

1. 請敘述臨床上分析血清總蛋白質(total protein), 白蛋白(albumin), 胎兒甲蛋白 ( $\alpha$ -fetoprotein), 各用什麼分析的原理, 這三個檢驗結果各有什麼臨床意義。(12分)
2. 請解釋下列名詞: Glycolysis, Glycogenesis, Glycogenolysis, Gluconeogenesis (8分)
3. 說明下列三種酵素的生化反應, 生理功能, 組織器官分布, 臨床應用, 實驗室分析方法.(15分)  
Amylase, Alanine aminotransferase, Lipase
4. 試簡述唐氏症第一期及第二期產前篩選的方法及臨床意義(6分)
5. 試說明 MetHb 及 COHb 的測定方法及臨床意義(6分)
6. 請簡述腎上腺腫瘤的診斷方法(6分)
7. 何謂代謝性酸中毒?臨床上如何檢測?(6分)
8. 請說明微量金屬在臨床上的測量方法及需注意事項(6分)

Questions and Answers

9. To develop home-made method for routine clinical chemistry testing, method validation instead of method verification is required. Please describe the difference between method validation and method verification. What are the important issues and requirements for method validation? (5分)
10. Please describe the biogenesis of glycosylated hemoglobin HbA1c and the methodology of its measurement. Based on your understanding, what is the significance and the clinical application of HbA1c? And what are possible interferences of HbA1c measurement in clinical practice? (5分)
11. What is ROC (Receiver Operating Characteristic) curve and its application? Once ROC curve is drawn, how to interpret the result for the application? (5分)
12. Please describe the role of PTH (parathyroid hormone) in physiological Calcium homeostasis and bone remodeling cycle. (5分)
13. What is pharmacogenetics? Please also describe the application of pharmacogenetics for personalized medicine and precision medicine. (5分)
14. Plasma proteins can briefly classify into positive acute phase reaction protein and negative acute phase reaction protein. Please explain and provide an example what is positive acute phase reaction protein and negative acute phase reaction protein. (5分)
15. Risk management is the trend in routine clinical chemistry testing. In the mention of pre-analytical phase, how do you implement risk management? (5分)

試題隨卷繳回