

# **6720-34 – Level 3 Advanced Technical Certificate in Constructing the Built Environment**

**2018**

**Qualification Report**

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# Introduction

This document has been prepared by the Chief Examiner and Principal Moderator; it is designed to be used as a feedback tool for centres in order to enhance teaching and preparation for assessment. It is advised that this document is referred to when planning delivery and when preparing candidates for City & Guilds Technical assessments.

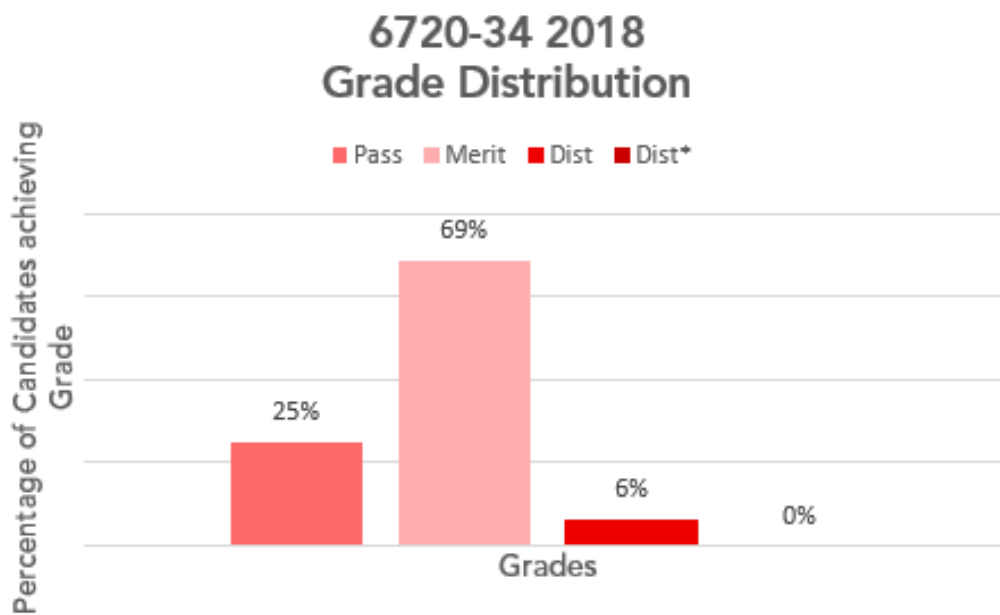
This report provides general commentary on candidate performance in both the synoptic assignment and theory exam. It highlights common themes in relation to the technical aspects explored within the assessment, giving areas of strengths and weakness demonstrated by the cohort of candidates who sat assessments in the 2018 academic year. It will explain aspects which caused difficulty and potentially why the difficulties arose.

The document provides commentary on the following assessments;

- 6720-040/540 Level 3 Constructing the Built Environment – Theory exam
  - March 2018 (Spring)
  - June 2018 (Summer)
- 6720-041 Level 3 Constructing the Built Environment – Synoptic Assignment

## Qualification Grade Distribution

The grade distribution for this qualification is shown below;



Please note City & Guilds will only report qualification grades for candidates who have achieved all of the required assessment components, including Employer Involvement, optional units and any other centre assessed components as indicated within the Qualification Handbook. The grade distribution shown above could include performance from previous years.

# Theory Exam

## Grade Boundaries

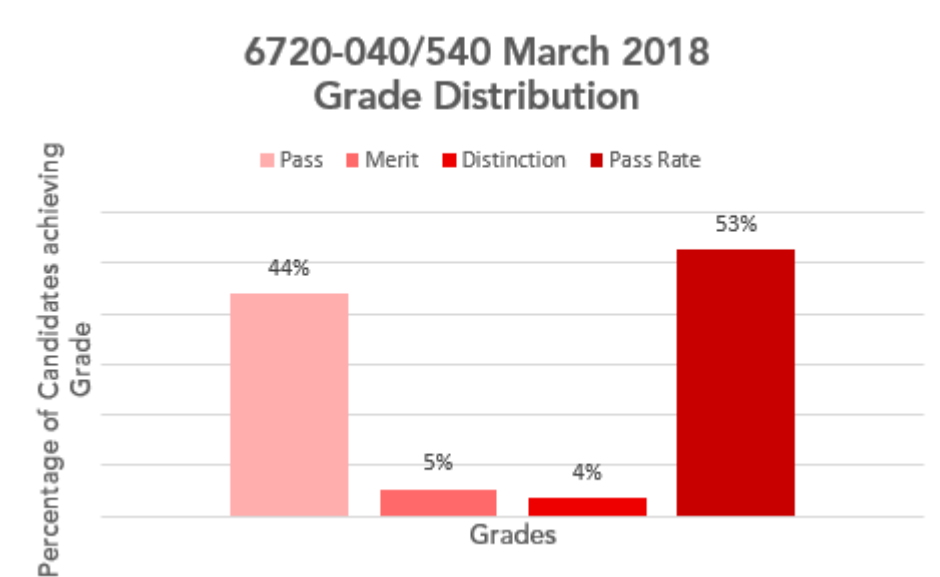
Assessment: 6720-040/540

Series: March 2018 (Spring)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel;

<b>Total marks available</b>	<b>60</b>
Pass mark	23
Merit mark	32
Distinction mark	42

The graph below shows the distributions of grades and pass rate for this assessment;

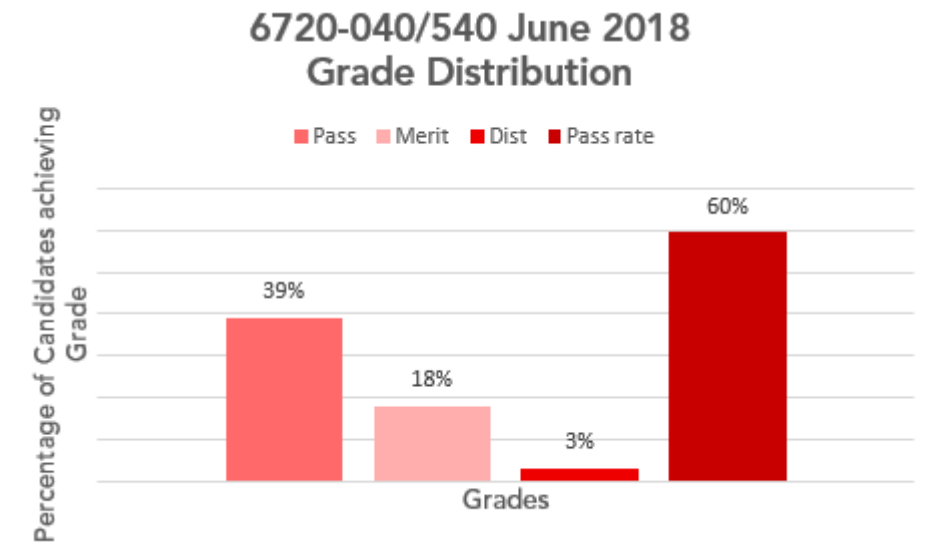


Assessment: 6720-040/540  
Series: June 2018 (Summer)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel;

<b>Total marks available</b>	<b>60</b>
Pass mark	23
Merit mark	32
Distinction mark	42

The graph below shows the distributions of grades and pass rate for this assessment;



## **Chief Examiner Commentary**

### **6720-040/540 Level 3 Constructing the Built Environment – Theory exam**

#### **Series 1 – March 2018 (Spring)**

Overall, the performance on this paper was good, with most questions attempted by candidates. Candidates were often able to achieve identification marks at pass level and some candidates were able to achieve merit and distinction results with a series of linked explanation responses linked back to the contextualisation of question stems.

Technical areas that were answered well by candidates include volumetric domestic construction techniques, methods used to connect structural steel beams and columns, fire resistance techniques in domestic buildings and hazards associated with weather conditions on a building site and in confined spaces. The question asking for an explanation as to why glulam beams and columns may be preferred to steel for the structural frame of industrial and commercial buildings was particularly well answered by the majority of candidates.

Areas of weakness include questions on cladding techniques and diaphragm walling. One question asked for a justification of the need to remediate a contaminated area of land to construct a primary school. The majority of candidates struggled to offer justifications and simply described the process of how to de-contaminate the site.

Higher scoring candidates were able to give linked responses to questions on deep strip foundations, damp proof membrane (DPM), accident statistics and the COSHH Regulations. These candidates often achieved the top of mark band 2 or mark band 3 for the extended response question.

Lower scoring candidates struggled with contextualised questions, often not relating their responses to the question stem, or were unable to provide linked responses to identified issues. Some candidates struggled to explain clearly their responses and often gave brief superficial responses such as, “it is cheaper, quicker or easy”.

Centres are advised to revisit current handbooks, test specifications and previous papers to fine-tune the delivery of their programmes.

#### **Extended Response Question**

This question was, overall, satisfactorily answered by most candidates. Candidates were able to explain some aspects linked to construction forms, health & safety requirements or the need to provide access for the elderly and disabled people. However, in many cases, responses did not detail construction form issues.

## **Series 2 – June 2018 (Summer)**

Overall the performance of this paper was good. Candidates generally performed well on questions related to Unit 303 health and safety in the built environment. Other questions that were answered well by candidates included those asking for recall of information relating to construction technology, the naming of secondary elements, disadvantages of traditional methods of construction and use of laminated timber for portal frame design.

General areas of weakness included understanding why laminated timber would be specified for a portal frame. Candidates simply gave the characteristics of laminated timber, as well as generalised statements that timber was stronger than steel, without any supporting evidence. Candidates also struggled with the question on permits to work and gave weak definitions when describing ground improvement techniques.

Higher scoring candidates were able to give linked responses to the explanation of Energy Performance Certificates (EPCs), thin joint construction technique, a benefit of deep strip foundation in good ground conditions and why a monitor roof might be preferred to a traditional flat roof for a wide-span building. These candidates often achieved marks across the paper and scored well within the extended response question.

Lower scoring candidates struggled with contextualised questions, often not relating their responses to the context of the question, or were unable to provide linked responses to identified issues. For the question relating to Energy Performance Certificates (EPCs), candidates simply discussed in generic terms the need to conserve energy at a high level, rather than giving an explanation as to why it could be used to support the energy performance of domestic buildings. These candidates struggled with some construction technology concepts including explaining the term ‘thin joint construction’ for masonry walls and ‘monitor roofs’. Instead candidates simply gave generic responses about masonry and roofs.

As with the last series, at Level 3, candidates need to be able to answer contextualised questions in order to achieve higher marks in the examination.

### **Extended Response Question**

This question was, overall, satisfactorily answered by most candidates. For the June 2018 series, there was an increased number of candidates who accessed Mark Band 2 and Mark Band 3 for the Extended Response Question.

Candidates were able to explain some aspects linked to construction forms, sustainability methods and health & safety requirements. Higher scoring candidates identified the need to follow health & safety requirements which was then followed by detailed list of legislation and practices to be adopted such as risk assessments and method statements. In addition, if sustainable methods of construction were identified, the advantages and benefits of the identified methods were explained. Lower scoring candidate responses did not detail construction forms in any detail and simply repeated their responses from previous questions in the exam and so didn't demonstrate a breadth of knowledge and understanding of all the units assessed by the Extended Response Question.





# Synoptic Assignment

## Grade Boundaries

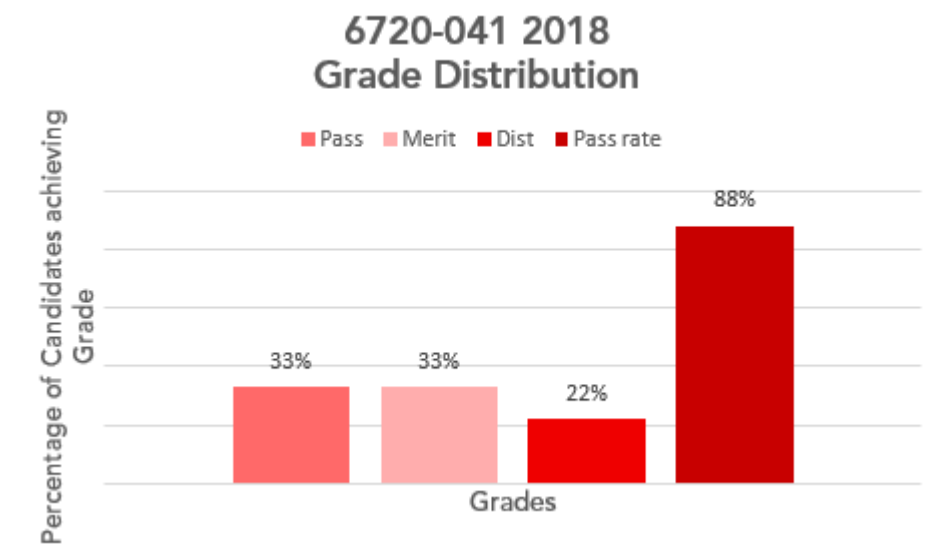
Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel;

Assessment: 6720-041

Series: 2018

<b>Total marks available</b>	<b>60</b>
Pass mark	24
Merit mark	34
Distinction mark	45

The graph below shows the distributions of grades and pass rate for this assessment;



## Principal Moderator Commentary

The assignment brief was scenario based with images and was appropriate for candidates to consider what they could research, providing direction for the areas discussed throughout the report. The outcomes from the tasks were varied and tended to demonstrate the amount of effort that candidates wanted to put into the research and in the amount of care taken in the presentation of their work.

### **A01 Recall of knowledge relating to the qualification learning outcomes**

General recall tended to be good throughout the assignment. For example, candidates confidently demonstrated knowledge of a range of materials in Task 1 and consideration of the obvious risks when working at height within Task 2. Candidates were able to give the advantages of using solar PV. The tutor marking of A01 was accurate and the moderators tended to agree with these.

### **A02 Understanding of concepts, theories and processes relating to the learning outcomes**

In the lower scoring assignments, candidates provided little research and there were frequent ephemeral comments in the text that were either abstract or appeared to be conjecture as they were not supported by reasoned arguments and referencing that could demonstrate understanding. Most marks were within tolerance but this tended to be the area where tutors had slightly over-marked and some appear to have interpreted an extensive use of recall as understanding.

In the higher scoring assignments, candidates were able to demonstrate this understanding through supporting their arguments with researched data and structured calculations (Tasks 3 and 4). This personalised the candidates' work and gave a clear demonstration of their understanding of feed in tariffs and cost savings rather than a regurgitation of generalised savings that had been discussed in the classroom and that were not founded upon research.

### **A03 Application of practical/technical skills**

Work was variable and on the higher scoring assignments, there was a good structure to the calculations and a good use of hand sketches and images, some drawn on CAD that supported the choice of materials in Task 1. Tutor marking for this was accurate and very few amends were made to the scoring of the application of practical / technical skills.

### **A04 Bringing it all together - coherence of the whole subject**

Centres seem to have a style of formatting the work which candidates tended to follow and as a result, often miss opportunities to demonstrate originality in the presentation of their work. Reports often feel like they are completed in terms of achieving tasks and in doing so, feel like an assignment rather than a report that would be used by a client. Centre marking was good for this outcome but where there was any down grading, this tended to be related to low marks for understanding and the inability to bring it all together because the work lacked sufficient detail.

### **A05 Attending to detail/perfecting**

Many assignments failed to score high marks for this outcome and this was frequently over scored by markers. There was a general lack of checking and accuracy in texts with work having basic errors in its technical content. Candidates need to be highly focused with attention to detail to provide a client centred outcome and to be able to provide a report that would be acceptable in the industry.

From the evidence submitted, it is clear that the centres have interpreted the assignments appropriately and the majority of candidates have approached each task fully and have followed the assignment briefs. Centres are using the holistic approach to mark effectively and the marks moderated have been consistently within tolerance. Any slight discrepancy in marking was usually related to the marks for A02 understanding, and where this was not marked sufficiently, there often would be a knock on effect on the marks for the attention to detail (A05). The standard of assessment has been good and in many

samples, the feedback sheets have been used well to provide candidates with useful, quality feedback on their performance.