Mastership in Chemical Analysis

Part B Examination

Paper 2

Burlington House

Wednesday 12 October 2016

10:00 – 13:00
Instructions

Answer one question from section 1, two questions from section 2, one question from section 3, and one more question, chosen from any of the remaining questions in sections 1 and 2 (Five questions in all).

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.

Section 1: Food Law and Policy (Answer at least one question from this section)

1. The Food Labelling Regulation 1996 has been replaced by the Food Information Regulations 2014. What aspects of the Food Labelling Regulations have not been re-enacted in the Food Information Regulations and how are these aspects now controlled? (20 Marks)

2. What do you understand by the “Primary Authority Agreement” between food companies and local authorities? Describe how it works in principle and whether you think this is beneficial to food enforcement or not. State your argument. (20 Marks)

Section 2: Agriculture (Answer at least two questions from this section)

3. Discuss the current regulations applicable to fertilisers. (20 Marks)

4. Describe the official methods used to analyse a formal feeding stuff for:
   (a) Protein
   (b) Crude fibre
   (c) Oil
   (d) Vitamin E

   (5 marks each – total of 20 Marks)
5. What are the major sources of the following contaminants in animal feed? What are their effects on animals and their implications for the food chain?
   (a) DDT
   (b) Ochratoxin A
   (c) Theobromine
   (d) Ergot
   (e) Mercury
   
   (4 marks each – total of 20 Marks)

6. What are the legislative definitions of the following feeding stuffs?
   (a) Feed material
   (b) Compound feed
   (c) Mineral Feed
   
   How are they required to be labelled under current legislation?
   
   (4 Marks)
   (16 Marks)

   **Section 3: Water** (Answer only one question from this section)

7. Detail the available methods of drinking water purification to ensure it complies with current legislation.
   
   (20 Marks)

8. Detail the validation process which must be carried out on a water analysis method to ensure it would meet DWI (Drinking Water Inspectorate) requirements. Include in your answer references to any statistical criteria which should be met
   
   (20 Marks)

END OF PAPER