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|  Salahaddin University – Erbil Sub: --Biochemistry  College of Agricultural Engineering Sciences Stage: Second Department of Horticulture--- Time:2 hourFinal Examination / 1st Semester (2022- 2023)  |

**Q1/Fill the following blanks with suitable word**

**1-Proteins** are large biomolecules, or macromolecules, consisting of one or more long chains of amino acid residues.

2-Most proteins consist of linear polymers built from series of up to 20 different **L-α- amino acids**.

**3-** carbohydrateyield energy **(ATP)** to drive metabolic processes.

4-**Epimers** are carbohydrates that differ in the location of the -OH group in one location.

5- In **Sugar alcohols** replace carbonyl oxygen to form polyhydroxy alcohols like glyceraldehyde --> glycerol

6- **Sugar acids** Oxidation of carbonyl carbon or highest carbon. glucose --> gluconic acid or Glucaric acid or glucuronic acid

**7- Lipids** are distinguished by their high solubility in nonpolar solvents and low solubility in H2O.

8- **Oil and water** don't because mix water has polar bonds while oils have nonpolar bonds.

9-homoglycans (homopolysaccharides): composed on **one** monosaccharide

10) heteroglycans **(heteropolysaccharides)**: made of more than one type of monosaccharide

**1-Which of the following is NOT a common type of lipids?**

1. Fats b- Oils c- Sugars c- Waxes

**2-**

1. true b- false

**3-Which of the following is the best explanation for why soaps can dissolve oily substances?**

a- The hydrocarbon tails of soap are nonpolar so, they are soluble in oil.

1. The hydrocarbon tails of soap are polar so they are soluble in oil.

**4-Unsaturated lipids are generally liquid at room temperature because their hydrocarbons**

 **are \_\_\_\_\_\_\_\_\_\_\_\_\_ packed because of their \_\_\_\_\_\_\_\_\_\_\_\_ bonds.**

1. tightly; double b- loosely; single c- loosely; double

**5-The basic backbone of most fat or oil molecules is an alcohol called....**

1. Glycerol b- Glycerin c- Glyceric acid d- Glycogen

**6. Which of these statements best describes the composition of Lipids?**

 a- C, H, O in a 1:2:1 Ratio b- C, H, O, N, P all present

**7-Which of the following functional groups would be found in typical lipids?**

1. Carboxyl -COOH (O=C-O-H) b- Hydroxyl –OH

**8-Define acids number and peroxide value with writing rule?**

 ***Signature***

 ***Name of Academic Staff***