

Course No: PHARM 2315
 Course Title: Biochemistry
 Date: 27/11/2017
 No. of Questions: (4)
 Time: ONE hour
 Using Calculator (Yes)

University of Palestine

 Second Mid-term Exam
 First Semester 2017/2018
 Total Grade: 15 Marks

Instructors Name: Dr. Hassan Ramadan
 Student No.: _____
 Student Name: _____
 College Name: _____
 Dep./Specialist: _____
 Using Dictionary (No)

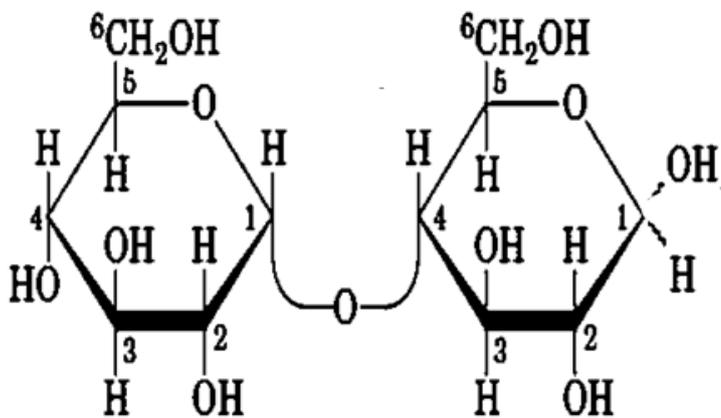
Question (1) Select and circle the correct answer from the following: (5 Marks)

1-	Which of the following is a non-reducing sugar?		
(a)	Isomaltose	(b)	Sucrose
(c)	Lactose	(d)	Maltose
2-	α-D-fructose and β-D-fructose are		
(a)	Stereoisomers	(b)	Anomers
(c)	Epimers	(d)	Keto-aldo pairs
3-	The carbon atom which becomes asymmetric when the open straight chain form of monosaccharide changes into ring form is known as		
(a)	Epimeric carbon atom	(b)	Anomeric carbon atom
(c)	Isomeric carbon atom	(d)	None of these
4-	Which of the following is an epimeric pair?		
(a)	Glucose and fructose	(b)	Glucose and mannose
(c)	Lactose and maltose	(d)	Galactose and mannose
5-	The number of isomers of D-Xylulose is		
(a)	2	(b)	4
(c)	8	(d)	16
6-	A disaccharide formed by 1,1-glycosidic linkage between their monosaccharide units is		
(a)	Lactose	(b)	Maltose
(c)	Trehalose	(d)	Sucrose
7-	The glycosaminoglycan which does not contain uronic acid is		
(a)	Hyaluronic acid	(b)	Heparin
(c)	Keratan sulfates	(d)	Chondroitin sulphate
8-	Repeating units of hyaluronic acid are		
(a)	N-acetyl glucosamine and galactose	(b)	N-acetyl galactosamine and D-glucuronic acid
(c)	N-acetyl glucosamine and D-glucuronic acid	(d)	N-acetyl galactosamine and L-glucose 6-phosphate
9-	In glycogen the branch points occur every		
(a)	2-4 residues	(b)	4-6 residues
(c)	8-12 residues	(d)	24-30 residues
10	Keratan sulphate is found in abundance in		
(a)	Heart muscle	(b)	Liver
(c)	Cornea	(d)	Adrenal cortex

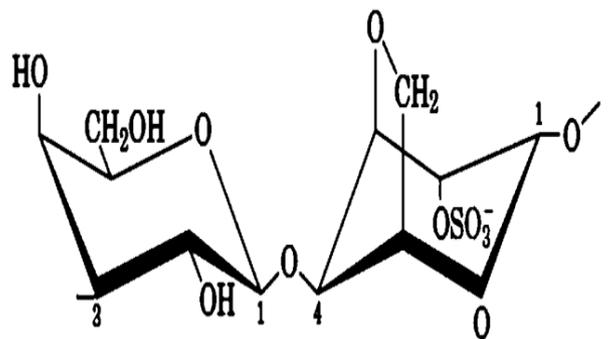
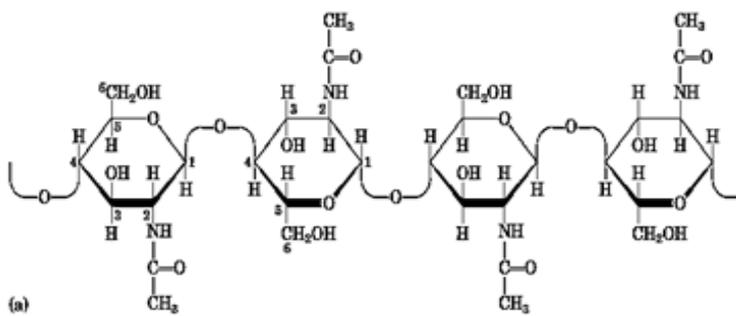
Question (2) Name or draw the structural formula of the following molecules : (5 Marks)

α -D-Galactopyranose

β -D-Mannose



D-Ribulose



Question (3) Answer the following questions: (3 Marks)

(A) Although **lactose** exists in **two** anomeric forms, no anomeric forms of **sucrose** have been reported. **Explain why?**

(B) A young man entered his physician's office complaining of abdominal cramps, diarrhea, and flatulence. His eyes were sunken and the physician noted additional signs of dehydration. The patient's temperature was normal. He explained that the episode had occurred following a birthday party at which he had participated in an ice cream eating contest. The patient reported prior episodes of a similar nature following ingestion of a significant amount of dairy products. **This clinical picture is most probably due to a deficiency in one of the following (Explain your answer?):**

- A. Salivary α -amylase.
- B. Isomaltase.
- C. Pancreatic α -amylase.
- D. Sucrase.
- E. Lactase.

Question (4) Answer the following questions: (2 Marks)

1. Briefly describe the five major groupings of amino acids

2. Tripeptides in a certain protein designated as A, B, C, D and E.

A	B	C	D	E
Tyr-Lys-Met	Gly-Pro-Arg	Asp-Trp-Tyr	Asp-His-Glu	Leu-Val-Phe

Which one of the above tripeptides?

- _____ (a) is the most negatively charged at pH7
- _____ (b) contain the largest number of nonpolar R groups?
- _____ (c) contain sulfur
- _____ (d) will have the greatest light absorbance at 280 nm?

End of Questions

Good Luck