

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 12 October 2020

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 and may be answered in any order. Candidates should follow the instructions provided in the question when composing their answers.
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

- a) At premises without salvage or disaster plans, or where these plans are not available, Incident Commanders should develop a damage control plan.
- i) Describe the three phases of damage control and describe the factors that affect the effectiveness of damage control. (6 marks)
 - ii) Excluding direct fire damage, describe the ways in which damage can be caused at an incident. (4 marks)
- b) Describe the factors that an Incident Commander should consider when determining whether or not a controlled burn would be appropriate. (10 marks)
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Question 2

Fire and Rescue Services need to plan in advance in order to ensure that they are prepared for emergency incidents.

Describe the information that should be included in pre-planning for a wildfire incident. (20 marks)

Question 3

- a) Explain the difference between natural ventilation and mechanical ventilation. (4 marks)
 - b) Explain the difference between offensive ventilation and defensive ventilation. (4 marks)
 - c) Describe the factors that an Incident Commander should consider when formulating and implementing a ventilation strategy at an incident. (12 marks)
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Question 4

a) Describe the specific risks that can be encountered at rescues involving confined spaces.

(4 marks)

b)

i) Describe the specific risks that can be encountered when tackling a fire in a tunnel.

(8 marks)

ii) Describe the control measures that can be implemented when tackling a fire in a tunnel.

(8 marks)

Question 5

a) Explain how external fire may spread if the fire breaches the external envelope of a high-rise building.

(10 marks)

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

(10 marks)

Question 6

a) Describe the three stages of situational awareness.

(6 marks)

b) You are the Incident Commander arriving at an incident involving hazardous materials. Describe the information that you would gather when carrying out your initial survey of the scene to secure situational awareness.

(8 marks)

c) State the factors that are likely to adversely affect an Incident Commander's situational awareness.

(6 marks)

Please turn over

Question 7

You have been called to a road traffic incident on a busy main road. Two cars have collided and the driver and passenger in one of the cars are trapped.

- a) Describe the hazards and risks that would be encountered in carrying out the rescue. (14 marks)
- b) Describe the control measures that you would put in place whilst the rescue is underway. (6 marks)
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Question 8

- a) Describe the characteristics and use of medium expansion foam. (8 marks)
- b) Describe the characteristics and use of high expansion foam. (6 marks)
- c) Describe the hazards associated with the use of high expansion foam. (6 marks)
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