

Level 3 Certificate in Fire Science, Operations, Fire Safety and Management (All Examinations)

Examiner Report on March 2015 Examinations

Introduction

In order to achieve a Pass in each of the examinations within the Level 3 Certificate in Fire Science, Operations, Fire Safety and Management, candidates are required to achieve a minimum of 50% of the marks available ie 25 marks or above.

Candidates should be aware that each of the examinations is designed to test all of the sections of the relevant unit syllabus so the questions will be drawn from each of the different topics set out in the syllabus. There are 20 marks available for the multiple choice section of the examination and 30 available for the short answer section of the examination. Many candidates for all papers appeared to have studied only part of the content of the syllabus and, as a result, performed very well in some aspects of the paper but then failed to achieve any marks at all on other subject areas.

Many candidates, for all of the examinations, failed to read the questions in the Short Answer section carefully and subsequently failed to follow the instructions provided in the question. Candidates are advised that the instructions provide an indication of the depth that is required in the answer – for example, a question that includes the word “explain” will require a response that explains the item/issue specified in the question; a list of single-words will not meet the requirement to “explain” and therefore candidates will not be able to secure the marks allocated to the “explanation” element of the question. Many candidates lost significant amounts of marks by ignoring the requirements of the question.

Candidates are advised that an explanation of the requirements associated with the different instructions used in questions (eg “describe”) is provided in the Candidate Guide which is available to download from the IFE’s website (please see the page provided on “Preparing for Exams”).

Fire Engineering Science (L3C1)

General

Standards were generally good with 56% of candidates passing the examination.

Multiple Choice

Few candidates scored high marks on the multiple choice section of the examination.

The questions are designed to cover all elements of the syllabus so candidates need to be prepared to answer questions on a wide range of topics.

Many candidates performed poorly on questions involving calculations. Whilst the majority of candidates were able to complete calculations to determine the capacity of rectangular shapes and of hoses, many candidates were unable to calculate the capacity of a circulator tank or to determine density, Water Power or discharge through a nozzle.

Some candidates also made errors in answering questions that focus on knowledge and understanding covered by the heat section of the syllabus.

The questions which received the most correct responses were those addressing chemistry topics. Candidates also performed well in this part of the examination when responding to questions about electricity.

Short Answer Questions

Momentum: Few candidates attained full marks for this question. Many candidates were unable to define “momentum” correctly. Many also failed to complete the calculation required correctly.

Heat: Many candidates were unable to define the terms “heat” and “temperature”. The definitions provided often lacked depth. Many candidates failed to illustrate their answers with examples as required by the question and, as a result of this omission, they lost the opportunity to achieve the marks allocated to this component of the question.

Pumping: Some candidates were able to achieve full marks on this question. However, some candidates presented their answers as lists, often offering only one word, to summarise the factor to be overcome. Candidates should be aware that examiners can award marks only where the answer is clearly correct in the terms of the questions asked – a one-word answer is not always sufficiently clear in its intentions.

Flashpoint and fire point: Many candidates were unable to define these terms fully with candidates securing fewer marks for the description of “flashpoint” than “fire point”. There appeared to be a lack of understanding about these terms and few candidates were able to achieve high marks.

Extinguishing Media: This question was generally answered well with most candidates achieving some, if not all marks, for this question.

Electricity: This question was often answered poorly. Few candidates were able to define and use the terms set out in the question and fewer were able to complete the calculation of the power output so were unable to reach the correct answer. Candidates are advised that the syllabus specifies the terms that should be understood and also the calculations that may be tested.

Fire Operations (L3C2)

General

Standards were generally good with 57% of candidates passing the examination. Fewer candidates achieved a Pass than in previous years.

Multiple Choice

Most candidates performed well on the multiple choice questions and demonstrated a range of knowledge from across the syllabus. Questions relating to firefighting practice and to the use of most types of equipment were generally answered particularly well.

The least well-answered questions were those relating to motorway fires, water supplies, the use of BA guidelines and the use of radiation equipment.

Short Answer

Overall many candidates demonstrated poor exam technique, with many candidates failing to follow the instructions in the question. There were few outstanding scripts. The strongest candidates were able to provide clear and succinct answers to the questions, covering the key points relating to the question and presenting these in a logical order. Other candidates, who performed less well, provided irrelevant points and often repeated or re-worded the same point.

Location Pre-planning: Most candidates attained good marks for their responses to this question. Candidates that did less well failed to focus on the specific “location” aspects of pre-planning as required by the question or failed to cover pre-planning at all.

Initial Considerations at a Fire: Most candidates attained some marks for their response to this question. The best responses recognised the key words within the question and provided the specific details required in their answers including both the what and the how. Whilst many candidates talked about dynamic risk assessment in some form or other, fewer were able to link this to the benefits of effective and safe operations.

Many candidates failed to address the specifics in the question, for example talking about incident response generically rather than specifically a fire incident. Some candidates wasted time writing about IC considerations at the later stages rather than the initial considerations; this did not answer the question and therefore gained no marks.

Basement fire - (a) Challenges (b) Firefighting: Part (a) was generally well answered and many candidates secured all of the marks available for this part of the question. The best responses provided a good but brief description for each of the four challenges identified. However, some candidates provided only brief or even single word answers such as 'ventilation', 'heat' and 'visibility' rather than “describing” the challenges eg how the absence of ventilation compounds the build-up of heat and the poor visibility. As a result, they were unable to achieve many marks.

Responses to Part (b) were generally poor as many responses were generic and not specifically focussed on “basement” firefighting.

Centrifugal Pump: This question was generally answered well and the majority of candidates attained good marks.

Extension ladders: This was the least well answered question. Many candidates ignored the requirement to focus on “extension” ladders and provided generic responses. Candidates also failed to provide explanations as to why the principles should be followed.

Fire Safety (L3C3)

General

Standards were generally good with 55% of candidates passing the examination.

Multiple Choice

Candidates performed well on some topics. Responses to questions on the more well-known aspects of building structures and materials, on drencher systems and also on the principles and planning of fire safety were generally good.

There were many errors in responses to questions on the following topics: fire doors, performance of structural timber, use of carbon dioxide installations, heat detectors and active fire safety measures.

Short Answer

Floor Components: Many candidates did not identify three components as required by the question; others failed to follow the instructions to “describe” the three components and provided responses that lacked depth. The three components that were required were: load bearing, upper surface and lower surface.

Wall Collapse: The question required candidates to explain the factors that affect the stability of a “wall” in fire. Some candidates produced very lengthy answers regarding the properties of sandstone and granite along with descriptions of spalling rather than focussing on the wall and the factors (such as the thickness of the wall in relation to its height) that affect the stability of a wall. Unfortunately, candidates who focussed on the building materials rather than the wall did not answer the specific question and were unable to achieve marks.

Rising Main: This question was generally well answered although some candidates did not go into sufficient detail in their descriptions and therefore failed to achieve the maximum number of marks. Some candidates wrote about wet and dry sprinkler systems rather than about rising mains.

Smoke and Heat Exhaust Ventilation Systems: This question was generally well answered with a substantial number of candidates scoring full marks.

Fire Alarm Power Systems: This question was generally well answered although some candidates wrote about open and closed circuit systems rather than focussing on the need to ensure appropriate back-up power systems.

Flame Detectors: Few candidates followed the instruction in the question and wrote about about “the principle of operation” of this type of detector; few gave an appropriate example of a flame detector system (such as an infra-red detector). As a result, few candidates achieved high marks for their response.

Staged and Progressive Horizontal Evacuation: This question was generally answered poorly with few candidates demonstrating understanding of evacuation strategies.

Management and Administration (L3C4)

General

Standards were generally good with 75% of candidates passing the examination.

Most candidates performed better on the multiple choice section of the examination than on the Short Answer section of the question. There were few high scoring scripts as many candidates who performed well on the multiple choice section of the examination did not perform equally well on the Short Answer section.

Multiple Choice

Many candidates achieved more than half marks on this section and some candidates achieved very high marks.

The majority of candidates performed well across the different aspects of the syllabus. Questions related to organisation structure, health and safety, record keeping, training and managing staff were particularly well answered by most candidates.

Some candidates performed less well on questions where knowledge had to be applied to a situation eg determining criteria for reviewing the effectiveness of a training course. At Level 3, candidates need to be able to apply their understanding to assess and review situations

Short Answer

Candidates generally performed less well in this section with many candidates presenting lists of points without referencing their answers back to the question and the specific instructions. Candidates are advised that this section of the paper tests in-depth understanding. Candidates will not be able to achieve marks if they do not demonstrate that they can apply their understanding through describing, explaining etc as required by the question.

Benefits of team-working: Candidates were asked to “describe” the benefits of team-working for an organisation. However, many candidates presented lists, often of single words, without describing or qualifying their statements. In addition, many candidates ignored the requirement to link the benefit to the organisation. Many of the single words presented as answers were meaningless without the further description asked for by the question eg phrases such as “happy staff” did not describe how the organisation benefited. As a result, few candidates scored high marks for this question.

Risk Assessment: those candidates who knew about risk assessments were able to score high marks on this question. However, a high number of candidates were unable to state the steps in a risk assessment.

Communication: Many candidates were unable to secure high marks for this question because they did not “explain” their answers. Candidates who expanded their points and/or who provided reasons for their answers scored high marks.

Delegation: The majority of candidates were able to identify appropriate factors and scored high points.

Budgeting Systems: The majority of candidates were able to identify reasons for organisations to have an effective budgeting system although some responses were quite superficial and did not demonstrate an in-depth understanding about the links between budgeting and effective business management.

Training Plan: Many candidates ignored the requirement to focus on an individual team member and wrote about general training goals. As these responses were not specific to an individual, the candidates did not achieve marks. Many other candidates ignored the requirement to “explain” the three factors they had identified. Candidates who did not explain their points were not able to achieve the marks available for explanation.

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