

# 國立臺灣師範大學 101 學年度碩士班招生考試試題

科目：營養學相關科目

適用系所：人類發展與家庭學系

注意：1.本試題共1頁，請依序在答案卷上作答，並標明題號，不必抄題。2.答案必須寫在指定作答區內，否則依規定扣分。

一、解釋名詞：請翻譯解釋並舉例下列名詞，每小題2分，共10分

1. Case-control study
2. Health promotion
3. Descriptive epidemiology
4. Food frequency questionnaire
5. Nutrition claim

二、問答題

1. 請舉例說明你會如何評估及改善國內2-5歲幼兒飲食營養狀況。(10分)
2. 何以鐵不足會影響到學童之認知學習行為？請就營養代謝之考量列點說明。(20分)
3. 以當下之大台北市區的國、高中學生為活動對象，來舉辦與營養有關之科普(popular science)活動，請問以何者為主題最為妥當？請列點說明採用此主題之原因為何。(10分)
4. 請以生理、生化及代謝路徑(metabolic pathway)觀點，分別說明為何血糖控制不當之糖尿病病人、長期禁食或飢餓者，易引起酮中毒(ketoacidosis)(10分)。酮體(ketone body)包括哪些物質(3分)？酮中毒的臨床症狀為何(4分)？除預防上述情況發生外，如何減緩其臨床症狀(3分)？
5. Please design two randomized controlled clinical trials, including cross-over and parallel designs to investigate the effect of tocopherol supplementation on inflammatory markers in central-obese elderly women. (14分)
6. Please calculate the nitrogen balance using the following data: (6分)  
Female, aged 20 y, body weight 50 kg, height 160 cm, serum creatinine 0.7 mg/dL, protein intake 62.5 g/d, urine volume 2000 mL/d, urinary urea nitrogen 300 mg/dL.
7. There are two forms of iron in foods, heme iron and nonheme iron. Please answer the following related questions: (10分)
  - (1) What form of iron is better absorbed? Please state the average absorption rate for each.
  - (2) Which form of iron accounts for a major proportion of dietary iron intake? How are the distributions of both forms of iron in plant foods and animal foods?
  - (3) For the form of iron hard to be absorbed, which of the following items can improve its absorption if eaten simultaneously: tea, orange juice, meat, whole grains, gastric acid, milk.