

**Course No: NUTR 1302**  
**Course Title: Food Chemistry& MNA**  
**Date: 22/05/2018**  
**No. of Questions: (6)**  
**Time: 2 hours**  
**Using Calculator (No)**

**University of Palestine**



**Final Exam For 2<sup>nd</sup>**  
**Semester.**  
**2017/2018**  
**Total Grade:30**

**Instructor Name: Dr. Ghada AL- Saqqa**  
**Student No.: \_\_\_\_\_**  
**Student Name: \_\_\_\_\_**  
**College Name: Pharmacy**  
**Dep. / Specialist: Health & Nutrition**  
**Using Dictionary (No)**

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**Question One:**

**5 Marks**

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**Define the following terms:**

- 1) Food additive.**
- 2) Chylomicrons.**
- 3) Mineral water.**
- 4) Natural vinegar.**
- 5) Emulsions.**
- 6) Polyunsaturated fatty acid (PUFA).**
- 7) A spice.**
- 8) Food supplements.**
- 9) Gluconeogenesis.**
- 10) Salt.**

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**Question Two:****5 Marks**

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Put (T) for true answers and Put (F) for false answers.

- 1) Unlike vitamins, which are inorganic substances, minerals are organic and are found in rocks and soil ( ).
- 2) Foodborne molds produce chemical compounds called mycotoxins that have been linked to cancer ( ).
- 3) In cereals, little moisture cause yeasts and bacteria growth and high moisture may cause growth of mold ( ).
- 4) Honey is a sweet, viscous food substance produced by bees and some related insects( ).
- 5) Fat- soluble vitamins are not stored in the body, while water soluble vitamins are stored in the body ( ).
- 6) Frozen vegetables are less nutritious than fresh vegetables ( ).
- 7) Iodine is needed to make essential thyroid hormones ( ).
- 8) High-protein, low-carbohydrate diets may work more quickly than low-fat diets, at least in the first six months ( ).
- 9) Linoleic and linolenic acids lowers the fat and cholesterol contents of blood ( ).
- 10) Insoluble fiber helps slow digestion and absorption of glucose,helping control blood glucose levels ( ).

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### Question Three:

5 Marks

Write the expression that refers to the following:

- 1) Vitamins that help the body break down amino acids, produce enzymes, and synthesize new proteins include B6 (pyroxidine).
- 2) Consists primarily of two distinct and individual proteins, glutenin and gliadin.
- 3) Usually contain carbohydrates, which, although indigestible by the human digestive tract are digested by bacteria located along the large intestine, causing bloating.
- 4) Low in calories, high in sweetness and dangerous for people with PKU.
- 5) A starch (a heteropolysaccharide) that occurs naturally in the cell walls of fruits and vegetables.
- 6) Scientific discipline that analyses and measures human responses to the composition of food and drink, e.g. appearance, touch, odor, texture, temperature and taste.
- 7) A condition that can affect some individuals who have a deficiency in the enzyme lactase resulting in an inability to digest lactose properly.
- 8) A group with an odd number of unpaired electrons. They are extremely unstable and immediately react with another molecule to form stable substances.
- 9) Synthesized in skin exposed to sunlight and it regulates the absorption of phosphorus and calcium during bone growth.
- 10) Any dye, chemicals or substance that imparts color when it is added to food or drink. They come in many forms consisting of liquids, powders, gels and pastes.

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**Question Four:****5 Marks**

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Answer Five parts only.

- 1) Shortly, mention iron forms .
  
- 2) Why use food flavoring?
  
- 3) Write about beneficial effects of  $\beta$ - carotene.
  
- 4) What's the difference between “enriched” and “fortified” foods?
  
- 5) Shortly, mention factors affecting the bioavailability of minerals.
  
- 6) Who Uses Dietary Supplements?

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**Question Five:****5 Marks**

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Choose the best answers.

- 1) Potassium is one of the major minerals that plays an important role in maintaining .....
  - A) Muscle contraction and nerve impulse conduction.
  - B) A blood buffer .
  - C) Fluid balance.
  - D) All of the above.
  
- 2) Lactose is the sugar found in milk and casein is one of the major ..... .
  - A) Vitamins.
  - B) Proteins.
  - C) Fats.
  - D) Minerals.
  
- 3) Importance of oilseeds are the following ..... , except:
  - A) Can help slow the aging process.
  - B) The main source of vegetable oil used for cooking purpose.
  - C) Source of energy supply.
  - D) Medicinal use.
  
- 4) Magnesium (Mg) is the fourth most abundant mineral in the body and it .....
  - A) Helps lower high blood pressure and reduces risk of type 2 diabetes.
  - B) Acts as a cofactor for more than 300 enzymes, including energy metabolism.
  - C) A+B.
  - D) None of the above.

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5) Rancidity leads to the formation of both ..... compounds.

- A) Unpalatable and toxic.
- B) Palatable and toxic.
- C) Palatable and non toxic.
- D) Unpalatable and non toxic.

6) Caffeine is defined as a drug because it .....

- A) Stimulates the central nervous system.
- B) Causing increased alertness.
- C) A+B.
- D) None of the above.

7) Pantothenic acid (B5) is .....

- A) Essential for the formation of glycogen.
- B) Required for the synthesis of certain steroids hormones.
- C) A+B
- D) None of the above.

8) Plant proteins are typically incomplete, except:

- A) Beans.
- B) Soy.
- C) Peas.
- D) Lentils.

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**9) Eggs contain ..... an important nutrient that most people don't get enough of.**

- A) Vitamin E.**
- B) Vitamin A.**
- C) Vitamin D.**
- D) Choline.**

**10) Red meat is red in color, because the presence of ..... , a muscle pigment, in large amounts.**

- A) Albumin.**
- B) Myoglobin.**
- C) Hemoglobin.**
- D) None of the above.**

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### Question Six:

5 Marks

Match between column A and B

|    | Column A  | Column B  |  |
|----|---|---|--|
| 1  | The antioxidant function of vitamin E                         | May increase the chance of neural tube defects, such as anencephaly or spina bifida (a birth defect in which the spine is exposed).                   |  |
| 2  | Fruits and vegetables   | Are one of the most important reactions taking place during food processing and storage.  |  |
| 3  | Vitamin B2 "riboflavin"                                       | Plays an essential role in blood clotting.  |  |
| 4  | Consuming excess sugars can                                   | Provides a source of omega-3 fatty acids - the healthy fats that play a role in regulating blood cholesterol and supporting proper brain functioning. |  |
| 5  | A lack of folic acid (vitamin B9) before and during pregnancy | Play a preventative role in many age-related diseases.  |  |
| 6  | Tea   | Contributes to obesity, lead to type 2 diabetes, cause poor memory formation, learning disorders.   |  |
| 7  | Vitamin K   | Supports the development of red blood cells and plays a role in the metabolism of carbohydrates, proteins, and fats.                                  |  |
| 8  | Fish  | May reduce risk of age-related macular degeneration.  |  |
| 9  | Zinc  | Help protect against cardiovascular and degenerative diseases.  |  |
| 10 | Browning reactions  | Is critical for the prevention of oxidation of unsaturated fatty acids.   |  |

End of Questions

Good Luck