_5)_2$
5. Predict the product of the following reaction: 2
 - a) $\text{C}_6\text{H}_5\text{CH}_2\text{OC}_6\text{H}_5 + \text{HI} \longrightarrow$
 - b) $(\text{CH}_3)_3\text{C-OH} \xrightarrow{\text{Cu, 573K}}$
6.
 - a) What is denatured alcohol? 2
 - b) Write equation for the preparation of phenol from cumene.
7. Write the equations involved in the following reactions: 2
 - a) Kolbe's reaction
 - b) Williamson's synthesis
8. Explain the mechanism of the following reaction: 3

$$2\text{C}_2\text{H}_5\text{OH} \xrightarrow[413\text{ K}]{\text{Conc. H}_2\text{SO}_4} \text{C}_2\text{H}_5\text{OC}_2\text{H}_5 + \text{H}_2\text{O}$$
9. Account for the following: 3
 - a) C - O bond length in phenol is shorter than that in methanol.
 - b) Unlike phenols, alcohols are easily protonated.
 - c) The reaction of alkoxide with a tertiary alkyl halide gives an alkene.
10. Effect the following conversions: 3
 - a) Propene to propan-1-ol
 - b) Benzene to phenol
 - c) Ethyl magnesium chloride to Propan-1-ol

End of the Question Paper