# IFE Level 3 Diploma in Fire Safety and Fire Science

## Unit 6 – Fire Service Operations and Incident Command (Zone 2)

## Examiner Report – March 2017

### Introduction

Candidates generally performed well in this examination with 53% of those that attempted the examination achieving a pass.

As in previous examinations, many candidates appeared to rely solely on operational experience. This meant that responses often lacked the depth of detail and understanding required.

Many candidates failed to follow instructions to explain or describe. Candidates often presented their responses in lists of single words or in very short sentences. This format rarely meets the requirement to explain or describe. Candidates who failed to provide sufficient depth and detail in their responses were unable to attain high marks.

Responses were not always structured or planned in a logical way and this often led to the repetition of points. In addition, candidates often failed to use the mark allocation stated on the question paper as a guide in determining how much information should be provided in responses.

Candidates generally performed best on questions 2 and 3. Performance was often poor on questions 1, 4, 5 and 8.

### Question 1

*a) Explain the term "situational awareness" and its relevance to the role of Incident Commander in successfully managing an incident. (10 marks)*

*b) Incident Commanders often have to work with other agencies such as the police at the scene of an incident. Describe the factors that you would take into account when working with other agencies at an incident in order to ensure achievement of objectives. (10 marks)*

#### Examiner Feedback

The responses to part a) were of varying standards. Some candidates clearly explained Situational Awareness and its importance whilst others provided very limited information and struggled to explain its relevance. Candidates should be able to understand and explain the importance of Situational Awareness in relation to effective decision making processes, supporting problem recognition and enabling the development of an appropriate action plan.

Candidates who secured good marks for part b) considered advantages of, and barriers to, effective collaboration and interoperability. Some candidates restricted the marks available to them by responding only in single words (eg presenting only the word "communication" was a common approach) and therefore failed to describe their points in sufficient depth. For example, rather than writing just the word "communication" candidates were expected to draw out points such as identifying information that needs to be shared and the methods to do this in an accurate and timely fashion, establishing joint understanding of risks and subsequent implications for working arrangements, establishing liaison arrangements and ensuring shared understanding of roles and responsibilities of different agencies.

## Question 2

*a) Define and provide an example of a hazard, risk and control measure in relation to operational incidents. (6 marks)*

*b) Describe, giving an example of each stage, the hierarchy of control measures in relation to managing risks at an operational incident. (8 marks)*

*c) Describe three different types of risk assessments that Incident Commanders can use at an operational incident. (6 marks)*

### Examiner Feedback

Candidates often attained their highest mark for the response to this question. The average mark attained on this question was 11.

Responses to part a) and part b) were usually good with candidates attaining either all, or a high proportion, of the marks available. Some candidates failed to follow the instruction to provide an example and this therefore limited the marks they could attain. Some candidates appeared to be confused about the difference between a hazard and a risk.

In responding to part c), some candidates clearly demonstrated an understanding of various Risk Assessments. However, other candidates seemed to rely on limited knowledge and did not explain their answer or support their response with further information. Candidates often attained only low marks for this element of the question.

## Question 3

*a) Define the term "flashover" and describe the signs associated with flashover. (8 marks)*

*b) Define the term "backdraught" and describe the signs associated with backdraughts. (8 marks)*

*c) Define the term "fire gas explosion". (4 marks)*

**Examiner Feedback**

This question covered an area that is fundamental for firefighters. Although there were some good responses with candidates clearly articulating the difference between the three different types of phenomena and explaining the associated signs and symptoms, there were also many poor responses with some candidates appearing to confuse backdraughts and flashovers. Some candidates appeared to use local terms when providing descriptions and explanations rather than demonstrating underpinning knowledge developed via recognised scientific and operational definitions.

Part c) was the least well answered part of the question. Some candidates omitted to provide a definition and wrote about generic explosions rather than fire gas explosions.

## Question 4

*In relation to wildfire incidents:*

*a) Describe the factors to be considered by the Incident Commander when developing a tactical plan. (8 marks)*

*b) Describe the control measures that an Incident Commander would put in place to protect crew members. (12 marks)*

**Examiner Feedback**

Responses to part a) were generally poor. Few candidates demonstrated in-depth understanding of wildfire incidents. Candidates often failed to articulate the factors that an incident commander would take into account when facing this type of incident. Examples of the type of considerations expected were current and predicted fire behaviour and fire spread, available resources and their capabilities and limitations, an assessment of what is threatened by the fire including any areas needing to be prioritised for protection or evacuation.

In responding to part b), candidates often relied upon previous operational experience. Responses were often limited and drew on generic rather than specific information. Few candidates demonstrated understanding of the specific requirements in this type of situation.

## Question 5

*Describe the considerations and operational tactics that an Incident Commander can use when dealing with water-related rescues. (20 marks)*

**Examiner Feedback**

This is a standard and frequent subject for examination but few candidates demonstrated the depth and breadth of understanding required to attain high marks. Candidates often appeared to rely only on their operational experience. Many responses were presented as brief lists, often containing only single words such as “weather”; marks were awarded only where points were supported by a suitable description and the candidate’s intentions were clear.

Responses were particularly poor in relation to the issues that the incident commander needs to take into consideration. Few candidates took time to focus on the specific context and to assess the areas for consideration. Points for consideration that were rarely identified included: time factors such as how long the candidate had been immersed in the water and the implications for survival, the impact of weather and/or tide on water conditions and the level and the resources already available/en route.

## Question 6

*a) Explain the steps that Incident Commanders can take to identify and preserve evidence at the scene of a fire. (12 marks)*

*b) Describe the actions that an Incident Commander should take following an incident. (8 marks)*

### Examiner Feedback

The majority of candidates provided a good response to part a) and demonstrated a good depth of knowledge.

Responses to part b) were less successful as many candidates simply repeated points made in part a) rather than taking into account the wider considerations when closing down an incident such as recording any near misses or exposure to hazardous substances, identifying any learning points and identifying whether any information on the site needed to be recorded for future use by either the FRS or other agencies.

## Question 7

*a) Describe the different types of ventilation tactics that can be used at an operational incident.(10 marks)*

*b) Explain how the positive effects of ventilation can aid firefighting and rescues within a building. (5 marks)*

*c) Explain the factors that affect the effectiveness of ventilation within a building. (5 marks)*

### Examiner Feedback

This was a question where candidates with detailed understanding attained very high marks but where those with limited knowledge were unable to score few, if any, marks.

In response to part a), some candidates relied on only a single type of ventilation and were unable to attract many marks. Candidates who obtained high scores explored different types of ventilation as required by the question. Types of ventilation tactics that could have been covered included natural ventilation, forced ventilation, automatic ventilation, defensive ventilation and offensive ventilation.

Most candidates provided good responses to part b) although some candidates focused only on limited elements.

Part c) required candidates to demonstrate a real depth of understanding and therefore some candidates, who relied on only limited experience, were unable to attain high marks.

## Question 8

*Firefighting foams have been developed primarily to deal with liquid fuel fires.*

a) *Describe the seven main properties of firefighting foam. (7 marks)*

b) *Identify five factors that will influence the performance of firefighting foam. (5 marks)*

c) *Describe the characteristics of medium expansion foam and, using examples, explain how these characteristics determine the situations where it would be appropriate to use medium expansion foam. (8 marks)*

### Examiner Feedback

Part a) tested basic understanding of firefighting foam. There some poor responses to this question with candidates presenting either irrelevant information or demonstrating only limited knowledge. The seven properties (which should have been presented with a brief description) are expansion, stability, fluidity, contamination resistance, sealing and re-sealing, knockdown and extinction, back-burn resistance.

Responses to part b) were often poor with candidates failing to address the requirements of the question. There are many factors that could have been presented in the response including the type of foam-making equipment used and the way it is operated and maintained, the type of foam concentrate used, the type of fire and fuel involved and the rate at which the foam is applied.

In responding to part c), most candidates were able to identify a situation when this type of foam would be used but few demonstrate any understanding at all as to the factors that made it appropriate to use medium expansion foam in the situation.