

Kafrelsheikh University

Faculty of science



Winter semester of the academic year 2019/2020

Chemistry department

Suggested research topics

Winter semester of the academic year 2019/2020

كيمياء عضوية (II) كيمياء عضوية

Course name in English: Organic Chemistry (II), Part (A)

Professor Dr.: Hanaa Mansour

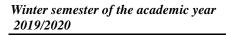
Level: 2nd Year Chemistry, Special

Chemistry Department, Faculty of Education



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Chemistry department

No.	Research title	Research items							
1	Chemical Bonding	1-Types of chemical bonding 2-Examples of each Type 3-Common examples of different type 4- Electronic configurations& Bonding							
2	Electronegativity	 1-Definition of electronegativity 2- Periodic table and electronegativity 3-Relation between electronegativity &bond polarity 4-Molecular polarity 5- Dipole moments and its applications 6- CH₄, CH₃F, CO₂, CH₂F=CH₂F NH₃, H₂O Molecules are polar or NOT? 							
3	Hybridization	 1-Classifications of hybridization. 2-Shape of orbitals in each type. 3- Examples of each type of hybridization 4-Hybridization in Formaldehyde. 5- Why hybridizations happened? 							
4	Resonance & Inductive effects	 1- Definition of resonance & Inductive effects 2-Types of resonance & Inductive effects 3-Which is more strong resonance or Inductive effects 4- Applications of resonance on aromaticity & orientation on benzene ring 5- Acidity of phenol 							
5	Acidity & Basicity	1-Definitions of acidity & Basicity 2- Inductive effects and acidity 3-Which is more acidic aliphatic acids or aromatic acids 4-Lewis acids& Lewis base							
6	Keto-enol Tautomerism	 1- Definition of keto-enol tautomerism 2-Tautomerism in 1,3-β-diketones (cyclic, acyclic) 3-Which is more stable keto or enol form, WHY?? 4- Acid catalysis of keto-enol tautomerism 5- Which is more basic aliphatic amines or aromatic amines WHY??? 							

Course Instructor:

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Head Department



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