

※請注意本試題共(2)張，如發現頁數不足，應當場請求補齊，否則缺頁部份概以零分計算。第(1)頁

本試題共二大題，總分 100 分。

一、選擇題：(每題 4 分) (60%)

1. Which of the following nutrients is primarily absorbed in the large intestine? (A) glucose (B) water (C) alcohol (D) fats
2. Insufficient intake of dietary iodide promotes the enlargement of the thyroid gland. This condition is called (A) graves' disease (B) goiter (C) hyperparathyroidism (D) cretinism
3. The adaptation that occurs during prolonged starvation results in (A) use of glucose for energy (B) increase in the metabolic rate (C) increase in the internal body temperature (D) use of ketone bodies for energy
4. Why might individuals with a prolonged rise in postprandial triglycerides be at increased risk of cardiovascular disease? (A) these individuals usually have congenital arrhythmias (B) these individuals are bathing their arteries in very atherogenic particles for most of the day (C) these individuals almost always are smokers (D) none of the above
5. The current management approach to gout emphasizes reduced intake of (A) fiber-rich foods (B) purine-rich foods (C) dairy products (D) legumes
6. Decreasing calorie intake by 400-500 calories per day would mean a loss of about one pound of body fat in (A) 2 days (B) 7 days (C) 10 days (D) 14 days
7. BS is a 60 year old man who is complaining of intermittent flushing, itching, and heartburn for several months. Megadosing of which of the following vitamins may result in these symptoms? (A) Niacin (B) Riboflavin (C) Vitamin B12 (D) Vitamin E
8. It is more advantageous for the human body to store fuel as triacylglycerol in tissue than as protein in muscle because adipose triacylglycerol stores contain (A) More calories and more water (B) Less calories and less water (C) Less calories and more water (D) More calories and less water
9. Elevated serum amylase and lipase serve as indicators of (A) cystic fibrosis (B) pancreatitis (C) ulcerative colitis (D) gastritis
10. The American Heart Association supports an ω -6 polyunsaturated fatty acid intake of (A) at least 3 - 5% of energy (B) at least 5% to 10% of energy (C) at least 10 - 15% of energy (D) at least 12 - 18% of energy

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11. A 55-year-old man has developed red, roughened skin in sun-exposed areas over the past 2 years. She also has a chronic, watery diarrhea. On physical examination he exhibits memory loss with confusion. These findings are most consistent with which of the following vitamin deficiencies? (A) vitamin A (B) vitamin E (C) niacin (D) pyridoxine
12. A 42-year-old woman has been on and off diets for the past 10 years trying to lose weight. She has had no major illnesses during this time. Her BMI has ranged from 25 to 31 over that time. Which of the following problems is her pattern of dieting most likely to cause? (A) vitamin deficiencies (B) anorexia nervosa (C) increase risk of osteoporosis (D) greater weight gain
13. A 40-year-old man has a body mass index of 40. His BMI was increased, even as a child. He has deranged leptin signaling by steatocytes. Which of the following complications is he most likely to develop? (A) prostatic adenocarcinoma (B) osteoarthritis (C) Alzheimer's disease (D) type 2 diabetes
14. This type of research study observes how much and what kinds of foods a group of people eat (A) intervention (B) cohort (C) case-control (D) epidemiological
15. Aspirin hinders the body's use of this vitamin (A) folate (B) thiamin (C) riboflavin (D) niacin

二、問答題：(40%)

1. Iron, an essential trace element, has been thought to participate in free radical-producing reactions, particularly the hydroxyl radical-producing Fenton reaction. What is Fenton reaction? (10%)
2. 何謂 cancer cachexia ? (10%) 請說明癌症病人發生 cancer cachexia 或是 cancer anorexia-cachexia syndrome 的可能原因。(20%)