


Course No: DMED 1204  
Course Title:  
Bio-Organic Chemistry  
Date: 01 /06 / 2017  
No. of Questions: (4)  
Time: 2 hours  
Using Calculator (No)

University of  
Palestine  
  
Final Exam  
2017/2016

Instructor Name:  
Student No.: \_\_\_\_\_  
Student Name: \_\_\_\_\_  
College Name: \_\_\_\_\_  
Dep. / Specialist: \_\_\_\_\_  
Using Dictionary (No)  
Total Grade: 50

### Question I. True Or False ( 10 Marks )

1. The enzyme make chemical reaction faster by increasing activation energy ( )
2. Proteins are fat soluble substances ( )
3. Irreversible inhibitor binds with enzyme active site and destroy it ( )
4. The nitrogen base of DNA and RNA are the same ( )
5. Oxidation of lipids gives energy ( )
6. The enzymes of the living creature depends on the hepatitis of this living creature ( )
7. The concentration of substrate effects work of enzyme ( )
8. At extreme pH levels the enzyme does not denaturize ( )
9. Insulin has a fibrous shape ( )
10. At extreme temperature values the enzymes denaturize( )
11. Sucrose is a reduced sugar( )
12. Vitamins A , D , E , K are water soluble( )
13. Poisons and drugs are inhibitors ( )
14. Globulins are a derived protein found in blood ( )
15. Vasopressin stimulates lactation( )
16. Essential amino acids are produced in the body( )
17. The useful cholesterol is HDL( )
18. Saturated fatty acids are usually liquids( )
19. Enzymes are attached to the substrate at the active site
20. Proteins are important because they repairs the body tissues( )

**Question II. Choose the correct answer ( 20 Marks )**

- 1. How many water molecules are formed when a linkage of 17 amino acids form a peptide by dehydration:**
  - a) 15
  - b) 7
  - c) 16
  - d) 14
- 2. Which sugar is a reduced sugar :**
  - a) Cellulose
  - b) Glucose
  - c) Sucrose
  - d) Starch
- 3. Irreversible inhibitor :**
  - a) Can be washed from enzyme solution by dialysis
  - b) Destroys the active site
  - c) Binds with the enzyme
  - d) None
- 4. Sulfoprotein is :**
  - a) Simple protein
  - b) Conjugated protein
  - c) Derived protein
  - d) All of the above
- 5. Which type is an irreversible inhibitor :**
  - a) Nerve gas
  - b) Poisons
  - c) Pesticides
  - d) All of the above
- 6. Starch can be hydrolyze to :**
  - a) Fructose
  - b) Glycogen
  - c) Glucose
  - d) Allose
- 7.  $\alpha$  – glucose +  $\beta$ - galactose  $\rightarrow$  :**
  - a) Maltose
  - b) Lactose
  - c) Sucrose
  - d) Mannose

**8. Globin is :**

- a) Simple protein
- b) Derived protein
- c) Conjugated protein
- d) None

**9. Functional group of aldehyde :**

- a)  $\text{NH}_2$
- b)  $\text{CO}$
- c)  $\text{OH}$
- d)  $\text{CHO}$

**10. Oxytocin :**

- a) Causes hypertension
- b) Dehydration
- c) Antioxidant
- d) Stimulates Lactation

**11. Which of the following is a fermentable sugar :**

- a) Sucrose
- b) Cellulose
- c) Maltose
- d) Lactose

**12. People with lack of enzyme lactase suffer from :**

- a) Hypertension
- b) Headache
- c) Galactosemia
- d) Diabetes

**13. Essential amino acid :**

- a) Produce in the body
- b) Not produce in the body
- c) Taken by diet
- d) B+c

**14. The photosynthesis gives :**

- a)  $\text{H}_2$
- b)  $\text{O}_2$
- c)  $\text{N}_2$
- d)  $\text{CO}_2$

**15. The Complicated proteins :**

- a) More than 20 amino acid together
- b) More than 30 amino acid together
- c) More than 10 amino acid together
- d) More than 25 amino acid together

**16. Which of the following decrease sugar in blood :**

- a) Glucagon
- b) Vasopressin
- c) Insulin
- d) Oxytocin

**17. The oxidation of oils gives :**

- a) Alcohol
- b) Ketone
- c) Unsaturated fatty acid
- d)  $H_2O$

**18. Hydrogenation of unsaturated fatty acid gives :**

- a) Saturated fatty acid
- b)  $H_2O$
- c)  $N_2$
- d)  $CO_2$

**19. Glycogen can be hydrolyze:**

- a) Fatty acid
- b) Protein
- c) Glucose
- d) RNA

**20. Polysaccharide are complexes have number of molecules:**

- a) More than 10
- b) 2-10
- c) Zero
- d) None of the above

### Question III.

**Explain the following (10 Marks )**

**1) How does the enzyme make the chemical reaction goes faster without the raising of temperature in details ?**

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**2) Compare :**

	DNA	RNA
<b>1- Chemical composition</b>		
<b>2- Shape</b>		
<b>3- Function</b>		

**3) Write the chemical composition of the following nucleotides and where is it found.**

**A. d-TTP**

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**B. GDP**

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**4) Explain the Solubility of esters in organic solvents ?**

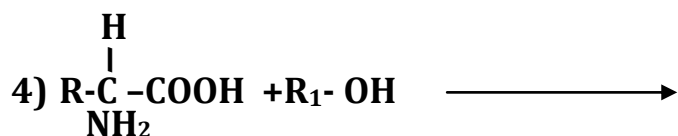
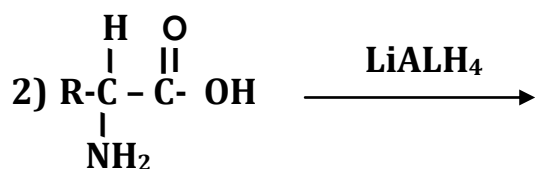
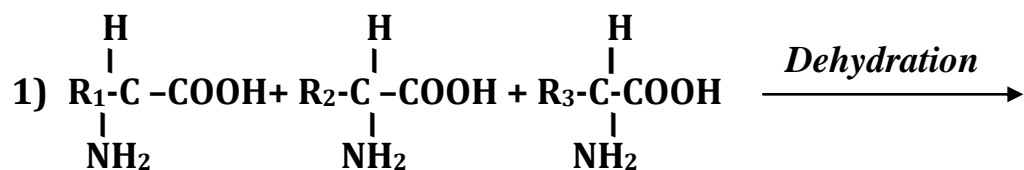
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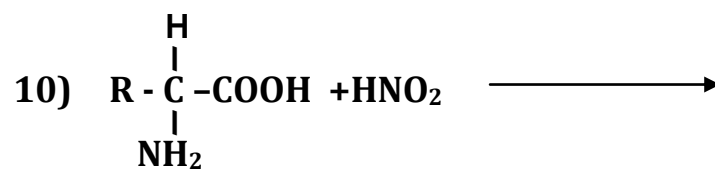
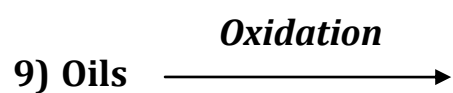
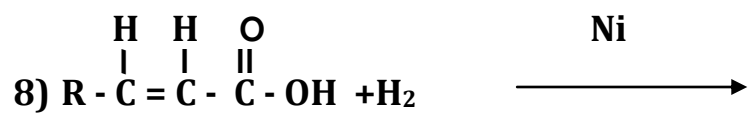
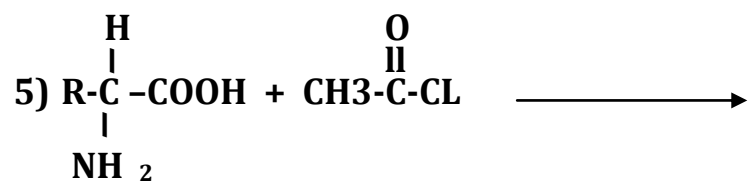
- 5) How does the body of man suffering from starvation consume the biological compound ( sugar, lipid, protein ) and what is the signs that occur on the body in each step ?

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Question IV. Complete the following reactions (10 Marks )

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*End of Questions  
Good Luck*