

L3D6



THE INSTITUTION OF FIRE ENGINEERS
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IFE Level 3 Diploma in Fire Science and Fire Safety
Unit 6: Fire Service Operations and
Incident Command (L/505/6008)

Monday 8 October 2018

10.30 – 13.30

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. Questions may be answered in any order.
4. Candidates must record all of their answers in the answer book provided.
5. The question paper must be handed in with the answer book.

Question 1

In relation to Incident Command at an emergency incident:

- a) Define the offensive tactical mode and give two examples of situations of offensive mode. (5 Marks)
 - b) Define the defensive tactical mode and give two examples of defensive mode situations. (5 Marks)
 - c) Explain how tactical modes are managed when sectors are in use. (6 Marks)
 - d) State two reasons why tactical mode may change and describe the actions to be taken by the Incident/Sector Commander when tactical mode changes from offensive to defensive. (4 marks)
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Question 2

- a) A decision trap is a thought process that can lead to wrong decisions being made. Describe four different examples of decision traps and explain how each can arise. (8 marks)
 - b) Describe the purpose and content of a decision log. (12 marks)
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Question 3

- a) Describe the control measures used to protect crew members when there is a risk of biological infections at water-related incidents. (6 marks)
 - b) Describe the hazards, other than biohazards, that may be present at incidents involving flooding. (8 marks)
 - c) Describe the post-incident actions that the Incident Commander should take following attendance at a water-related incident. (6 marks)
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Question 4

- a) Fire and Rescue Service personnel are at risk of electrocution when coming into contact with electrical equipment and components at operational incidents. One type of contact which can lead to electrocution is the direct contact that results from static discharges. Describe three other ways in which electricity can present a hazard.

(6 marks)

- b) Describe the control measures to be implemented when attending an incident where electrical hazards are present.

(14 marks)

Question 5

- a) Explain how firefighting foams can affect the environment.

(3 marks)

- b) Explain how fire water run-off can affect the environment.

(3 marks)

- c) Describe the control measures that can be implemented to prevent or reduce environmental damage due to fire water run-off.

(14 marks)

Question 6

- a) Firefighting foams have been developed primarily to deal with the hazards posed by liquid fuel fires. Explain the way in which firefighting foams work to extinguish fires.

(4 marks)

- b) Describe the process to be followed when using foam to extinguish a flammable liquid fire.

(4 marks)

- c) Describe how the following equipment is used in the production of foam and state how the foam produced is applied.

- i. LX (low-expansion foam) handheld foam-making branches
- ii. HX (high-expansion) foam generators

(12 marks)

[Please turn over]

Question 7

a) You are the Incident Commander at a building fire. Describe the information that you would gather when carrying out your initial survey of the scene to secure situational awareness.

(8 marks)

b) Describe the specific hazards associated with fires in roofs.

(6 marks)

c) Describe the control measures that you would put in place when dealing with a building where the structure appears to be unstable.

(6 marks)

Question 8

a) Explain the operational considerations that an Incident Commander will need to take into account when attending a fire in a long road tunnel.

(10 marks)

b) Describe the control measures that would need to be put into place to protect crew members when managing a fire in a long road tunnel.

(10 marks)
