

中山醫學大學 99 學年度碩博士班甄試入學招生考試試題

營養學系碩士班

考試科目：營養學

時間：80 分鐘

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聞  
稿

※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 )

本試題共三大題，總分 100 分。

一、選擇題：(每題 4 分)(20%)

1. Lard (pork fat) is 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
2. Which component typically accounts for the largest proportion of your total daily energy expenditure?  
(A) basal metabolic rate (B) thermic effect of food (C) physical activity  
(D) adaptive thermogenesis
3. If a person builds tolerance to alcohol and finds he can drink more without becoming intoxicated, it means  
(A) his stomach cells have increased production of acetaldehyde dehydrogenase, thereby protecting his organs against the harmful effects of alcohol  
(B) a secondary system (MEOS) for detoxifying alcohol is working, thereby protecting his organs against the harmful effects of alcohol  
(C) a secondary system (MEOS) for detoxifying alcohol is working but this does NOT protect his organs against the harmful effects of alcohol  
(D) he has reached the pinnacle of manliness and sex appeal
4. The following two hormones help maintain blood calcium balance:  
(A) estrogen, progesterone (B) parathyroid hormone, thyroid hormone  
(C) calcitonin, parathyroid hormone (D) vitamin D, thyroid hormone
5. You see many patients who subsist on a diet of corn meal and boiled greens, have little appetite for food, alternate between diarrhea and constipation, have an inflamed tongue, and a scaly dermatitis on exposed skin. The patients most likely have a vitamin deficiency of  
(A) thiamin (B) niacin (C) riboflavin (D) folate (E) cobalamin

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新聞稿

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二、解釋名詞：(每題 6 分)(30%)

1. Oral glucose tolerance test (OGTT)
2. Trans fatty acid
3. Nitrogen balance
4. Food enrichment
5. Insulin shock

三、問答題：(50%)

1. Polyunsaturated fatty acids (PUFAs) contain 18 - 22 carbons, up to 6 double bonds and belong to the  $n-3$  and  $n-6$  families, please name at least three  $n-3$  and three  $n-6$  fatty acids. (10%) It has been speculated that  $n-3$  fatty acids have anti-inflammatory properties, please explain possible anti-inflammatory mechanism of  $n-3$  fatty acid. (10%) Recently, supplementation of  $n-3$  fatty acids has been recommended to inflammatory disease (i.e., COPD, ARDS), please give your opinions on whether you support or not support the recommendation. (15%)
2. Elevated fasting serum triglycerides (TG) have been identified as a risk factor of cardiovascular disease (CVD). However, two recent long-term prospective studies suggested that measuring TG levels after meal (i.e., postprandial) is more predictive of CVD risk than measurements taken after a fast. Please explain why might individuals with a prolonged rise in postprandial TGs be at increased risk of CVD? (15%)