

L4C2



THE INSTITUTION OF FIRE ENGINEERS
Founded 1918 • Incorporated 1924

IFE Level 4 Certificate in Fire Science and Fire Safety (HL)

Unit 2: Fire Safety (D/505/5932)

Friday 11 March 2016

14.30 – 17.30

Instructions to Candidates

1. The time allowed for this examination is **THREE** hours.
2. Candidates should answer **SIX** questions from the total of **EIGHT** questions set for this examination.
3. All questions carry equal marks and may be answered in any order. Candidates should follow the instructions provided in the question when composing their responses.
4. Candidates should record all of their answers in the answer book provided.
5. The question paper must be handed in with the answer book.

Question 1

Unwanted Fire Signals (False Alarms) divert fire service resources from real emergencies and other important work.

- a) Explain how repeated Unwanted Fire Signals may reflect on the management of fire safety, impact the operation of the building and affect occupant behaviour. (8 marks)
 - b) Explain how measures, put in place by both the premises management and the fire service, achieve the objective of reducing Unwanted Fire Signals. (12 marks)
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Question 2

Explain, using examples, the measures that need to be implemented as part of a total fire engineering package.

(20 marks)

Question 3

- a) Explain the issues surrounding initial leakage pathways in a building provided with a pressurised system to support a means of escape strategy and explain how they influence means of escape arrangements. (12 marks)
 - b) Define the term “final leakage path” and explain how leakage pathways are incorporated into the design of modern buildings. (8 marks)
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Question 4

You are asked by a building occupier to oversee, as his representative, the acceptance of a new, large and complex fire detection and fire warning system installation that is linked to an alarm receiving station and is being handed over by the system installer.

Describe the elements that you would ensure are in place and/or have been completed before accepting the system as fit for purpose.

(20 marks)

Question 5

You are advising the owner/manager of a care home which provides twenty-four hour personal care/nursing for people with a range of different vulnerabilities including dementia and mobility impairments.

Describe the control measures that you would recommend to the owner/manager of the premises.

(20 marks)

Question 6

You have been asked to lead a review following a fire in a display in the concourse of a large shopping mall during a busy trading session. Two sprinkler heads activated and the fire was quickly extinguished by the fire service. However the evacuation took much longer than it had during a recent drill.

Describe the factors that you would take into account when reviewing the fire and the performance of the systems involved.

(20 marks)

Question 7

Explain how the fire safety provisions and fire performance of a building can deteriorate during the lifetime of that building.

(20 marks)

[Please turn over]

Question 8

Refer to the plan provided on page 5 of this question paper.

You have been asked to advise a developer on fire safety provisions in order to convert the building shown in the plan into a hotel.

Referring to the plan, describe the problems in relation to means of escape and fire resistance. Suggest solutions to the problems and explain how each of your solutions would remedy the issue.

(20 marks)



