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| Department: | General Science | Final Exams  2020 - 2021 | Module: | Organic& Biochemistry |
| College of Basic Education | | Stage: | Third |
| Salahaddin University–Erbil | | Round: | First |
|  | | Time: | 3 Hours |

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| **Q1/ Prepare the following compounds :- (6 Marks)**  1-Frome Benzene prepare Bromo benzene (Bromination mechanism).  2-Frome 2-bromobutane prepare n-Butane (Hydrolysis of Grignard reagent).  3-Frome 1,2-diChloro propane prepare Propyne .  **Q2/A- Define the following terms:- (3 Marks)**   1. Isomerism 2- Resonance 3- Markovnikovs rule   **B- Draw the Chemical structure of the following compounds :- (3 Marks)**   1. Para xylene 2- 1-Bromo3-chloro4-methylpentane   3-Cyclo hexane (boat shape )  **Q3/ Complete the following reactions :- (8 Marks)**   1. CH3-C≡C-CH3 + H2O 2. CH3-C=C-CH3 + HBr 3. + H2SO4 4. + H2   **Q4/ Answer the following:- (5 Marks)**   1. Organic compounds have low melting point and react slower than ionic compounds? (Why) 2. Write briefly about Friedel-Crafts acylation of Benzene .   page2 |

**Biochemistry**

**Q1 / Choose correct answer for the following :- (5 mark)**

1-The total 3D structure of protein it consist of-------------.

1. 10&20 Structure b- 30 Structure c- both of a &b

2-The group which gives properties to compound that attach are ----------------.

1. Functional group b- R – group c- amine group

3-Glyceraldehyde is an example of ---------.

1. Aldotetrose b- aldotriose c- aldopentose

4-The process of producing carbohydrate is -----------------.

1. Respiration b- Photosynthesis c-Digestion

5-Histones, Albumin, Globulin are an example of -----------------.

1. Simple protein b- Conjugated protein c- Fibrous protein

**Q2/ A-** Summarize the Formation of Cyclic α-D- Glucose. **(3 Mark)**

**B-** Define Zwitter ion, and give example to your answer. **(4 Mark)**

**Q3 Write true or false for the underline sentences, then correct the false :- (5 mark)**

1. Glycosidic bond is a covalent bond between tow amino acid.
2. Cellulose is a polysaccharide of glucose units have α-1, 4- and α-1, 6-glycosidic bonds.
3. Lactose Is a disaccharide of β-D-galactose and α- or β-D-glucose.
4. Biomolecular Is any organic molecule that is produced by a living organism.
5. Secondary structure of protein it consists of a variety of folding, bending and twisting patterns.

**Q4 / A –** Enumerate three (4) important of protein. **(4 Marks)**

**B-** Classify type of carbohydrates. **(4 Mark)**

**Good Luck**

**Lecturer**

**Snowber Mohammed Ahmed**