

IFE Level 4 Certificate in Fire Science and Fire Safety

Unit 3 – Fire Service Operations and Incident Command

Examiner Report – March 2020

Introduction

Standards were in line with previous years with 35% of candidates achieving a Pass.

Candidates generally performed best on questions 5 and 8; they performed least well on questions 3 and 6.

As in previous examinations, candidates often provided responses that lacked context-specific or technical detail. At this level, candidates are expected to demonstrate in-depth understanding of a range of complex contexts. The lack of detail was sometimes compounded by the presentation of responses as brief, bullet point lists. At level 4, bullet point responses consisting of single words or short phrases are insufficient to secure marks as candidates are required to demonstrate that they have a full grasp of the significance of issues.

Question 1

An Incident Commander should be aware of the impact that their actions and behaviours have on the people they lead. Explain the leadership behaviours that an Incident Commander should be able to demonstrate and adapt in order to maximise team performance. (20 marks)

Examiner Feedback

The question was focussed on maximising team performance and the actions and behaviours that Incident Commanders can adapt to achieve this. Many candidates failed to make the link to impact or to explain the value of particular behaviours and actions in relation to crew performance. It was common for responses to describe operational procedures, command structures, service values and personal values without referencing the specific requirements of the question. Some candidates simply provided lists of personal attributes.

At this level, examiners were looking for candidates to demonstrate considered and in-depth assessments. For example, candidates could have referenced displaying and instilling confidence as a behaviour; they could then have gone on to explain that this is important because others at an incident take direction from leaders and personnel will respond positively to a confident leader whereas personnel will also detect negative behaviours such as panic, insecurity or uncertainty and this will affect how crews respond to the leader's instructions and the situation.

Question 2

You are attending an established incident at a railway station.

- a) *Describe the strategic issues that you would need to consider when attending such an incident at a railway station. (14 marks)*
- b) *State the roles that may be regarded as responsible persons at this incident and describe the range of information, advice and assistance that such roles can provide to support the development of a safe tactical plan. (6 marks)*

Examiner Feedback

Many responses to this question failed to address the context that was clearly set out in the question. Many responses included generic rail incident procedures such as the requirement to post look-outs or safety on embankments (even though the incident was set in a station) whilst others relied on generic incident command theory and application that could have been adapted for any incident. Few candidates submitted responses with specific details and as a result few achieved high marks for their response to part a).

Examples of specific issues that could have been covered include:

- dependant on time of day and peak travel times, the incident could involve large volumes of people with the potential for overcrowding in certain areas
- a media strategy may be needed
- if there is a risk to the safety of the public, personnel or infrastructure, which requires power isolation or train stoppages, this action should be initiated as quickly as possible
- large rail terminals or stations may have complex layouts consisting of one or more buildings for passengers, and possibly goods, and may be constructed over a number of levels
- large train stations may have a number of rail companies operating in different areas, with varying emergency procedures.
- security features, such as fences and locked gates need to be taken into account
- there may be adjoining properties that may become involved and may need to be considered for evacuation purposes.
- some facilities provided to keep the public safe can present a potential obstruction to a fire and rescue service, for example, platform edge doors or barriers. Methods of opening these facilities should be readily available to station staff.
- non-public areas can present additional hazards such as rails, points, fasteners, sleepers, ballast and subgrade; lineside structures including fences; power systems, including power supply equipment, overhead line equipment (OLE) and conductor rail equipment (CRE)

Candidates often performed well on part b) with most providing responses covering support and information provided by rail workers such as the station manager and the network incident response manager (NIRM) on issues such as safety, access to equipment and restoration of services.

Question 3

You are the Tactical Commander mobilised to attend a confirmed chemical release.

- a) *Explain the circumstances where you would consider committing fire crews without full chemical protective clothing and state the circumstances when you would not. (5 marks)*
- b) *Where fire crews will be committed without full chemical protection clothing:*
- i) *explain what you would take into consideration when assessing the risk from the released chemical substance. (5 marks)*
 - ii) *describe the initial and longer term control measures that you would instigate. (10 marks)*

Examiner Feedback

Part a) was often answered well with most candidates providing sufficient detail in their response to score marks. Some candidates mentioned significant or catastrophic escalation but few explored resources, time constraints or the issues related to line of sight.

Part b) was less well answered with candidates often providing generic points in their responses rather than identifying the detail required in the context of the situation. Most candidates failed to include detail on visual condition of casualties (which could indicate type of risk or toxicity), the effects of the surroundings in relation to the risks posed by any chemical release or the performance of structural firefighter kit in such circumstances. Candidates appeared to provide answers based on limited operational experience rather than on detailed study of the CBRNE field. Candidates sometimes wandered into describing processes around decontamination and did not demonstrate an understanding of the wider issues involved in assessing the risk and the longer term control measures.

In addition, many candidates presented their response to part b) largely as bullet pointed lists. Whilst presenting information in lists is acceptable, at level 4 bullet points with minimal words/phrases without expansion or a rationale to demonstrate understanding is insufficient to secure marks.

Question 4

From a tactical perspective, describe the main hazards and the relevant control measures that may need consideration when crews are required to undertake working at height operations. (20 marks)

Examiner Feedback

This question was a popular option for candidates and some candidates were able to attain high marks. Unfortunately, there were many poor responses where candidates provided generic answers that could have been adapted for any incident with very little specific detail regarding working at height. Again, some candidates responded by using minimal bullet points without sufficient detail to attract marks.

Good responses included a discussion of the hierarchy of control measures and the option to avoid working at a height along with consideration of the use of stable working platforms and specialist teams with specific skills related to working at height.

Question 5

Situational awareness underpins all aspects of operational decision-making across all levels of command and is critical during the planning process for predicting the likely effects of activities.

- a) *Describe the three stages of operational situational awareness.* (10 marks)
- b) *Explain the factors that may affect situational awareness.* (10 marks)

Examiner Feedback

Candidates who selected this option often attained good marks. The average mark attained for this question was 9. Most candidates were able to demonstrate an in-depth understanding. One or two candidates misunderstood and incorrectly elaborated the three phases of an incident.

Candidates tended to perform better on part a) than on part b).

Question 6

You have been appointed to the task of reviewing Site Specific Risk Information for a bus depot that has just introduced a fleet of hydrogen-powered vehicles.

- a) *Describe the risk information specific to the use of hydrogen that you would need to additionally record for this type of premises.* (15 marks)
- b) *Detail the properties of hydrogen which are distinct from those of hydrocarbon fuels and require special consideration.* (5 marks)

Examiner Feedback

This was not a popular option for candidates with only 16 of the 106 candidates who sat the examination attempting it.

Part a) focussed around an SSRI linked to hydrogen which should be familiar to candidates.

Most candidates provided some detail in their responses around the storage facilities but few explored the issues around the onsite processes such as delivery and re-fuelling, the training given to staff and responders, management and relevant regulations.

In responding to part b), most candidates knew that Hydrogen was the lightest of all gases but few were able to cite properties. As the use of this type of power increases, it is important to

be aware of the properties that need special consideration should incidents arise. These include:

- Mixtures of hydrogen in air are flammable over a wide range of compositions (4% - 75% in air, 29% Stoichiometric)
- The energy required to ignite a hydrogen/air mixture can be very low
- Hydrogen burns with a flame that is invisible in daylight
- Hydrogen is a small molecule that can leak easily
- Hydrogen is often stored at high pressure, and if released and ignited burns with a rapidly moving or jet flame
- Colourless, odourless and tasteless

Question 7

You are a Tactical Commander mobilised to attend a large developing wildland fire. You have been allocated the role of Sector Safety and need to identify suitable escape routes and safety zones.

- a) *Explain the considerations when identifying, selecting and using escape routes at this incident* (10 marks)
- b) *Describe the factors to be considered when selecting an area to use as a safety zone so that it provides a safe refuge from a wildfire.* (10 marks)

Examiner Feedback

This question was a popular option for candidates but responses were often limited and, as with other questions, many candidates resorted to providing minimal generic points that did not demonstrate understanding of the specific context. Some candidates also made statements such as; “I would consider the weather” or “I would consider the terrain” without explaining why these factors were significant in the context.

Some responses included detail of the considerations that led to the decision to appoint the role of sector safety. The question started from the point where the sector safety role had been put in place so this discussion was not necessary or relevant.

Candidates who secured high marks were able to demonstrate experience and knowledge in this subject, with some very good responses referring to local procedures and/or to detail from the National Occupational Guidance. Responses that scored lower marks often included non-specific references to livestock and farm-related risks.

Question 8

Gaining situational awareness at operational incidents is vital for Incident Commanders in order to prioritise their actions and to make judgements on the effective use of resources.

As a Tactical Commander attending a fire involving a waste processing site, describe the information that you would consider gathering to enable all emergency responders to operate safely and effectively. (20 marks)

Examiner Feedback

This question was a popular option for candidates with most candidates performing well. The average mark attained was 8.

Most candidates appeared to have had direct experience of this context or to have undertaken study in the area and to be familiar with the issues.

Candidates often failed to consider checking whether or not on-site machinery had been isolated and few referenced the site manifest or any Control of Substances Hazardous to Health (COSHH) documentation.

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