

Level 4 Certificate in Fire Science and Fire Safety

Unit 3 – Fire Service Operations and Incident Command

Examiner Report on March 2015 Examination

Introduction

38% of the candidates who attempted the paper achieved a pass. The majority of candidates who achieved a pass achieved a D Grade (ie they achieved between 40% and 50%).

At Level 4 candidates should demonstrate a wide understanding of issues and an ability to assess situations from all angles. Many candidates presented answers that were limited in terms of the depth and breadth of the information provided. Some candidates presented their responses as brief bullet points in lists without including explanations as required by the question or without linking their points back to the specific context; at Level 4 candidates should be able to explain why actions are taken/appropriate and should be able to draw on a wide range of technical understanding in addressing different and complicated contexts.

Question 1

Closing down an emergency incident is an important part of an Incident Commander's role. Explain the actions to be taken when closing down an incident involving hazardous materials. (20 marks)

Examiner Feedback

This question was a popular choice with candidates. Although many candidates achieved 8 or more marks for their responses, few candidates achieved very high marks for their responses.

Some candidates provided their answers as a list of bullet points despite the instruction in the question which asked for an *explanation* of the actions. At Level 4 candidates are expected to provide detailed responses and brief lists of bullet points rarely provide the depth required. A common example was the provision of a bullet point referencing only "hot debrief" without an explanation of the purpose of debriefs and an extension to cover the contribution of cold debriefs.

Many candidates omitted to consider the handover process in detail; some omitted to identify and explain the importance of documenting residual hazards and including information such as fire service actions and the hazmat adviser's contact details in the handover.

Question 2

a) Explain the significant issues and risks related to dealing with fires in open rural areas. (12 marks).

b) Identify and explain the specific pre-planning actions that may be taken for an incident of this type. (8 marks)

Examiner Feedback

Most of the candidates who responded to this question performed better on part a) than on part b).

In response to part a), candidates were often able to identify hazards related to access to the site although some candidates limited their marks by failing to explain their points fully. However, a common gap in responses was the identification and explanation of issues related to the way that fire behaves in open rural areas; for example, candidates often failed to identify the impact of the type of vegetation, the fact that fire will generally gain speed if travelling up a slope and the fact that fire can travel underground with no indication of burning, leaving voids and fire breaking out some distance from the original starting point.

Responses to part b) were often limited with candidates referencing mainly the need to ensure that water supplies and appropriate equipment were available but omitting to consider issues such as partnership working, topographical knowledge, evacuation and communication plans. Again, points were rarely expanded so candidates were unable to achieve the higher marks available for the provision of explanations and associated demonstration of understanding.

Question 3

In relation to incident risk management:

- a) Describe what is meant by the term “Analytical Risk Assessment” and summarise the way that Analytical Risk Assessments are used during incidents. (8 marks)*
- b) Explain the “Hierarchy of Control Measures”. (12 Marks)*

Examiner Feedback

Candidates generally provided a good response to part a) with most candidates able to explain the term and to summarise how analytical risk assessments are used during incidents.

The Hierarchy of Control Measures was less well understood and some candidates did not appear to be aware of the following six elements: eliminate, reduce, isolate, control, PPE, discipline.

Question 4

In relation to fighting fires in oil installations:

- a) Outline the factors that have to be considered by the Incident Commander prior to committing firefighters to carry out a rescue from the roof of a storage tank that is involved in fire. (12 marks)*
- b) Explain why, for fire management reasons, a double deck roof is preferred to a single deck roof on storage tanks. (8 marks)*

Examiner Feedback

In order to secure a high mark for the response to this question, candidates needed to demonstrate technical understanding of the specific context.

The candidates who attempted this question, generally provided good responses to part a). However, responses to part b) were often less well developed as candidates omitted to provide explanations and/or did not provide sufficient detail in their responses.

Question 5

You are the Incident Commander at a fire involving an electrical transformer. Explain the factors you will need to consider in fighting the fire. Your answer should cover hazards, automatic protection and firefighting. (20 marks)

Examiner Feedback

Most of the candidates who responded to this question provided only brief responses and few candidates covered all of the aspects set out in the question. A common error was to focus only on the hazards associated with electricity and to omit to consider the implications of automatic protection (eg fixed CO₂ or Halon) or firefighting.

Question 6

You are the Incident Commander at a civil disturbance where rioters have set fire to several buildings and vehicles. Describe the factors you would consider in deciding whether to commit personnel to deal with individual buildings or vehicles on fire including any precautions you would put in place to mitigate any risks. (20 marks)

Examiner Feedback

This was a popular question with candidates and some candidates achieved high marks for their responses.

The question asked candidates to assess a situation and identify the facts they would consider prior to committing crews. Some candidates presented lists of actions to be followed in tackling the situation rather than providing a considered assessment prior to action as required by the question. Other candidates provided a list of generic precautions rather than considering the specific context.

Candidates who assessed the issues related to the safety of personnel and the actions to ensure that crew and equipment were kept out of danger from the rioters achieved high marks. The most common omissions were consideration of the potential for booby traps, consideration as to whether fires should be allowed to burn, ensuring pre-briefings for crews, ensuring evacuation strategies and minimising the use of equipment.

Question 7

You are called to manage an incident where a military aircraft has made a forced landing on farmland.

a) Summarise the dangers that this situation presents. (10 marks)

b) Explain how you would rescue the pilot and maintain the safety of the crew. (10 marks)

Examiner Feedback

Candidates who responded to this question generally performed well on part a) and were able to identify dangers related to the military aircraft. Some candidates presented generic responses and failed to explore the specific dangers such as armaments, engines, carbon composite materials (MMMF), laser hazards, aircraft fuels etc.

Few candidates achieved a high mark for their response to part b). A common approach was to present a list of generic hazards and precautions. However, the question was focused on the rescue of the pilot so responses needed to demonstrate technical understanding of rescues in the specific context of a military aircraft; points to be covered include, lifting the pilot out of the aircraft, managing the rescue in a tight space and ensuring safe working around the equipment and switches in the aircraft.

Question 8

Explain the hazards to firefighters that may be present when working with helicopters that have been provided to assist the emergency services and detail the precautions that should be put in place both prior to and during operations. (20 marks)

Examiner Feedback

Candidates often provided good responses to this question although some candidates omitted to cover both hazards and precautions in their answers.

Candidates who linked hazards and the appropriate precautions achieved high marks.

It was common for candidates to write at length about the dangers presented by rotating blades but to omit other hazards such as noise. Answers were often focused on hazards and omitted precautions; examples of the types of precautions which could have been explained in the response include the use of hearing protection, removing any debris in the area, securing clothing and equipment, establishing wind direction and briefing crews.