

IFE Level 3 Diploma in Fire Science and Fire Safety

Unit 6 – Fire Service Operations and Incident Command

Examiner Report – October 2020

Introduction

Candidates generally performed well in the examination with 78% of those who sat the examination securing a Pass. Most candidates appeared to draw on relevant experience as well as study.

Candidates who were unsuccessful in the examination usually failed to provide sufficient depth and detail in responses to attain the marks available or else failed to apply their understanding to the specific context set out in the examination question.

Question 1

- a) *At premises without salvage or disaster plans, or where these plans are not available, Incident Commanders should develop a damage control plan.*
- i) *Describe the three phases of damage control and describe the factors that affect the effectiveness of damage control. (6 marks)*
- ii) *Excluding direct fire damage, describe the ways in which damage can be caused at an incident. (4 marks)*
- b) *Describe the factors that an Incident Commander should consider when determining whether or not a controlled burn would be appropriate. (10 marks)*

Examiner Feedback

This question was the least popular option for candidates and also one of the lower-scoring questions on the paper.

When responding to part a)i) candidates often limited their response to discussion of site salvage lists. In order to attain marks, candidates needed to describe the stages ie:

- Phase 1 includes work undertaken at the same time as firefighting.
- Phase 2 is aimed at mitigating the damage that has already occurred and preventing further deterioration
- Phase 3 deals with preventing subsequent damage or losses including removing and temporarily storing items

Part a)ii) was usually answered well with candidates able to cite issues such as firefighting methods, firefighting media, smoke damage, collapsed structure, exposure of contents to the elements and breaches of security.

Part b) was generally poorly answered. Some candidates wrote at length about wildfires. The types of considerations that would have secured marks included:

- Risk to life or health - does a controlled burn reduce or increase risk to people?
- Chance of extinguishing the fire – little risk or high chance with minimal health or environmental impact?
- Fighting the fire could cause a significant risk to firefighters
- Property is beyond salvage
- Impact of weather conditions, particularly wind
- Fire water run-off could damage an area of high environmental sensitivity or value
- Fire water run-off could affect drinking water sources or affect sewage treatment
- The fire is likely to spread widely or to high hazard areas
- The proximity of residential properties
- Important or valuable buildings are involved

Question 2

Fire and Rescue Services need to plan in advance in order to ensure that they are prepared for emergency incidents. Describe the information that should be included in pre-planning for a wildfire incident. (20 marks)

Examiner Feedback

This question was focused on pre-planning. There were some good responses to the question. However, some candidates failed to address the situation from a pre-planning angle and provided responses based on considerations when actually attending the incident; this meant that their responses were largely irrelevant and only low marks were attained.

Question 3

- a) Explain the difference between natural ventilation and mechanical ventilation. (4 marks)*
- b) Explain the difference between offensive ventilation and defensive ventilation. (4 marks)*
- c) Describe the factors that an Incident Commander should consider when formulating and implementing a ventilation strategy at an incident. (12 marks)*

Examiner Feedback

There were some good responses to this question and examiners noted an improvement in terms of levels of understanding of this critical area. However, there were also some poor responses with candidates failing to recognise the difference between natural and mechanical ventilation and also failing to explain the difference between offensive and defensive modes.

Part c) was often answered well although candidates sometimes failed to appreciate that there were 12 marks available and therefore 12 relevant points were required to attain full marks.

Question 4

- a) *Describe the specific risks that can be encountered at rescues involving confined spaces. (4 marks)*
- b)
- i) *Describe the specific risks that can be encountered when tackling a fire in a tunnel. (8 marks)*
- ii) *Describe the control measures that can be implemented when tackling a fire in a tunnel. (8 marks)*

Examiner Feedback

This question was usually answered well and was one of the highest scoring questions in the examination. Candidates generally performed best on part b) and most marks were gained in answering this part of the question.

Part a) was less well answered and few candidates attained full marks. There were many risks that could have mentioned and which would have secured marks. These include:

- Entrapment
- Injuries from the casualty if the casualty is in a state of panic or unable to move
- Injury due to lack of space to manage movement of equipment or injured persons for rescue
- Injury due to physical restrictions when accessing or exiting the space
- Loss of consciousness of any person at work arising from an increase in body temperature
- Loss of consciousness or asphyxiation of any person at work, arising from gas, fume, vapour or lack of oxygen
- Drowning of any person at work arising from an increase in the level of liquid
- Asphyxiation of any person at work arising from a free flowing solid, or the inability to reach a respirable environment due to the entrapment by a free flowing solid

Question 5

- a) *Explain how external fire may spread if the fire breaches the external envelope of a high-rise building. (10 marks)*
- b) *Describe the control measures that you would put in place when dealing with a building where the structure appears to be unstable. (10 marks)*

Examiner Feedback

Although this question was generally answered well and the average mark attained was 9, part a) was less well answered than part b).

In responding to part a), most candidates referenced cladding and made relevant points but few considered other issues such as:

- External window glazing or wall panels failing and the impact of open windows
- Spread between adjacent compartments on the fire floor or between floors
- Falling debris from cladding systems, photovoltaic systems, glass or other building materials
- Thin, flat or curved, building components, for example, glass that is used for glazing or structural purposes, may travel or float a significant distance.
- Poorly fitted window frames may lose integrity due to their exposure to fire or heat.
- Green roofs and walls can be a source of fuel for a fire, allowing external fire spread.
- Weather conditions, such as wind strength and direction, may impact on external fire spread.

Question 6

- a) *Describe the three stages of situational awareness. (6 marks)*
- b) *You are the Incident Commander arriving at an incident involving hazardous materials. Describe the information that you would gather when carrying out your initial survey of the scene to secure situational awareness. (8 marks)*
- c) *State the factors that are likely to adversely affect an Incident Commander's situational awareness. (6 marks)*

Examiner Feedback

The question was generally answered well with the average mark attained being 10. Most marks were attained for the response to part b) as candidates often appeared to lack understanding of situational awareness and this led to poorer responses to parts a) and c).

Part a) was not answered well as few candidates recognised that the three stages of situational awareness are: information gathering, understanding information and anticipation.

Responses to part b) were usually good as candidates were able to apply their experience and assess the situation.

Part c) again revealed poor understanding of situational awareness with many candidates appearing to guess at answers. Points that would have secured marks included:

- Stress
- Fatigue
- Biases that affect decision-making, memory recall and interactions with others
- Poor communication, for example unstructured briefs and debriefs and concepts that were not commonly understood
- Excessive spans of control
- Distractions during critical tasks
- Assumptions that are not confirmed as accurate
- Poor information management, for example, failing to record or validate information

Question 7

You have been called to a road traffic incident on a busy main road. Two cars have collided and the driver and passenger in one of the cars are trapped.

- a) Describe the hazards and risks that would be encountered in carrying out the rescue. (14 marks)*
- b) Describe the control measures that you would put in place whilst the rescue is underway. (6 marks)*

Examiner Feedback

This question was the most popular option for candidates and also the highest scoring with the average mark attained being 11.

It was clear that candidates generally had wide experience and understanding of operations in this area. In some cases, candidates mixed up hazards and risks with control measures and this meant that responses did not always focus on the question as asked.

Question 8

- a) Describe the characteristics and use of medium expansion foam. (8 marks)*
- b) Describe the characteristics and use of high expansion foam. (6 marks)*
- c) Describe the hazards associated with the use of high expansion foam. (6 marks)*

Examiner Feedback

This was one of the the least popular questions on the paper and was the lowest scoring of all of the questions on the paper with candidates attaining an average mark of 7. Many responses lacked the detailed level of technical understanding expected at this level.

Date issued: February 2021