

**CHS261: Principles of Nutrition
First Midterm Exam (Students Model)**

Time allowed: One hour

Date: / /1438

الاسم: _____ الرقم الجامعي: _____ رقم الكشف: _____

Part I: Write True or False between brackets and correct the false question (s) by underlining the false word(s) and write it (them) under each question. Non corrected false question (s) will be given zero: **Carefully transfer your answers to the answer sheet that will be checked and marks will be given based on your answers in the answer sheet.**

(marks)

1. Malnutrition results from deficient food energy or nutrient intake **only** (excess or deficient food energy or nutrient intake or by an imbalance of nutrients)
2. No single food supplies all nutrients the body needs
3. **Micronutrients** (macronutrients) are called proximate principles
4. Enzymes of the small intestine and pancreas work more effectively near **acidic** (neutral) pH
5. Without recycling bile acids, synthesis of new bile acids in the liver would not keep pace with needs for adequate fat digestion
6. BMR; is higher in men than women and in **nonathletics than athletics** (athletics than nonathletics)
7. Fat-free mass and Lean Body Mass are metabolically **inactive** (active) tissues
8. Disease conditions and some drugs can cause **primary** (secondary) nutrient deficiency
9. Basal metabolic rate represents about **10%** (60-70%) of daily total energy expenditure
10. During **mechanical** (chemical) digestion, enzymes break down macromolecules into smaller molecules to be efficiently absorbed.
11. The **pancreatic** (gastric) secretions contain the intrinsic factor that facilitates vit B12 absorption in the ileum
12. Pancreatic enzymes are synthesized in **active** (inactive) forms to prevent auto degradation of the pancreas

Part II: Circle the correct answer: Carefully transfer your answers to the answer sheet that will be checked and marks will be given based on your answers in the answer sheet.
(marks)

1. Most nutrients absorption takes place in the:
 - a) Duodenum
 - b) Jejunum
 - c) **Ileum**
 - d) Ilium
2. Lipids are digested in the small Intestine into:
 - a) proteins
 - b) amino acids;
 - c) **fatty acids and glycerol;**
 - d) simple sugars
3. They stimulate colonocyte proliferation and enhance absorption of electrolytes and water
 - a) **Short Chain Fatty Acids**
 - b) Pancreatic secretions
 - c) Gastric secretions
 - d) Salivary amylases
4. The energy provided by each gram of carbohydrates, proteins, fats, and minerals are:
 - a) 4, 9, 4, 0 Kcal; respectively
 - b) **4, 4, 9, 0 Kcal; respectively**
 - c) 9, 4, 4, 0 Kcal; respectively
 - d) 4, 4, 4, 0 Kcal; respectively
5. It is a food group that healthy adults can consume 6 –11 servings, and provides them with carbohydrates, thiamin, folic acid and dietary fiber.
 - a) **Bread, Cereal, Rice & Pasta Group**
 - b) Fruit Group
 - c) Vegetable Group
 - d) Milk, Yogurt & Cheese Group
6. Using specific carrier to transport nutrients or the carrier changes the cell membrane in such a way that the nutrients can pass through:-
 - a) chemical digestion
 - b) simple diffusion
 - c) **facilitated diffusion**
 - d) active transport
7. When the energy intake is higher than energy expenditure, the body will be in:
 - a) isocaloric balance and its weight will be maintained
 - b) **positive caloric balance and its weight will increase**
 - c) positive caloric balance and its weight will be maintained
 - d) negative caloric balance and its weight will decrease
8. The best way to assess the subclinical declining of nutrients' stores within the body is:
 - a) Dietary studies
 - b) Physical examination
 - c) **Laboratory tests**
 - d) Anthropometric data

Part III: Write the question number from column (A) beside its correct answer in column (B).
Carefully transfer your answers to the answer sheet that will be checked and marks will be given based on your answers in the answer sheet.
 (marks)

1.1. Recognize nutrients, their digestion, absorption, and functions and roles in health maintenance.

#	Column (A)	#	Column (B)
1.	Macronutrients		are the main bulk of food so called " <i>proximate principles</i> "
2.	Nutrition assessment		comprehensive analysis of a person's nutrition status
3.	subclinical nutrient deficiency		a deficiency in the early stages, before the signs have appeared
4.	Chyme		semiliquid mass of partly digested food expelled by the stomach into the duodenum
5.	Absorption		uptake of nutrients by the small intestine for transport into either the blood or the lymph
6.	Lean Body Mass		includes fat that acts as fuel for energy production but does not include storage fat (S/C fat or fats surrounding internal organs)
7.	Thermic effect of food		energy expenditure associated with the consumption, digestion, and absorption of food
8.	<i>Food Guide</i>		Nutrition education tool translating scientific knowledge and dietary recommendations into an understandable form for use by those who have little or no training in nutrition.

Part IV: Fill the following blanks with the correct word (s):

(marks)

1. Nutrient deficiency can be either: **(1) subclinical, (2) primary, or (3) secondary deficiency**
2. The main functions of foods are: **(1) Physiological, (2) Social and (3) Psychological functions**

3.

calculate the followings for an extra active male (1.9); height= 196 cm

1. The ideal body weight=	$(\text{height in cm} - 100) - \{(\text{height in cm}) - 150\}/4\}$	84.5
2. Basal Metabolic rate (BMR) =	$1 \text{ kcal} \times \text{BW (kg)} \times 24 \text{ hrs}$	2028.0
3. BMR and energy expended in physical activity (PA)=	$\text{BMR} \times 1.9$	3853.2
3. Thermic effect of food (TEF) =	10% of BMR+ energy expended in Physical activity	385.3
4. Total Energy Expenditure (TEE)=	$\text{BMR} + \text{energy in PA} + \text{TEF}$	4238.5
5. Distribute total energy expenditure among the following nutrients;		
Protein 15%=	635.8	
Carbohydrates (60%)=	2543.1	
Fat (25%)=	1059.6	
6. calculate the amount needed from each of the above nutrients in grams:		
Protein =	158.9	
Carbohydrates=	635.8	
Fat =	117.7	