

King Saud University
College of science
Biochemistry department

BCH 282

First mid term exam

1429/1430

Nutrition

Name:

Number:

Answer sheet

Q1: T or F (5 marks)

- | | |
|--------------|--------------|
| 1- () | 6- () |
| 2- () | 7- () |
| 3- () | 8- () |
| 4- () | 9- () |
| 5- () | 10-() |

Q2: Select the one lettered answer (9 marks)

- | | | | |
|----|-----|-----|-----|
| 1- | 6- | 11- | 16- |
| 2- | 7- | 12- | 17- |
| 3- | 8- | 13- | 18- |
| 4- | 9- | 14- | |
| 5- | 10- | 15- | |

Q3 Explain 2 only from the following (4 marks).

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Q1: Write (T) if the statement is true and (F) if it was false (5 marks)

- 1) The body has stores of lipids, proteins, and carbohydrates ()
- 2) Sorbitol is a sugar alcohol that can provides dietary energy ()
- 3) Essential amino acids are found in High biological value of proteins ()
- 4) Arachidonic acid is a Non essential FA (NEFA) involve in the clotting mechanism ()
- 5) The body composition is affected by the proportions of the body component ()
- 6) Food energy is the nutrient released from food components through digestion ()
- 7) If the FA is saturated, then the melting point will be higher and it will be in a solid state ()
- 8) Hypoglycemia is a condition characterized by an abnormally high level of blood sugar ()
- 9) lactose is the sugar in milk that is broken down to its components (glucose, fructose) ()
- 10) The body stores the extra glucose in the kidney and muscles in a form called glycogen. ()

Q2: Select the one lettered answer (9 marks)

1) A function of carbohydrates in the diet is to:

- A. absorbs and transport vitamins.
- B. promotes growth and repair of tissues.
- C. supply energy.
- D. allow for enzyme action.

2) A slice of bread with 1 gram of fat, 10 grams of carbohydrate, and 2 grams of protein contains:

- A. 42 calories.
- B. 57 calories.
- C. 82 calories.
- D. 102 calories.

3) When sucrose is digested it yields:

- A. Two maltose units.
- B. Glucose and fructose.
- C. Glucose and galactose.
- D. Fructose and galactose.

4) A patient who needed to lose weight began eating at fast food restaurants. He did not change his exercise level. However, the composition of his diet was altered in that his carbohydrate intake decreased by 50 g/day and his fat intake increased by 50 g/day. Otherwise, his diet remained the same. On this diet:

- A. He gained weight
- B. He lost weight
- C. His weight remained the same
- D. Non of the above

5) An essential amino acid:

- A. Forms a complete protein.
- B. Is needed only by growing infants and children.
- C. Cannot be synthesized by the body in sufficient amounts to meet the body's needs

6) Emulsifying agent produced by the liver and stored in the gall bladder aids fat digestion and absorption.

- A. Amino Acid
- B. Cholesterol
- C. Bile

7) Limit all of the following in your diet except

- A. Saturated and Trans fats
- B. Sugar and Salts
- C. Cholesterol
- D. Fiber

8) If a person weighed 220 lbs and you want to find their recommended protein intake, what would you do?

- A. Divide pounds by 2.2 to convert to kilograms, multiply by 0.8g/kg
- B. Multiply pounds by 2.2 to convert to kg, divide by 0.8g/kg
- C. Multiply pounds by 2.2 to convert to kg, multiply by 0.8 g/kg
- D. Multiply pounds by 0.8 to convert to kg, divide by 2.2

9) Lard (Animal fat) is a solid at room temperature because most of its fatty acids are:

- A. long and saturated.
- B. short and saturated.
- C. long and unsaturated.
- D. short and unsaturated.

10) Positive nitrogen balance:

- A. Body stores more than it excretes
- B. Body takes in less than it excretes
- C. Body stores less than it excretes

11) This factor influences Basal Metabolic Rate

- A. Lean Body Mass
- B. Body Temp
- C. Hormonal Status and Growth Periods
- D. All of the above

12) The major difference between Marasmus and Kwashiorkor diseases:

- A. is the presence of edema in kwashiorkor and not marasmus
- B. is the presence of edema in marasmus and not kwashiorkor
- C. non of the above

13) Phospholipid:

- A. Glycerol + two fatty acids + phosphorus
- B. Glycerol + three fatty acids + phosphorus
- C. Glycerol + one fatty acids + two phosphorus

14) _____ is the body's primary source of energy

- A. Fructose
- B. Sucrose
- C. Glycogen
- D. Glucose

15) Dietary fiber is an indigestible _____ that serves separately as a body regulatory agent.

- A. Fat
- B. Protein
- C. Carbohydrate
- D. Acid

17) Incomplete proteins are considered to be in_____

- A. Animal proteins
- B. Most plant proteins
- C. Gelatin
- D. Both C & B

18) Body protein has a source of energy of _____

- A. 9 kcal/g
- B. 6 kcal/g
- C. 3 kcal/g
- D. 4 kcal/g

Q3 Explain 2 only from the following.(4 marks)

- 1- BMR + 3 factor affecting BMR
- 2- Collagen
- 3- Calorie
- 4- Complex Carbohydrate
- 5- Dietary Fibre

Q4 what dose this equation represent? And define each symbol (2 marks)

$$I = U + F + S$$