

أستاذة المقياس: ل. عيلان

المستوى: السنة الأولى ليسانس  
التخصص: جذع مشترك  
السادسي: الأول

الإجابة النموذجية لامتحان مقياس Biochemistry

السنة الجامعية: 2023-2024

First part

Select the correct answer (10 pnts): اختر الإجابة الصحيحة

- Monounsaturated fatty acids have:  
 One double bond in their carbon chain  
 No double bond in their carbon chain  
 A simple bond in their carbon chain
- Catabolism ensures:  
 Compounds Break down  
 Compounds synthesis  
 Is triglycerides
- The human's body stores glucose in the form of:  
 Glucose  
 Glycogen  
 Starch
- Oligosaccharides are:  
 Lipids  
 Acids  
 Polymers of monosaccharides
- Simple lipids are:  
 Sugars  
 Amins  
 Fatty acids esterified to alcohol.
- Biochemistry is the science of:  
 Living molecules  
 Inanimate matter  
 Plastic
- Aldotriose is a monosaccharide with:  
 03 carbon atoms  
 18 carbon atoms  
 00 carbon atoms
- Animal cells:  
 Have a plasma membrane  
 Do not contain mitochondria  
 Are found in plants
- C18 :0 is  
 Water  
 Saturated fatty acid  
 Maltose
- Water level in human body goes up to:  
 60 %  
 01%  
 200%

Second part

**Exercise 1:** Justify the following statements (4 pnts): برر العبارات التالية:

-  $C_{18} :1 \Delta^9$



- Ketotriose doesn't have an optical isomer

$n = 3$

For ketoses we use the following equation:  $OI = 2^{n-3} \Rightarrow OI = 2^{3-3} = 2^0 = 1$

Therefore, there is only one ketotriose that has no optical isomer.

**Exercise 2:** The hydrolysis of a compound gave many molecules including:

أعطى تحليل مركب عدة جزيئات منها:

**Molecule A:**  $C_6H_{12}O_6$

1. What is the nature of this molecule? ما طبيعة هذه الجزيئة؟

**Monosaccharide**

2. How many carbon atoms does it contain? كم عدد ذرات الكربون الموجودة في هذه ال جزيئة؟

**6 C**

3. According to the number of carbon atoms, how can we name this molecule?

تبعاً لعدد ذرات الكربون، كيف يمكننا تسمية هذه الجزيئة؟

**Hexose**

**Molecule B:**  $C_{10}H_{20}O_2$

1. What is the nature of this molecule? ما طبيعة هذه الجزيئة؟

**Saturated fatty acid**

2. Does it contain double bonds? هل يحتوي على روابط مضاعفة؟

**No, it does not**

3. Draw the developed formula of this molecules

ارسم الصيغة المفصلة لهذه الجزيئة

