

問答題

1. 請以人體鹼性磷酸酶(alkaline phosphatase)、肌酸激酶(creatine kinase)舉例說明
 - a. 同功酶(isoenzyme)的遺傳來源。(5 分)
 - b. 說明 allozymes 及 hybrid isoenzymes 形成的差異。(5 分)
 - c. 同功酶在不同組織的分布。(5 分)
 - d. 說明有那些非遺傳性的改變，可以形成酵素的 isoform。(5 分)
 - e. 同功酶及酵素 isoform 在臨床檢驗的方法及應用。(5 分)

2. Lipoproteins are particles that transport lipids in blood. What are the basic components of lipoprotein? (5 分)

3. The exogenous pathway plays an important role in lipoprotein metabolism. What is the role of exogenous pathway and how does it work? (6 分)

4. What blood tests should be performed and what are the criteria for the diagnosis of type 2 diabetes? (6 分)

5. When measuring total protein, what would be the difference if plasma instead of serum is used? (4 分)

6. Albumin is the most abundant protein in plasma/serum. Please describe the methodology to measure serum albumin. (4 分)

簡答題(7-10)

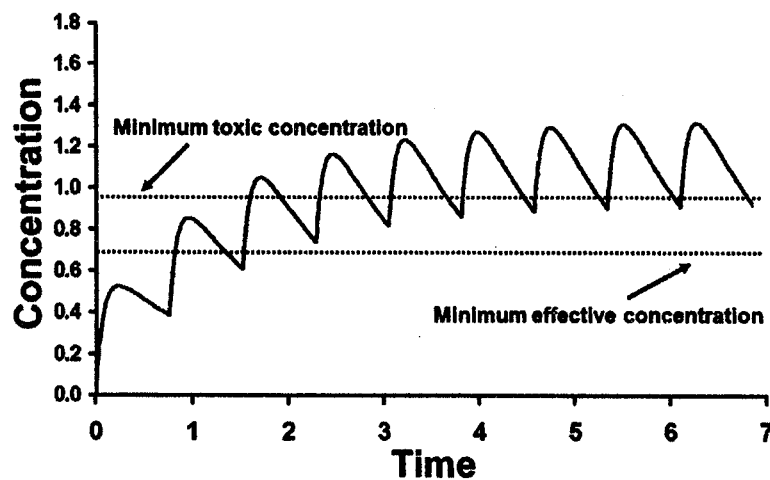
7. In order to evaluate a testing method, the clinical diagnostics and testing results are listed in a 2x2 table in below. Please answer the following questions.

		Clinical Diagnosis	
		Diseased	Non-Diseased
Testing Results	Positiv	950	900
	Negati	50	8100

- a. Please calculate testing characteristics: Sensitivity, Specificity, False Positive Rate, False Negative Rate, Positive Predictive Value (PPV), Negative Predictive Value (NPV), and Diagnostic Effectiveness (Accuracy). (5 分)
- b. In your opinion, will you utilize this testing method for clinical practice? Please explain your reason and theoretical basis. (5 分)

見背面

8. Therapeutic drug monitoring (TDM) is an important issue that specializes in the measurement of medication drug concentrations in blood. It aims to improve patient care by adjusting the dose of drugs. In below, there is a patient with TDM results, please interpret this result and what is your suggestion for this patient? (5 分)



9. The skeleton is a metabolically active organ that undergoes continuous remodeling throughout life. Please describe consecutive phases in the bone remodeling cycle and indicate the major player (cells) in each phase. (5 分)
10. Liver is the main drug metabolizing organ and known as first-pass metabolism. Please describe how phase I and phase II metabolism work in drug metabolism. How pharmacogenetics can be applied in phase I and phase II drug metabolism? (5 分)
11. catecholamine 及 VMA 常用來檢測何類疾病?所需哪類檢體?檢體的處理需注意事項? (5 分)
12. 在毒品吸食過量的情形下，常造成血中哪類酸鹼的失衡?在 blood gas 及 ion 的檢測結果會有哪些特徵? (6 分)
13. 腦垂腺後葉主要負責儲存及釋出哪些由下視丘合成的激素?它們的主要生理功能為何? (4 分)
14. 利用免疫法測量 cortisol 時，可否利用三明治免疫法的方式?為什麼? (4 分)
15. 試述銅極度缺乏時造成貧血的原因。(3 分)
16. 試述維生素 K 在血液凝固上所扮演的生化角色。(3 分)

試題隨卷繳回