

# UNIVERSITY OF BIRMINGHAM

## **MSc in Clinical Biochemistry (5602)**

West Midlands Training Course in Clinical Biochemistry &  
The University of Birmingham - College of Medical and Dental Sciences

### **2<sup>nd</sup> Year Essay Paper 1: 26<sup>th</sup> June 2009**

Enter your name and student ID number on all answer booklets.  
Please answer one question from each module.  
You will need to pass each module  
Time allowed: 2 hours 15 minutes (1230 – 1445)

#### **Module 1**

1. Write short notes on three of the following:
  - a. Thyroglobulin
  - b. Macroprolactin
  - c. Aldosterone:Renin ratio
  - d. Hyperphosphataemia
2. Review the principles and current applications of atomic absorption spectrophotometry.

#### **Module 2**

1. Discuss the role of the laboratory in the management of the acute metabolic complications of diabetes mellitus.
2. Critically discuss the laboratory methods for the measurement and standardization of serum cholesterol.

#### **Module 4**

1. Describe the principles of Tandem Mass Spectrometry. Using specific examples in clinical biochemistry outline the advantages and disadvantages, indicating their suitability in particular laboratory settings.
2. Critically evaluate the haematological and biochemical tests used to detect iron deficiency.