

IFE Level 3 Diploma in Fire Safety and Fire Science

Unit 3 - Fire Service Operations and Incident Command - International

Examiner Report – March 2015

Introduction

Candidate performance was in line with performance in previous years with around one third of the candidates achieving a Pass.

As in previous years, the examination paper was designed to test candidates' ability to apply their knowledge and understanding in a number of different situations. Those candidates who achieved high marks demonstrated specialist understanding in a range of situations and tailored their responses to the specific context set out in the question. Candidates who performed least well generally failed to align their responses to the specific context, usually providing generic (rather than context-specific) statements or else failed to assess the full scope of the situation (thus omitting key points).

As in previous examinations, many candidates failed to follow the instructions in the questions. This was particularly notable where candidates failed to follow instructions to identify and explain *priorities/considerations* and presented answers listing actions to be taken rather taking a more analytical review of the situation and the subsequent priorities as required by the question.

Question 1

You are the Officer-in-Charge of a three appliance attendance at a fire in a building where persons are reported to be trapped. Describe the priorities to be considered when formulating your tactical plan. (20 marks)

Examiner Feedback

This was a popular question with candidates and many candidates achieved good marks.

Candidates who achieved high marks provided detailed considerations of the issues taken into account when formulating the plan and identified factors such as: establishing whether or not rescues would be needed and, if so the implications for resources, establishing the location and extent of the fire and any implications for fighting the fire and resource and ensuring that a risk assessment has been carried out.

Some candidates failed to appreciate that the question was about assessing initial *priorities* and wrote about the actions to be taken in tackling the fire with some even including the debriefing sessions at the closure of the event. Unfortunately, candidates who took this approach failed to demonstrate ability to review priorities as required by the question.

Other common errors were the failure to take into account the possibility of rescues being needed and the failure to reference the completion and implementation of a risk assessment.

Question 2

At a large incident, the Officer-in-Charge has appointed you as the Safety Officer. Detail the duties associated with the role of Safety Officer. (20 marks)

Examiner Feedback

Candidates with an understanding of the role of Safety Officer were able to achieve high marks for this question as they were able to detail the duties of the role.

Some candidates provided brief responses which covered only a high level summary of the role. There were 20 marks available for the question so candidates were required to provide an in-depth description of the role and to draw out a full description of the duties.

Question 3

You have been called to an incident at a lawful detention centre (e.g. prison or police cells). Describe the precautions specific to incidents in this type of location that you would implement. (20 marks)

Examiner Feedback

Candidates who applied their response to the specific context and considered all aspects of the situation achieved high marks.

Many candidates focussed on only one or two aspects of the situation, often writing at length only about co-operation with the police and/or crew safety.

Full responses considered the implications, and arrangements, for crew briefings and safety, the use of equipment, evacuation arrangements, working with authorities at the detention centre, communications and working with other organisations such as the police

A few candidates presented a list of generic points without considering the specific situation in their response.

Question 4

You are the Officer-in-Charge of the first appliance mobilised to the reports of a fire in the radiological unit of a local hospital.

- a) Name and describe the two principal hazards which arise from radioactivity. (4 marks)*
- b) Outline the factors and safety information the Officer-in-Charge should consider prior to the deployment of personnel within the hazard zone. (8 marks)*
- c) What measures should the Officer-in-Charge take after the incident to help eliminate or remove risks to the personnel who entered the hazard zone? (8 marks)*

Examiner Feedback

This question required candidates to demonstrate specialist understanding.

Many candidates failed to identify both “irradiation” and “radioactive contamination” in their response to part a) although marks were awarded for correct points provided in the description of the hazards.

Candidates that achieved high marks for part b), focussed their response on the specific situation and demonstrated relevant understanding of the factors to be considered *prior* to deploying personnel. Some candidates wrote about the steps they would follow in tackling a generic incident rather than describing specific issues relevant to the incident such as identification of the quantity and nature of the source of radioactivity, the advice needed from experts, the appropriate protection needed, the advice from site personnel and non-radioactive hazards.

Responses to part c) often omitted relevant measures such as: recording any exposures or near misses, decontamination of equipment, provision of health-related information and arrangements for follow-up monitoring.

Question 5

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

- a) Describe the seven main properties of firefighting foam. (14 Marks)*
- b) Identify six factors that will influence the performance of firefighting foam. (6 marks)*

Examiner Feedback

Candidates who wrote about the properties of firefighting foam were often able to score high marks. Unfortunately, many candidates wrote about firefighting foam generally and provided information about how firefighting foam works to extinguish fire. These responses did not answer the specific question so candidates who responded in this way attained few, if any, marks. The seven properties are: expansion, stability, fluidity, contamination resistance, sealing and re-sealing, knockdown and extinction, burn-back resistance.

In response to part b), most candidates were able to identify some of the factors that influence the performance of firefighting foam.

Question 6

You are the Officer-in-Charge of a two appliance attendance at an incident where it is reported that a team of sewer workers is not responding from an underground location.

- a) Explain the risks to the firefighters from working in raw sewage in a confined space. (6 marks)*
- b) What are the main issues that the Officer-in-Charge should consider on arrival at this incident? (10 marks)*
- c) Detail the actions the Officer-in-Charge should take to safeguard the welfare of the firefighters after the incident has been concluded. (4 marks)*

Examiner Feedback

This question was a popular choice for candidates and most of the candidates who attempted the question achieved a good mark.

Candidates generally performed best in response to part a) and candidates who fully explained risks were able to achieve full marks. A common fault was the tendency to provide a list of single words/short phrases such as “gases” – candidates who presented generic terms without linking them back to the sewer context or explaining why something was a hazard did not achieve marks.

Candidates who presented a full assessment of the situation achieved high marks. Some candidates focussed on only one or two elements of the situation and this limited the marks that could be achieved. Common errors included omitting to consider the access arrangements above ground and the need to seek support from other services such as police and ambulances.

In response to part c), most candidates successfully identified for the need for decontamination arrangements, advising crew members not to eat or drink until after the decontamination process had been completed and explaining the process for follow-up health checks. The most common omission was the need to ensure that equipment/kits were fully cleaned and decontaminated. Few candidates identified that there may be a need to consider psychological welfare as well as physical welfare after the event.

Question 7

Explain in detail the hazards that may be present when dealing with incidents involving high voltage overhead power cables and explain the precautions you would take as the Officer-in-Charge to ensure the safety of your crews. (20 marks)

Examiner Feedback

This question was often answered poorly. Candidates generally provided brief responses and did not demonstrate technical understanding of the implications in dealing with incidents of this type.

Some candidates failed to explain that water is a conductor of electricity and did not use this as the basis to discuss appropriate approaches to fighting the fire and the implementation of suitable precautions. Other candidates omitted to consider the dangers associated with working outside at height.

Question 8

In relation to incidents involving ships and vessels:

- a) What does the acronym SOLAS stand for? (2 marks)*
- b) Describe in detail what is contained within a SOLAS fire plan. (16 marks)*
- c) Where would the SOLAS fire plan be located? (2 marks)*

Examiner Feedback

This was not a popular option with candidates. However, those candidates that did attempt the question generally demonstrated specialist understanding of Safety of Life at Sea (SOLAS) and achieved good marks.

Question 9

In relation to petrochemical incidents:

- a) Outline the main types of explosion risks associated with oil tanks. (6 marks)*

- b) *Explain the control measures the Officer-in-Charge should take into account when dealing with a fire in a tank under repair or demolition. (14 marks)*

Examiner Feedback

Part a) required candidates to demonstrate technical understanding in relation to types of explosions associated with oil tanks. Most candidates provided only a partial response and few were able to identify the full range of explosion risks. Many candidates identified boiling liquid expanding vapour explosions (BLEVE) as a type of explosion but explanations were often insufficient to achieve marks. Other types include: unconfined vapour/gas cloud explosions, confined vapour cloud explosions, explosions linked to demolition/repair and steam explosions.

Candidates who demonstrated understanding of the specific context and identified appropriate control measures were able to achieve high marks.

Question 10

Chemical protection suits provide protection to firefighters when dealing with hazardous materials.

- a) *Describe the two generic types of chemical protection suits. (4 marks)*
b) *In relation to the design of chemical protection suits, describe the performance standards that are expected of chemical protection suits. (16 marks)*

Examiner Feedback

This question, which required understanding of the requirements for chemical protection suits, was not a popular choice for candidates.

Few candidates identified that the two generic types of suits are reusable chemical protective clothing and limited life chemical protective clothing.

Candidates generally performed better in response to part b) with many identifying and describing performance standards such as: abrasion resistance, stability to heat, flex cracking, burst resistance, resistance to ignition, puncture resistance etc