

中山醫學大學九十九學年度博士班入學招生考試試題

營養學系博士班

考試科目：營養科學總論

時間：120 分鐘

※請注意本試題共(1)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

新聞稿

本試題共一大題，總分 100 分。

一、問答題：

1. It has been postulated that vitamin B-6 may play a crucial role in protecting cells from oxidative stress because the vitamin has been shown to exhibit antioxidant activity. Please explain the possible mechanisms for vitamin B-6 acting as an antioxidant, directly or indirectly. (10%)
2. Two of the important emerging areas of nutrition science are the fields of nutrigenomics and nutrigenetics.
 - a. What is “nutrigenomics”? (10%) Please name an example about the effect of nutrient on gene expression. (10%)
 - b. What is “nutrigenetics”? (10%) Please name an example about gene-nutrient interactions and their role in disease prevention. (10%)
3. The research question is “Does calcium deficiency cause hip fractures in the elderly”?
 - a. Do you think a prospective cohort method is an appropriate approach to this research question? Why? (10%) Discuss the advantages and disadvantages of prospective cohort design relative to case-control for this research question. (20%)
 - b. Could the cohort study be designed as a retrospective study, and how would this affect these advantages or disadvantages? (20%)