

L4C3



THE INSTITUTION OF FIRE ENGINEERS
Founded 1918 • Incorporated 1924

IFE Level 4 Certificate in Fire Science and Fire Safety

**Unit 3: Fire Service Operations and Incident
Command (H/505/5933)**

Monday 7 October 2019

14:30 – 17:30

Instructions to Candidates

1. The time allowed for this examination is **THREE** hours.
2. Candidates must 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

The definition of a major incident is "an event or situation with a range of serious consequences which requires special arrangements to be implemented by one or more emergency responder agency".

- a) Describe the main civil protection duties of the Fire and Rescue Service when attending major incidents. (6 marks)
 - b) Explain the purpose of interoperability and intraoperability. (4 marks)
 - c) State and describe the five key principles of joint working as set out in the JESIP framework. (10 marks)
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Question 2

- a) Describe the factors that Incident Commanders should take into account when completing an environmental risk assessment to identify the potential risks posed by Fire and Rescue Service actions on the environment. (8 marks)
 - b) Describe the control measures that can be applied to reduce or, where possible, prevent environmental damage. (6 marks)
 - c) Describe the issues specific to managing motorway and highway drainage. (6 marks)
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Question 3

The Fire and Rescue Service retains responsibility for the health, safety and welfare of all persons (including multi-agency partners) working within the risk area.

At a multi-agency incident:

- a) Describe the key factors that should be considered when reviewing or devising an evacuation plan. (16 marks)
 - b) Explain how a tactical withdrawal differs from an evacuation. (4 marks)
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Question 4

Detail the pre-planning arrangements that need to be considered within the Emergency/Disaster Plan for a largescale fire at a petrochemical storage facility.

(20 marks)

Question 5

a) When subjected to fire some buildings under construction or demolition may collapse suddenly. Describe the factors prior to the fire that may affect the integrity of the structure.

(4 marks)

b) Describe the factors that can affect the rapid spread of fire in a building under construction.

(10 marks)

c) Describe the specific challenges encountered at building sites.

(6 marks)

Question 6

You have been called to a fire on a farm involving several out buildings and have been given the responsibility for organising the evacuation of a large number of farm animals. Detail the considerations and actions required to organise this evacuation effectively and safely.

(20 marks)

Question 7

a) You are called to manage an incident where a civil aircraft has made a forced landing on farmland. Describe the control measures that you would put in place.

(10 marks)

b) Describe the actions you would take to preserve the scene.

(10 marks)

Please turn over

Question 8

a) Explain the incident command protocols that would operate when attending incidents within prisons or other places of lawful detention and explain how the Fire and Rescue Service would work with other relevant organisations during and immediately after the incident.

(8 marks)

b) Explain the safety precautions specific to attending incidents within prisons or other places of lawful detention.

(12 marks)
