

# IFE Level 3 Diploma in Fire Science and Fire Safety

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

### Examiner Report – March 2020

#### Introduction

Candidates generally performed well with 78% of those who sat the examination securing a Pass. Some candidates submitted excellent scripts and 20 candidates attained either a B Grade or an A Grade.

Candidates generally performed best on question 5 where the average mark achieved was 13. Performance was also good on questions 3 (average mark scored was 10), question 7 (average mark scored was 9) and question 8 (again the average mark scored was 9). Candidates performed least well on question 4 where the average mark scored was 5.

Candidates appeared to have relevant operational experience and many appeared to draw on this experience when composing responses. Although this clearly assisted them in securing marks, responses often lacked enough detail and/or understanding for them to score higher marks. Further study is therefore recommended.

#### Question 1

- a) *Describe the control measures used to protect crew members when there is a risk of biological infections at water-related incidents.* (12 marks)
- b) *Describe the post-incident actions that an Incident Commander should take following an incident of this nature.* (8 marks)

#### **Examiner Feedback**

In responding to part a), many candidates placed the focus on water rescues and failed to consider the risks related to biological infections. As the question specifically asked for information on biological infections, this meant that many responses were irrelevant and scored few marks. The question required greater consideration of control measures with a focus on prevention of infection.

Candidates often performed better on part b) than on part a) although they often appeared to rely on operational experience rather than detailed understanding. Some candidates omitted to consider the need to report any personal injuries or exposure to hazardous substances in line with legislative requirements (ie Reporting of Injuries, Diseases and Dangerous Occurrences Regulations - RIDDOR).

## **Question 2**

*Name and describe each of the five key principles of joint working as set out in the JESIP (Joint Emergency Services Interoperability Principles) framework. (20 marks)*

### **Examiner Feedback**

This question was one of the least popular options for candidates. However, those that did answer the question often answered well and the average score attained was 8.

Whilst candidates often named all, or some, of the key principles of joint working (ie: Co-Location, Communication, Co-ordination, Joint Understanding of Risk and Shared Situational Awareness) correctly, few described the principles in sufficient detail to score high marks. Candidates should be aware that the marks shown on the exam paper are an indication of the number of correct points at the right level that are needed to score full marks; this therefore provides a guide as to length of responses required.

## **Question 3**

*Describe the following roles in relation to the Incident Command structure at a large fire:*

- a) Incident Commander (8 marks)*
- b) Sector Commander (6 marks)*
- c) Safety Officer (6 marks)*

### **Examiner Feedback**

This question was a popular option for candidates and was usually answered well. Candidates appeared familiar with the roles and clearly drew on operational experience.

Responses to part b) were often less full than other responses with candidates appearing to have less understanding of the responsibilities related to this role.

## **Question 4**

- a) Describe the environmental factors to be taken into account when using firefighting foam at incidents. (5 marks)*
- b) Describe the hierarchy of environmental control measures used to contain polluted fire water run-off at an incident. (15 marks)*

### **Examiner Feedback**

This was the least popular option for candidates and responses often lacked sufficient relevant detail to score high marks.

Part a) was often answered poorly with few candidates considering environmental factors as required by the question. It was common for candidates to write about foam in general (eg its properties) without considering its impact or the factors to be considered. Candidates who scored high marks explained that:

- firefighting foams can lead to the de-oxygenation of water, they can be toxic to aquatic life and present risks to drinking water supplies
- some compounds in firefighting foams do not break down in the environment and can accumulate in plants and animals
- the type of foam used should be appropriate for the task in hand and the minimum quantity used.
- using foam is a trigger for notifying environment agencies of an incident.
- extra care should be taken when using firefighting foam close to water sources or sensitive environmental areas.
- firefighting foam run-off should not be allowed to enter an oil separator because it will pass through it unaffected and may also flush oil into the drainage system.
- using foam can also have environmental benefits such as reducing water use and extinguishing a fire more quickly.

In response to part b), some candidates appeared to be unfamiliar with the hierarchy of environmental control measures. The stages of the hierarchy are:

- containment at source
- containment close to source
- containment on the surface
- containment in drainage system
- containment on or in watercourse

### **Question 5**

a) *In relation to fires in buildings:*

- define the term "ventilation" (2 marks)*
- explain the difference between natural ventilation and forced ventilation (4 marks)*

b) *Describe four benefits of ventilating buildings involved in fire.*

*(4 marks)*

c) *Define each of the following and provide examples of signs and symptoms:*

- flashover (5 marks)*
- backdraught (5 marks)*

### **Examiner Feedback**

This question was one of the most popular options for candidates and was usually answered well.

Ventilation was not well understood and candidates need to increase their understanding of this area to improve their safety and skills at incidents.

Examiners were pleased to note the very high level of understanding demonstrated in relation to flashover and backdraught.

### **Question 6**

*As the Incident Commander responding to an incident at a harbour, describe:*

- a) *the hazards and risks that can be encountered when working alongside docks and harbours.* (8 marks)
- b) *the fire safety measures incorporated into ships to assist firefighting and provide fire protection.* (6 marks)
- c) *the control measures that would be put in place when managing an incident at a harbour.* (6 marks)

### **Examiner Feedback**

This question was not a popular option for candidates but those candidates that did answer the question often scored good marks – the average score attained was 8.

Parts a) and b) were often answered well but candidates often failed to provide specific points in response to part c) which limited the marks that could be awarded. Examples of points that would have secured marks for part c) are as follows:

- liaise with the responsible person to obtain advice and assistance
- consider requesting advice or assistance from tactical advisers or specialists
- refer to SSRI
- consider requesting suspension of waterways operations
- access tidal information
- carry out a survey of the incident at the earliest opportunity, to identify and assess the stability of the mode of transport and infrastructure
- establish and manage appropriate cordons to restrict access to the hazard area

### **Question 7**

*You are the Incident Commander dealing with a fire in a high-rise building. State the information that you would gather to achieve situational awareness in order to manage the incident.* (20 marks)

### **Examiner Feedback**

This question was a popular option for candidates.

Candidates generally mentioned the need to consider access, risk to surrounding buildings and need for an evacuation strategy. However, further marks could have been attained for

considering the age and construction of the building, the use (including previous usage) of the building, the fire safety installations and utilities.

Although the average mark attained was 9, examiners were disappointed that few candidates demonstrated sufficient understanding to score higher marks. This question covered a topic that should be well understood.

### **Question 8**

- 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 process and content of de-briefing following an incident.* (8 marks)

### **Examiner Feedback**

Candidates often appeared to tackle this question from practical experience and this led to responses that lacked detail and sometimes failed to demonstrate the understanding that underpins these process. This was particularly the case in the part a) where candidates usually failed to identify more than a few points.

Part b) was usually answered better than part a) although some candidates repeated points given in part a) as content for their part b) answer even where the points were not appropriate.

Candidates often attained good marks overall and the average mark attained was 8.

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