جامعة الملك سعود - كلية العلوم – قسم الكيمياء

(الاختبار النهائي) في مقرر ١٤٥ كيم (١٩-٧-١٤٣٤هـ)

(الفصل الدراسي الثاني ١٤٣٣/١٤٣٤هـ) الزمن: ساعتان

أسم الطالب:- رقم الطالب:-

ملاحظة هامة: تصحيح الامتحان سيكون بناء على الإجابة المكتوبة في الجدول

Answer Sheet

رقم السؤال	الإجابة	رقم السؤال	الإجابة
1		21	
2		22	
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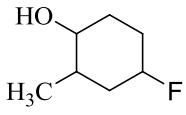
19		39	
20		40	

1- The IUPAC name of  **is:**

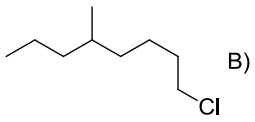
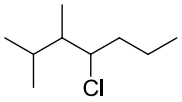
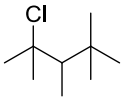
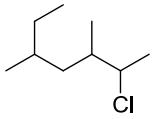
A) 1-Fluoro-3-methyl-4-cyclohexanol

B) 4-Fluoro-2-methylcyclohexanol

C) 5-Fluoro-2-hydroxy-1-methylcyclohexane

D) 1-fluoro-4-hydroxy-5-methylcyclohexane

2- The molecule with the highest boiling point is:

A)  B)  C)  D) 

3- The most electronegative atom is:

A) Cl B) F C) I D) Br

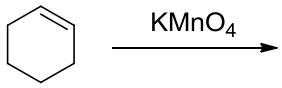
4- The number of sigma bonds in benzene is:

A) 5 B) 6 C) 7 D) 10

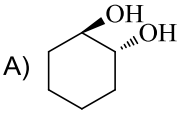
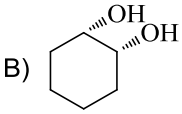
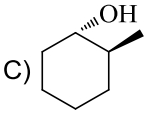
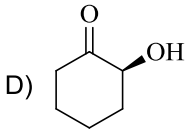
5- Which compound is completely water soluble?

A) Benzene B) propanol C) Cyclohexane D) Benzaldehyde

6- The product of the reaction shown below



is:

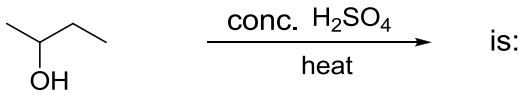
A)  B)  C)  D) 

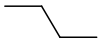
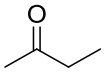
7- Reaction of butene with Cl_2 is an example of :

A) Electrophilic substitution. B) Electrophilic addition.

C) Nucleophilic substitution . D) Free radical.

8- The major product of the following reaction :



A)  B)  C)  D) 

9- The geometry of the carbon in ethyne is:

A) Linear **B) tetrahedral** **C) Trigonal** **D) Pentagon**

10- The main reaction of carbonyl is:

A) Electrophilic substitution. **B) Electrophilic addition.**

C) Nucleophilic substitution . **D) Nucleophilic addition.**

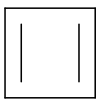
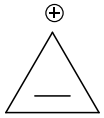
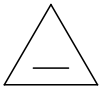
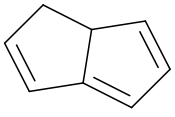
11- The addition of 2 mole HBr to 1-butyne gives :

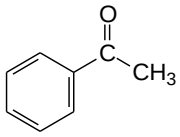
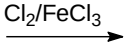
A) 2,2- Dibromobutane
B) 1,2- Dibromobutene
C) 1,1 -Dibromobutane
D) 1,2- Dibromobutane

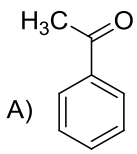
12- The type of hybridization of carbon of the benzene is:

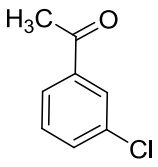
A) *sp* **B) sp^2** **C) sp^3** **D) sp^3d**

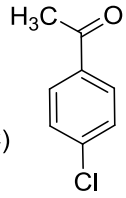
13- Which of the following compounds is an aromatic?

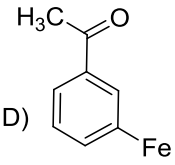
A)  B)  C)  D) 

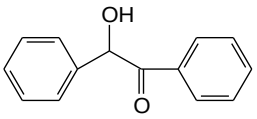
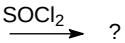
14- The major product of the following reaction   **is:**

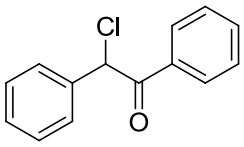
A) 

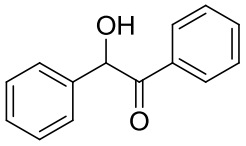
B) 

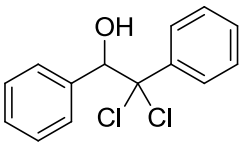
C) 

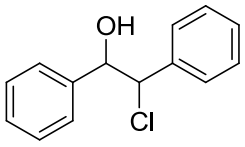
D) 

15-The product of the following reaction   **is:**

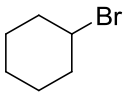
A) 

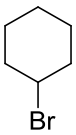
B) 

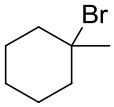
C) 

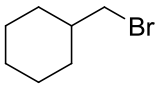
D) 

16- Addition of HBr to 1-methylcyclohexene gives:

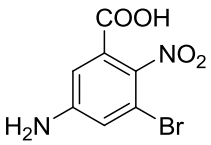
A) 

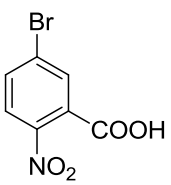
B) 

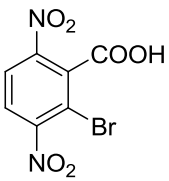
C) 

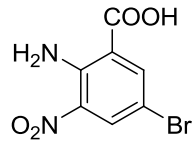
D) 

17- The compound 2-Amino-5-bromo-3-nitrobenzoic acid has the structural formula:

A) 

B) 

C) 

D) 

18- The structural formula represents Isopropylmagnesium chloride is:

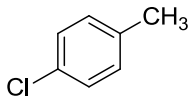
A) $CH_3CH(CH_3)MgCl$

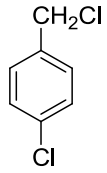
B) $CH_3CH_2CH(CH_3)MgCl$

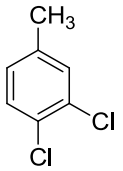
C) CH_3CHCH_2MgCl

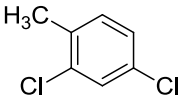
D) $CH_3CH_2CH_2CH_2MgCl$

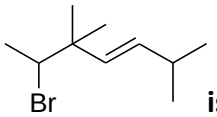
19- Chlorination of *p*-chlorotoluene with 1 mol Cl_2 under UV light gives:

A) 

B) 

C) 

D) 

20- The IUPAC name of the following compound  **is:**

A) 2-Bromo-3,3,6-trimethyl-4-heptene

B) 2-Bromo-3,3-dimethyl-1-isopropyl-1-pentene

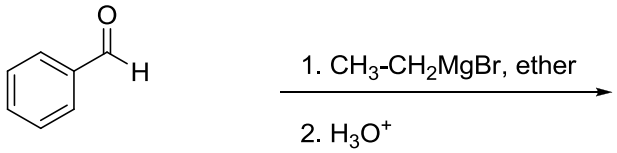
C) 6-Bromo-2,5,5-trimethyl-3-heptene

D) 2-Bromo-1-isopropyl-3,3-dimethyl- -1-pentene

21- Which of the reagents shown below will react with acetaldehyde to give an oxime?

A) NH_2-NH_2 B) $PhNHNH_2$ C) NH_3 D) NH_2OH

22- The product of the following reaction

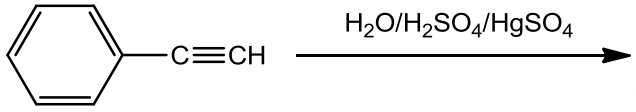


is:

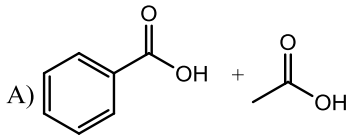
A) *m*-Propylbenzaldehyde B) 1-Phenylbutanol

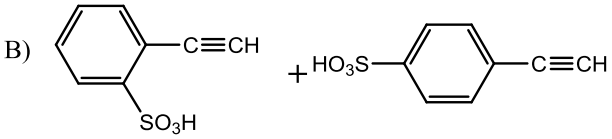
C) *m*-Bromobenzaldehyde D) 1-phenyl-1-propanol

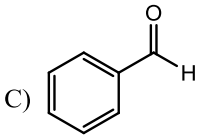
23- The product of the following reaction

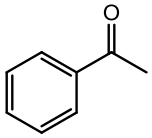


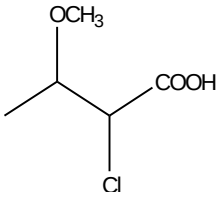
is:

A) 

B) 

C) 

D) 



24- The IUPAC name of the following compound is:

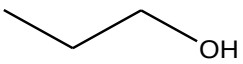
A) α-Chloro-β-methoxy butyric acid

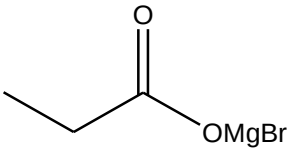
B) α-Chloro-β-methoxy propionic acid

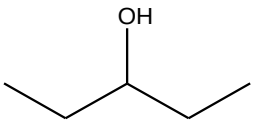
C) 2-Chloro-3-methoxy butanoic acid

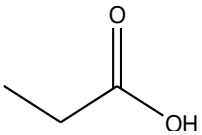
D) 2-Chloro-3-methoxy propanoic acid

25- Reaction of CH_3CH_2MgBr with CO_2 followed by the addition of H_3O^+ gives:

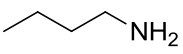
A) 

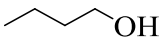
B) 

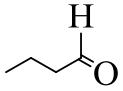
C) 

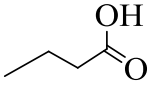
D) 

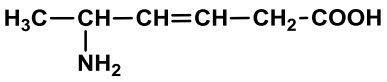
26- Which of the following compounds has the highest boiling point?

A) 

B) 

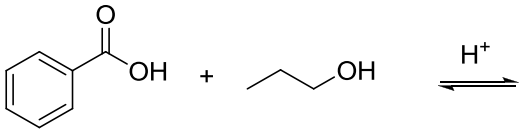
C) 

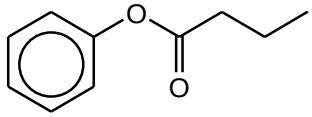
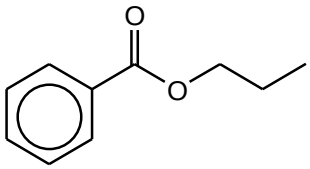
D) 

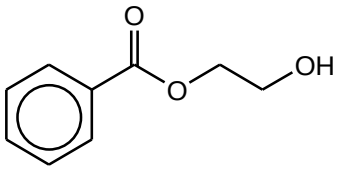
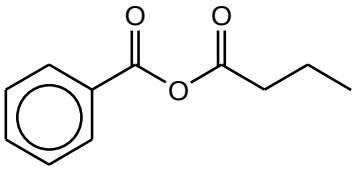
27- The IUPAC name of the following compound  **is:**

A) 5-Amino-3-hexenoic acid **B) 2-Amino-3-hexenoic acid**

C) 5-Amino-4-hexenoic acid **D) 5-Amino-3-hexane carboxylic acid**

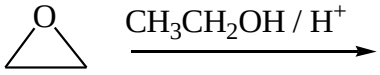
28- The following reaction  **gives:**

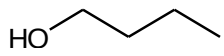
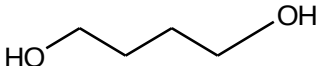
A)  **B)** 

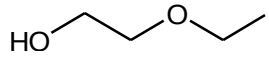
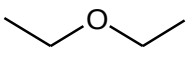
C)  **D)** 

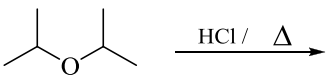
29- Oxidation of primary alcohol with $KMnO_4$ yields:

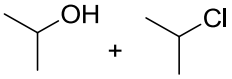
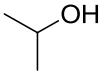
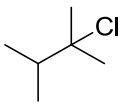
A) Carboxylic acid **B) Ester** **C) Aldehyde** **D) ketone**

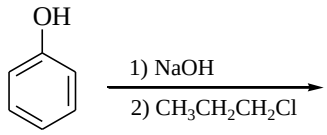
30- The following reaction  **gives:**

A)  **B)** 

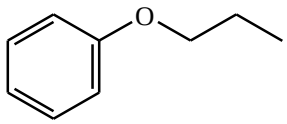
C)  **D)** 

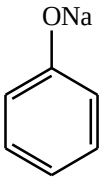
31- The following reaction  **yields:**

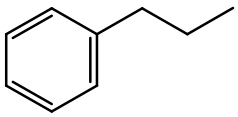
A)  B) 2  C) 2  D) 

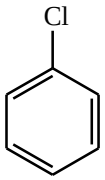
32- The following reaction 

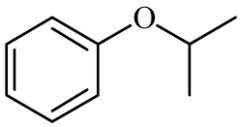
gives:

A) 

B) 

C) 

D) 

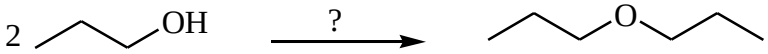
33- The common name of the following compound 

is:

A) propyl phenyl ether **B) Phenyl isopropyl ether**

C) Benzyl isopropyl ether **D) Isopropoxy-benzene**

34- What is the reagent needed for the following reaction?



A) H_2SO_4 / 140°C **B) H_2O / H^+** **C) HCl / heat** **D) NaOH / heat**

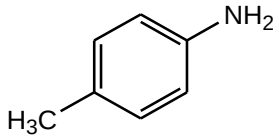
35- Reaction of alcohol with acid gives:

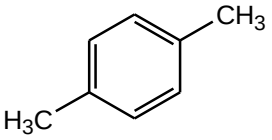
A) Amide **B) Ester** **C) Acetal** **D) Anhydride**

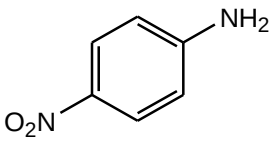
36- The strongest base of the following amines is:

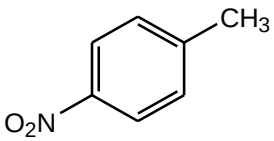
A) Aniline **B) *p*-Nitroaniline** **C) *p*-Methoxyaniline** **D) *p*-Chloroaniline**

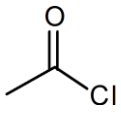
37- The structure of *p*-Toluidine is:

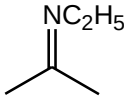
A) 

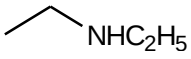
B) 

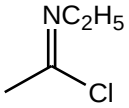
C) 

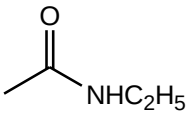
D) 

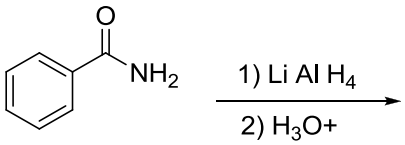
38- The following reaction  + $C_2H_5NH_2$ ⟶ **yields:**

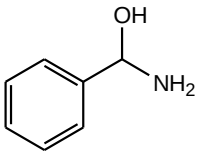
A) 

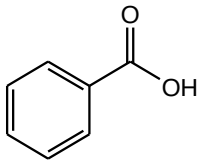
B) 

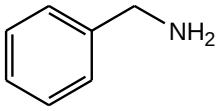
C) 

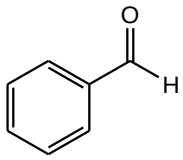
D) 

39- The following reaction  **gives:**

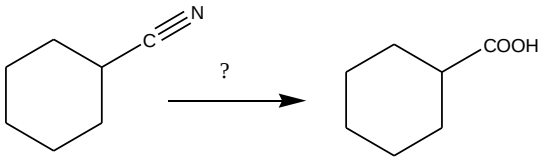
A) 

B) 

C) 

D) 

40- What is the reagent needed for the following transformation?



A) CO_2 **B) H_3O^+ /Heat** **C) $KMnO_4$** **D) $LiALH_4$**