

IFE Level 3 Diploma in Fire Safety and Fire Science

Unit 6 – Fire Service Operations and Incident Command (Zone 1)

Examiner Report – March 2018

Introduction

41% of candidates achieved a Pass for this examination.

Candidates performed best on question 2 but they also performed well on questions 7 and 8. Candidates performed least well on question 6.

Those candidates who were unsuccessful in the examination often provided only brief or limited responses to questions where a high number of marks were available. Candidates should be aware that the number of marks shown on the examination paper indicates the number of valid points that are required in order to attain full marks.

Question 1

a) Describe the main components of the Decision Control Process. (16 marks)

b) Explain why the Decision Control Process is important to the Incident Commander when decisions are being made at an incident. (4 marks)

Examiner Feedback

Most candidates were able to identify some, or all, of the main components of the decision control process ie situational awareness, planning, controlling action and active monitoring. Candidates who went on to describe the components in greater detail were able to attain additional marks.

In responding to part b), few candidates appeared to recognise how the control process added value to decision making. Examples of points that could have been made included the following:

- it provides a logical structure that acts as a check point.
- active incident monitoring arrangements can aid commanders in maintaining accurate situational awareness throughout a changing incident.
- the decision control process can be applied to basic decisions made on the incident ground for a task or problem or it can be used in planning the resolution of an entire incident.
- The decision control process recognises that decisions are not always made in a linear way

Question 2

- a) *As the Incident Commander of the first attending appliances you are called to a large distribution warehouse with signs of a rapidly developing fire. Describe your initial considerations when reviewing the situation. (12 marks)*
- b) *Describe the hazards and risks relevant to the situation. (8 marks)*

Examiner Feedback

This question was a popular option for candidates and most of the candidates that attempted the question secured their highest mark for their response to this question.

Responses to part a) were often quite brief and candidates sometimes identified only a few points. Candidates should be guided by the mark allocation when presenting their responses. Candidates sometimes just listed points without adding sufficient depth to enable the examiners to be clear as to the point that was being made.

Where candidates expanded their points, they often provided additional information that secured marks eg a detailed consideration as to whether or not all persons were accounted for could lead to additional marks for considering where people were last seen and whether or not rescues were required.

Candidates also often cited considerations such as the location of the fire, access/egress, fire loading, additional hazards and taking advice from on-site experts. However, few considered the active fire protection systems that might be present and whether they had activated. Candidates often omitted to consider the type and structure of the building involved in the fire (traditional, steel framed, uncomparted large volume building, sandwich panels, flat/pitched/fragile roofs) or to consider whether there were signs of partial or total structural collapse.

Part b) was generally answered very well with many candidates attaining a high proportion of the marks available.

Question 3

Fire and Rescue Services need to plan in advance in order to ensure that they are prepared for possible emergency incidents. Describe the factors that should be included in pre-planning for a possible incident at a building which contains a biological hazard. (20 marks)

Examiner Feedback

There were many points that could have been made in response to this question but candidates often provided only brief responses. Some candidates listed their points – marks were awarded where points were sufficiently clear but this was not always the case where only single words or very brief points were made.

Candidates often referred to issues such as access (although an additional mark could have been attained for referring to arrangements for access to secure areas where security passes

are required), considering water supplies, taking advice from experts, arranging training, planning for decontamination arrangements and ensuring access to key contacts. Examples of other factors that could have been covered in responses included:

- the proximity to other buildings/public areas and subsequent risks.
- the potential environmental impacts and plans to mitigate them.
- the nature of the hazardous materials – can they cause harm to people by inhalation, ingestion, direct skin contact, absorption through the skin or eyes or entry through cuts and grazes.
- any additional hazards and risks (eg unsafe structures, road traffic).
- the location of biological hazards - access/security in relation to biological hazards.
- any engineering solutions (sprinklers, ventilation systems).
- any specialist resources required.

Question 4

a) Describe the seven main properties of firefighting foam. (14 marks)

b) Describe the hazards associated with the use of high expansion foam. (6 marks)

Examiner Feedback

Few candidates provided good responses to question.

In responding to part a), those candidates that knew some or all of the properties often listed them without adding the descriptions required. This meant that candidates could attain only half of the marks available.

Few candidates appeared to have an understanding of the hazards associated with the use of high expansion foam. Examples of factors that candidates should be aware of include:

- there is a general loss in effectiveness of vision, hearing and sense of direction, i.e. disorientation.
- there can be a claustrophobic effect.
- penetration of light from torches and equipment is severely affected.
- audibility of speech, evacuation signals, low-pressure warning whistles and distress signal units is severely restricted.
- transmission of heat is reduced and the location and travel of fire are therefore harder to determine.
- thermal image cameras are ineffective.
- damage to structural features above and around may not be visible

Question 5

In relation to petrochemical incidents:

a) State and describe five main types of explosion risks associated with oil tanks. (10 marks)

b) Describe the hazards and risks associated with boil-overs and describe the control measures that should be put in place. (10 marks)

Examiner Feedback

This question was the least popular question on the examination paper.

In response to part a), candidates usually cited BLEVE (boiling liquid expanding vapour explosions). However, few candidates were able to identify other types of explosion risks. Other types that could have been cited were: unconfined vapour/gas cloud explosions, confined vapour cloud explosions, steam explosions, demolition/repair of tanks and explosion hazards.

Part b) required technical understanding of boil-overs. Some candidates responded with lists of generic points rather than focussing specifically on the context set in the question.

Question 6

Describe the hazards and risks associated with the operational use of helicopters. (20 marks)

Examiner Feedback

The majority of candidates attempted this question but few candidates were able to attain more than a few marks.

Candidates often identified only a few points, usually related to moving rotor blades and aviation fuel. Points were often presented only briefly which limited the marks that could be attained. Examples of other hazards and risks that could have been explored included those associated with suspended loads, aeriels, downwash, noise, engine exhausts, incorrect boarding/disembarking, falling from height, spotlights, disruption to communications and manual handling.

Question 7

You have been called to the scene of a trench collapse where one person has been trapped by the collapse.

a) Explain the hazards and risks that should be considered when developing an operational plan to carry out the rescue. (10 marks)

b) Describe the control measures that you would put in place. (10 marks)

Examiner Feedback

This question was generally answered well with many good responses received. Those candidates who did not perform well on the question generally provided only a few points in

their responses and it was the lack of depth/detail provided that limited the marks they attained.

Question 8

- a) *Describe the actions that incident commanders should take when closing down an incident. (14 marks)*
- b) *Describe the content and importance of post-incident de-briefs. (6 marks)*

Examiner Feedback

Candidates often presented only a few points in response to part a). Issues that could have been explored and detailed included actions such as managing the handover of the scene, ensuring a responsible person is aware of any hazards/ongoing issues, logging/recording the incident, making crews and appliances available as soon as possible, managing crew welfare, taking steps to preserve the scene where relevant etc.

Most candidates attained a high proportion of the marks available for part b).