

Section 6

Syllabus

The qualification is structured into seven sections, each with an indicative time allocation:

Topic	Time allocation
1. Introduction and history of the organism	15%
2. Legislation and guidance	15%
3. Risk assessment of systems	25%
4. Operational control	20%
5. Outbreak investigation procedures	10%
6. Record keeping	5%
7. Case studies	10%

1. Introduction and history of the organism (15%)

Educational objectives

Candidates should learn about:

- The origins of legionella and the factors which allow it to proliferate to hazardous levels in man-made water systems.
- The main practical and theoretical conditions which cause legionella infection to occur in susceptible individuals.

- 1.0.1 The occurrence of legionella, sources and primary cause of growth in man-made water systems.
- 1.0.2 Types and significance of the bacteria.
- 1.0.3 The infection chain, susceptibility to infection, symptoms, treatment and prognosis.
- 1.0.4 Health effects on exposed people.
- 1.0.5 Review of data gathered by Public Health England (PHE) and others.

2. Legislation and guidance (15%)

Educational objectives

Candidates should understand the key pieces of legislation and guidance which underpin best working practice in managing and controlling legionella risk.

- 2.0.1 Acts of Parliament.
- 2.0.2 Approved codes of practice, regulations, HSE guidance notes, British Standards. Other industry accepted good practice sources of information.

3. Risk assessment of systems (25%)

Educational objectives

Candidates should understand:

- The roles of people responsible for managing and controlling legionella risk.
- The different components of hot and cold water systems.
- The practical and theoretical principles of assessing the risk of exposure to legionella in domestic hot and cold water systems.

- 3.0.1 Role of the named duty holder and responsible person(s).
- 3.0.2 Definition of competent responsible person.
- 3.0.3 Key components of the management and control systems.
- 3.0.4 Design and operation of domestic type hot and cold water systems.
- 3.0.5 Importance of schematic diagrams and sentinel outlets.
- 3.0.6 Sentinel points on hot water systems with a circulation.
- 3.0.7 Significance of dead legs, blind ends and inaccessible parts of the water system.
- 3.0.8 Examples of other miscellaneous systems (e.g. emergency showers).

4. Operational control (20%)

Educational objectives

Candidates should have a detailed practical and theoretical understanding of how to implement legionella control regimes with suitable monitoring programmes and records.

- 4.0.1 Duties and responsibilities of responsible person(s).
- 4.0.2 The role, risks and responsibilities when subcontracting part of the task of the control strategy.
- 4.0.3 The written scheme of precautions, including routine temperature checks and routine condition inspection.
- 4.0.4 Other control strategies: ionisation, ClO², etc.
- 4.0.5 The role of general bacteriological testing as part of the control strategy.
- 4.0.6 Corrective or remedial actions.
- 4.0.7 Record keeping, the details required for effective management control and retention of monitoring data.

5. Outbreak investigation procedures (10%)

Educational objectives

Candidates should be able to identify a legionella outbreak and analyse, interpret and evaluate all relevant information in a hot and cold water system, and initiate the appropriate action to take in this instance.

- 5.0.1 The appointment and role of a Proper Officer and Incident Control Team.
- 5.0.2 Definition of an outbreak.
- 5.0.3 The roles of the investigating organisations (HSE, PHE, local authority).
- 5.0.4 Control and Investigation phases.
- 5.0.5 Interpreting the patterns of cases to trace the source; interpreting the microbiology to trace the source and the role of sequence-based typing (SBT).

6. Record keeping (5%)

Educational objectives

Candidates should understand which records they are required to keep for their water systems, in order to comply fully with legislation.

- 6.0.1 Regulatory requirements for record keeping.

7. Case studies (10%)

Candidates should be shown real-life case study examples of:

- 7.0.1 Causes of recent Legionnaires' disease outbreaks and the suspected water system sources.
- 7.0.2 Prosecutions.