Mastership in Chemical Analysis

Part B Examination

Paper 1

Burlington House

Tuesday 10 October 2017

1230 – 1530
Instructions

Answer five questions out of eight.

The answers to each question must be returned in the examination script booklets provided. All examination scripts must be handed in at the end of the examination.

The marks allocated to each question are given.

Unless otherwise stated, references to Statutes in England include the equivalent alternatives for Scotland, Wales and Northern Ireland.

Unless otherwise stated, any reference to Statutes includes the EU regulations that they enforce.

1.
   a. Detail the main requirements of Regulation (EC) No 1924/2006 relating to nutrition and health claims made on foods.
      
      14 marks

   b. Describe the requirements for use of the following nutrition claims:
      i. Source of protein
      ii. Contains vitamin A

      6 marks

2.
   a. Detail and discuss the requirements of the current fish labelling regulations.

      10 marks

   b. Detail how you would determine the fish content of a coated fish fillet.

      10 marks
3. State how the following terms are defined in law:
   i. Meat
   ii. Meat product
   iii. Meat preparation

6 marks

b. State in detail how you would analyse a sample of minced meat to ensure compliance with the requirements of the Food Information Regulations 2014.

14 marks

4. Summarise the legislation relating to materials and articles in contact with food.

20 marks

5. Discuss the application and limitations of DNA analysis in determining the composition and safety of foods.

20 marks

6. Discuss the legislation and guidance relating to the control of pesticides in foods.

20 marks
7. 
   a. What is the meaning of the term ‘reserved description’?

   4 marks

   b. Detail how you would analytically assess the composition of the following products:
      i. Honey
      ii. Marmalade
      iii. Milk chocolate
      iv. Instant coffee

   16 marks

8. For FIVE of the following, outline how you would analyse, and discuss the significance of, the results:
   i. Ponceau 4R in takeaway meat/sauce meal
   ii. Benzoic acid in an alcopop
   iii. Melamine in a milk product
   iv. Mercury in shellfish
   v. Cadmium in crab meat
   vi. Monosodium glutamate in an instant noodle product
   vii. Sorbitol in reduced sugar confectionery
   viii. Erucic acid in pickled vegetables in oil

   20 marks

END OF PAPER