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**بسم الله الرحمن الرحيم**

**Final Exam Period 2**

**Chem. 145 / Group 24593**

**Date: 12/02/1431- 27/01/2010**

**Student Name:----------------------------------------------------------------------**

**Student’s Id. No.:-------------------------------**

1. The correct IUPAC name for the following compound is



a) *N*,*N*-diethyl-3-amino-2-pentanone b) Diethylbut-2-one-3-amine

 c) Diethylbut-4-one-3-amine d) *N*,*N*-diethyl-3-amino-4-pentanone

1. Which is the most reactive compound in the electrophilic aromatic substitution?

 

1. Addition of Grignard reagent to any ketone will give :

a) Primary alcohol b) Scondary alcohol c) Tertiary alcohol d) Carboxylic acid

1. The correct IUPAC name for the following compound is



a) Isobutanoyl chloride b) 3-Methyl-butanoyl chloride

 c) 1-Chloro-3-methylbutanone d) 2-Methyl-butanoyl chloride

1. Which of the following is a correct name according to IUPAC rules?

a) 2-Methylcyclohexane b) 2-Ethyl-2-methylpentane

b) 3,4-Dimethylpentane d) 3-Ethyl-2-methylpentane

1. The structure of Styrene is



1. Which of the following amines is the most basic



1. How are these compounds related?



a) The same b) Geometrical isomers

c) Structural isomers d) Not related at all

1. All of the following compounds can form intermolecular hydrogen bonds except

a) Acids b) Alcohols

c) Thiols d) Aldehydes

1. What is the product of this reaction?



1. The compound of the highest acidity is

1. 2,3-Dimethyl-2-butene undergoes catalytic hydrogenation to give:

a) 2,3-Dimethylbutane b) 2-Methylpentane

c) 2,2-Dimethylbutane d) 3-Methylpentane

1. The main product of the following reaction is





1. The correct IUPAC name of the following compound is

a) 2-Hydroxy-butanal b) 2-Hydroxy-butan-3-one

c) 3-Hydroxy-butan-2-one d) 3-Oxo-2-butanol

1. 3-Cyclopentene carboxylic acid is



1. Which of the following compounds will show geometrical isomerism?

a) CH2=CHCl2 b) ClCH=CHBr

c) CH2=CHCl d) Cl2C=CBr2

1. Which of the following is ketal



1. The structure of vinyl bromide is



1. What is the best name for the following compound?



a) 3-Methylenehexane b) 2-Propyl-1-butene

c) 4-Ethyl-4-pentene d) 2-Ethyl-1-pentene

1. Amines can be prepared by the reaction of

 a) Acid + Alcohol b) Alkyl halides + Ammonia

 c) Acid +Base d) Two molecules of alcohols

1. The molecule of the highest boiling point is

 a) CH3-CH2-CH2-CHO b) CH3CH2­CH2CH2OH

c) CH3CH2OCH3CH2 d) CH3CH2CH2COOH

1. The main product of the following reaction is



1. Which of the following compounds **is not aromatic**



1. What is the major product expected from the following reaction?



1. What is the major product of the following reaction?



1. What is the major product of the following reaction?



1. The structure of 2-butyne-1,4-dioic acid is



1. The correct name for the following structure is:



a) 1-Chloro-3-ethyl-4-methylcyclohexane b) 4-Chloro-2-ethyl-1-methylcyclohexane

c) 1-Methyl-2-ethyl-4-chlorocyclohexane d) 5-Chloro-1-ethyl-2-methylcyclohexane

1. The product of the following Coery-House synthesis is:



a) n-Butane b) n-Hexane c) Isobutane d) *n*-Propane

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1. What is the major product of the following reaction?



1. Which compound of the following **would not** give Aldol condensation reaction



1. The correct IUPAC name of the following compound is



a) Ethoxypropanone b) Ethyl propanoate

c) Ethyl propyl ether d) Ethyl propyl anhydride

1. The major product for the following reaction is:
2. The alkyl bromide of the highest boiling point is:



1. Alkenes can be converted to epoxides using

a) CH3COOH b) CH3COCH3  c) CH3CHO d) CH3COOOH

1. Which amine of the following is tertiary amine



1. The major product of this reaction is:



1. The following compound is considered as



a) Aldol product b) Enol c) Cyanohydrine d) Acetal

1. The structure of phthalic acid is



1. The correct IUPAC name of the following compound is



a) 3-Methyl-5-Hexenal b) 1-Heptenal

c) 4-Methyl-5-hexenal d) 4-Methyl-5-hexyneal

1. **The main products of the following reactions are:**

i.



a) CH3CH2COONa + CHI3 b) CH3CH2COOH + CHI3

c) CH3CH2COOCOCH2CH3 + CHI3 d) CH3CH2CHO + CHI3

ii.

 

a) CH3COOH b) CH3CHO c) CH3CH2OH d) CH3OCH3

iii.







iv.



v.







vi.



vii.



viii.

a) CH3CN b) CH3CH2NH2 c) CH3NH2 d) CH3COOH

ix.



x.

**What is the major product of the following reaction?**



وبالله التوفيق،،،

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