**جامعة الملك سعود - كلية العلوم – قسم الكيمياء**

**الفصل الدراسي الأول 8143 - 9143 هـــ**

**الاختبار الفصلي الأول في مقرر 145 كيم**

**الزمن: ساعه و نصف**

**أسم الطالب: رقم الطالب:**

**أستاذ المقرر: الأستاذ الدكتور /**

***نموذج الأجابة:***

**ملاحظة هامة**: **تصحيح الإمتحان سيكون بناء علي الأجابة المكتوبة فى الجدول أسفل (حرف الإجابة الصحيحة) ولن ينظر الى بقية الأوراق والتي تعتبر مسودة .**

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| **الإجابة** | **رقم السؤال** | **الإجابة** | **رقم السؤال** |
|  | **16** |  | **1** |
|  | **17** |  | **2** |
|  | **18** |  | **3** |
|  | **19** |  | **4** |
|  | **20** |  | **5** |
|  | **21** |  | **6** |
|  | **22** |  | **7** |
|  | **23** |  | **8** |
|  | **24** |  | **9** |
|  | **25** |  | **10** |
|  | **26** |  | **11** |
|  | **27** |  | **12** |
|  | **28** |  | **13** |
|  | **29** |  | **14** |
|  | **30** |  | **15** |

1. **How many σ and π bonds are in the following structure**



1. 16 sigma and 4 pi bonds C)16 sigma and 2 pi bonds
2. 14 sigma and 2 pi bonds D) 10 sigma and 4 pi bonds
3. **Which of the following molecules has the smallest dipole moment?**

A) NH3 B) CH3F C) CHCl3 D) CCl4

1. **The carbon bearing a positive charge is called**

A) Carbanion C) Carbocation

B) Anion D) Free radical

1. **The product of the following reaction is**



A) *cis*-2-Pentene C) *trans*-2-Methylbutene

B) *trans*-2-pentene D) Pentane

1. **The geometry of the selected carbon is**



A) Octahedral C) Linear

B) Tetrahedral D) Trigonal planar

1. **Which of the following compounds would yield 2-butene upon debromination with Zn/acetic acid?**



1. **The compound X in the following reaction is**



1. Butane C) 1-Butene
2. 1-Bromobutene D) 1-Butyne
3. **The common name of dimethylbenzene is:**
4. Toluene C) Cresol
5. Anisol D) Xylene
6. **The major product of the following reaction is**



1. **The type of hybridization of the indicated carbon in the following structure is**



1. sp C) sp3d
2. sp3 D) sp2
3. **Which of the following compounds is aromatic?**



1. **The compound with the highest boiling point is**
2. Isopentane C) 2,2-Dimethylpropane
3. Pentane D) 2-Dimethylbutane
4. **Addition of 2 moles HBr to 1-pentyne gives**
5. *1-Bromopentene* C) 2,2-Dibromopentene
6. 1,2-Dibromopentane D) 2,2-Dibromopentane
7. **One of the expected products of the following reaction is**



1. **The major product of the following reaction is**



1. **The halogenation of benzene is**
2. Nucleophilic substitution C) Electrophilic addition
3. Nucleophilic addition D) Electrophilic substitution
4. **Cyclopropane react with H2/Pd to give**



1. **Oxidation of 1,3-dimethylbenzene by KMnO4 yields**



1. **The structure of *p*-chlorobenzyl fluorid is**



1. **The product of the following reaction is:**





1. **The product from the reaction of with Br2/FeBr3 is**
2. **Ozonoloysis of**

**gives**



1. **What is the correct IUPAC name of the given structure?**



1. 3,5-Dimethylcyclohexene C) 3, 5-Dimethylcyclohexane
2. 1, 5-Dimethylcyclohexene D) 4,6-Dimethylcyclohexene
3. **The number of isomers for the molecular formula C5H12 is**

A) 2 B) 3 C) 4 D) 5

1. **The product of the following reaction is**



1. Pentane C) Nonane
2. 1-Bromopentane D) Octane
3. **Acetylene is the common name for**
4. Ethene C) Ethyne
5. Propene D) Ethane



1. **The correct IUPAC name of the given compound is**
2. 1-Chloro-4-pentyne C) 5-Chloro-2-pentyne
3. 1-Chloro-3-pentyne D) 5-Chloro-3-pentyne
4. **The most reactive compound toward alkylation of the aromatic ring is**



1. **Which of the following compounds has the shortest carbon-carbon bond?**

A) Ethene B) Ethane C) Ethyne D) Propane

1. **The reagent used for the conversion of alkane to alkyl chloride is**
2. Cl2/Light B) Cl2/FeCl3 C) HCl D) HCl/H2O