

Course No:  
Course Title: Nutritional  
Biochemistry  
Date: 16/04/2018  
No. of Questions: (4)  
Time: 1hours  
Using Calculator (No)

University of Palestine



2<sup>st</sup> Exam For 2<sup>nd</sup> Sem.  
2017/2018  
Total Grade: 42

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

**Question One: Choose the correct answer**

**10 marks**

- 1- The lack of digestive powers of the -----stomach may have the benefit of allowing increased survival of the antibodies in mother's milk.  
A- Neonatal    B- Adult    C- teenager    D- elderly
- 2- After feeding, the pH of the infant's stomach may remain near neutral or drop to only pH ----  
A- 6    B- 4    C- 8    D- 7
- 3- The antibody present in highest concentration in the colostrum is -----  
A- IgM    B- IgG    C- IGE    D- IgA
- 4- The starch in starchy foods, such as bananas, potatoes, and rice, occurs in structures called -----  
A- spores    B- grains    C- amylopectin    D- none
- 5- The ----- effect of the bread occurs because of the crystallization of the bread starch  
A- sparing    B- staling    C- complementary    D- oxidation
- 6- The linear chain of pectin contains an occasional residue of the sugar -----  
A- ribose    B- xylose    C- rhamnose    D- galactose
- 7- The ----- colon is the place for the water and electrolytes absorption and the formation of the stool.  
A- descending    B- ascending    C- transverse    D- A & B
- 8- Short chain fatty acids supply ----- of the energy requirement of the colonocytes of animals such as rats and humans  
A- 15%    B. 5%    C. 5-7%    D. 50-75%
- 9- Propionyl CoA can be metabolized to succinyl CoA in the presence of \_\_\_\_\_  
A- B6    B. B2    C. B12    D. Vitamin D
- 10- ----- tend to have little effect on fecal bulk and delay the emptying of your stomach and makes you feel full, which helps control weight.  
A- Insulin    B- Insoluble fibers    C- Glucagon    D- Soluble fibers

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**Question Two: 1- Match the with the suitable answers**

**10 Marks**

1-	Cellulose, lignin, and many hemicelluloses are-----	IgG
2-	----- a potentially serious condition that can result from ignoring impulses to defecate and fecal mass that becomes too large to expel	Celiac disease
3-	Pectins, gums, and certain hemicelluloses are -----	adenomas
4-	----- are growths that extend into the colon, and that begin to be common in persons over 50 years old	Irritable bowel syndrome
5-	In the Colostrum, the antibody present in highest concentration is -----	Hydrogen gas
6-	----- occurs in the human colon and involves outpouchings where small regions of the gut mucosa slip in between belts of muscle and extend into the body	diverticular disease.
7-	The bloodstream of the newborn does contain antibodies, such as-----, and these were transferred to the fetus via the placenta prior to birth.	soluble fibers
8-	In addition to abdominal pain, the syndrome involves a pattern of alternating constipation and diarrhea are symptoms of -----	fecal impaction
9-	This disease arises from a mutation in the chloride ion transporter, and results in pancreatic insufficiency as well as respiratory difficulties -----	Methane gas
10-	The degree of lactose intolerance can be assessed by measuring the release of----- in the breath	Insoluble Fibers
11-	The symptoms of the disease include watery diarrhea, bleeding of the intestines, atrophy of the villi and iron deficiency -----	IgA
12-	Pectin are metabolized by the gut microflora to generate-----	Cystic fibrosis

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**Question Three: True or false:**

**10 marks**

- 1- Addition of bran (6-20 g/day) increases fecal weight and increases the frequency of defecation. ( )
- 2- Hydroxylated fatty acids such as hydroxystearic improve the absorption of water and electrolytes by the colon and induce net secretion. ( )
- 3- Resistant starch resists hydrolysis not because of its physical structure but because of its chemical structure ( ).
- 4- Resin and statin can lead drastic reduction in the serum cholesterol level ( )
- 5- Short-chain fatty acids stimulate the absorption of sodium, chloride, and water in the colon ( ).
- 6- The starch in the grains self-hydrolyzed (autolyzed) during the process of cooking ( ).
- 7- The concentrations of IgA and IgG increase in human breast milk in the weeks following birth. ( )
- 8- Lactose intolerance is not an absolute condition ( )
- 9- The E Coli consumes the available oxygen and helps produce an oxygen-rich environment that is required by many organisms. ( )
- 10- Gluten consists of proteins called ghrelin, and other proteins which is responsible for provoking the immune system ( ).

**Question Four: Discuss the following**

**10 marks**

- 1- Discuss: Dietary Fibers and Colon Cancer

5 marks

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2- Dietary proteins may escape digestion in the stomach of the human new-born

How the digestion process becomes weak and why?

5 marks

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End of Questions

*Good Luck*