

6720-35 Level 3 Advanced Technical Diploma in Constructing the Built Environment (540)

Pathways: Construction

Design & Planning

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.

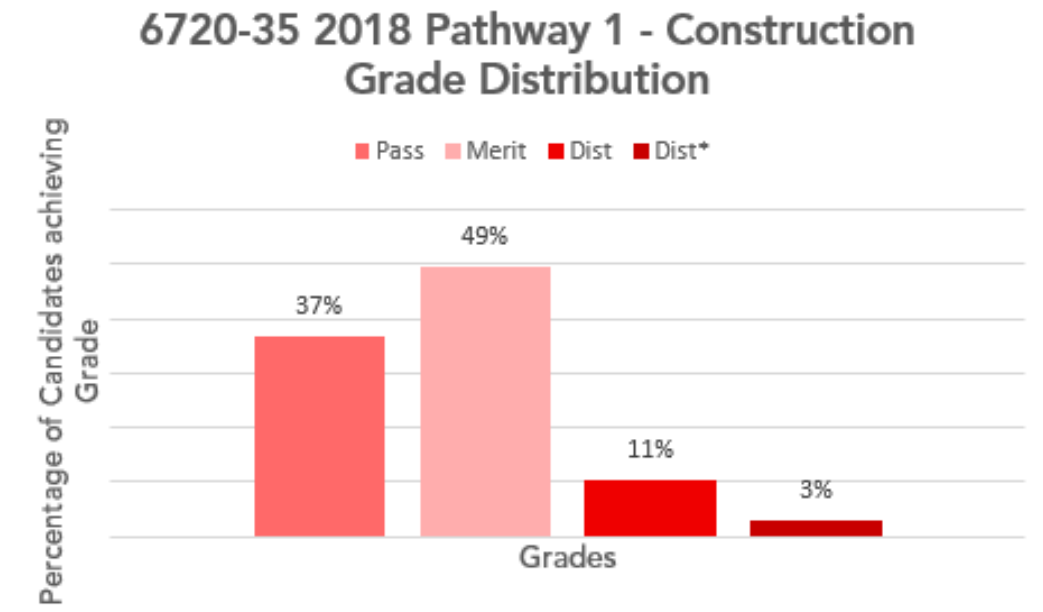
The document provides commentary on the following assessments;

- Pathway 1 – Construction:
 - 6720-042/542 Level 3 Constructing the Built Environment – Theory exam
 - March 2018 (Spring)
 - June 2018 (Summer)
 - 6720-043 Level 3 Constructing the Built Environment – Synoptic Assignment
- Pathway 2 – Design and Planning:
 - 6720-044/544 Level 3 Constructing the Built Environment – Theory exam
 - March 2018 (Spring)
 - June 2018 (Summer)
 - 6720-045 Level 3 Constructing the Built Environment – Synoptic Assignment

Qualification Grade Distribution

Pathway 1 - Construction

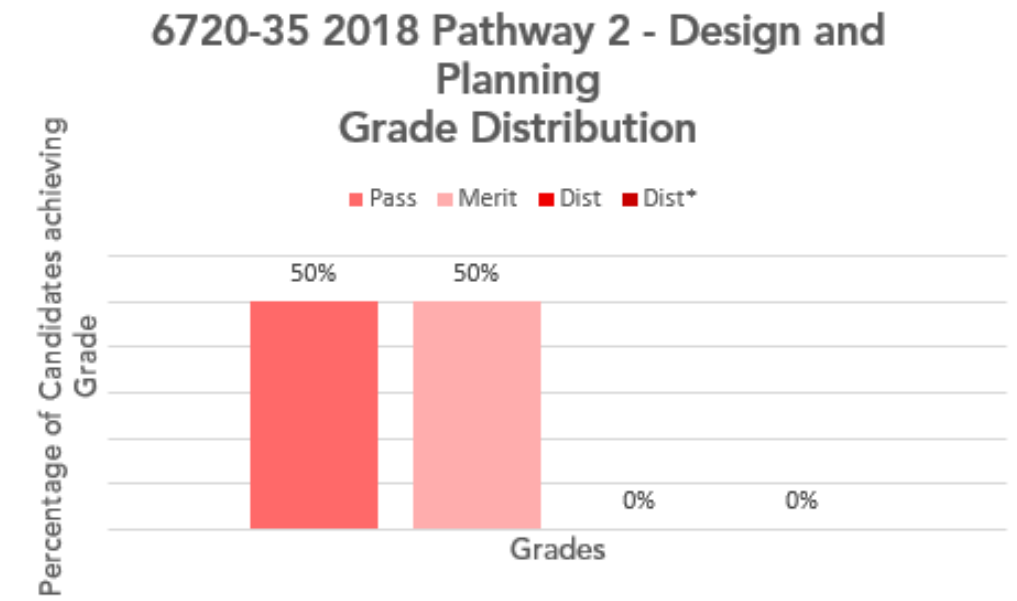
The grade distribution for this qualification is shown below;



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.

Pathway 2 - Design and Planning

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 Exams

Pathway 1 - Construction

Grade Boundaries

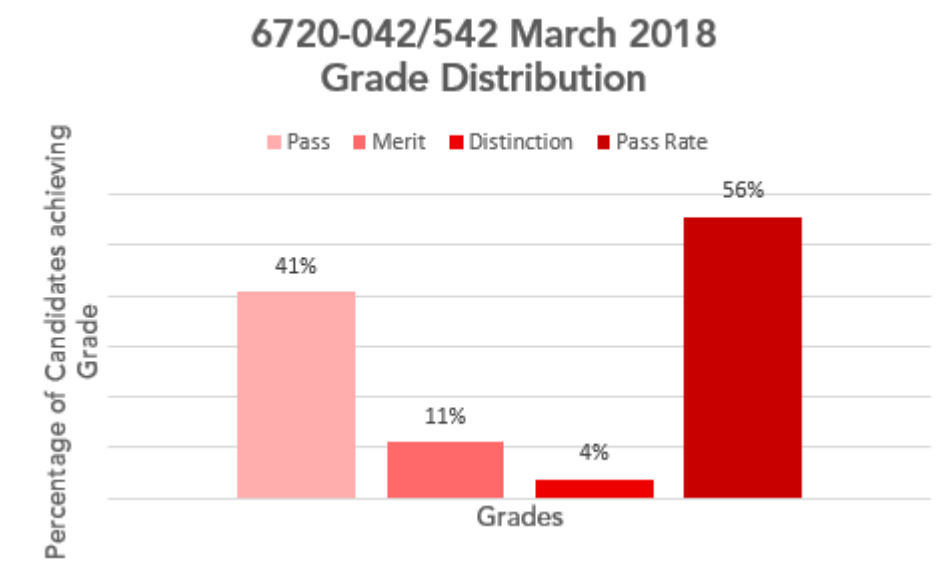
Assessment: 6720-042/542

Series: March 2018 (Spring)

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

Total marks available	90
Pass mark	35
Merit mark	48
Distinction mark	61

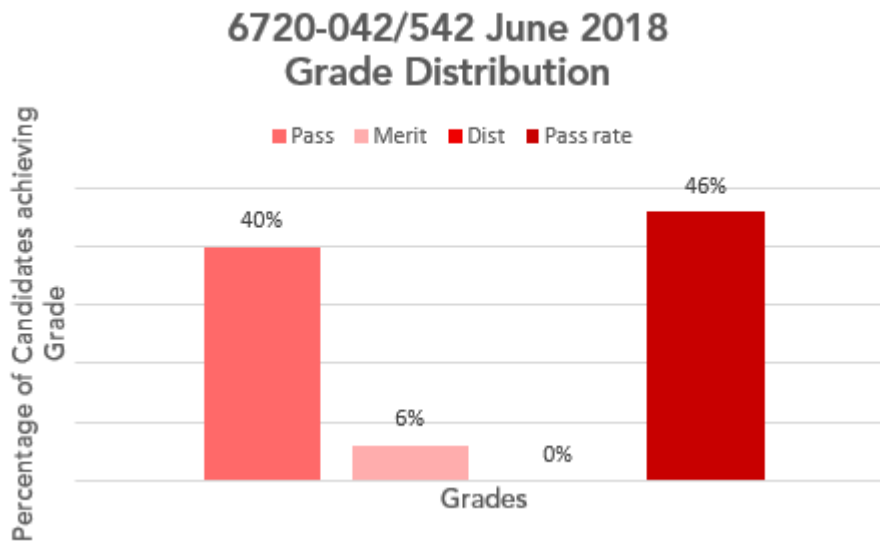
The graph below shows the distributions of grades and pass rate for this assessment;



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

Total marks available	90
Pass mark	35
Merit mark	48
Distinction mark	61

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



Chief Examiner Commentary

6720-042/542 Level 3 Advanced Technical Diploma in Constructing the Built Environment – Theory exam

Series 1 – March 2018 (Spring)

The candidates' performance across the paper was acceptable, with most of the candidates being able to answer many of the AO1 (Recall knowledge) questions and some being able to provide reasonable to good responses to the AO2 (Demonstrates understanding) type questions. In general, those candidates who answered the AO1 questions accurately and fully, went on to answer the AO2 questions more clearly and hence, to achieve higher marks.

Candidates performed better on questions that dealt with health and safety and construction site supervision than on the more technical detail involved in the construction of both domestic and industrial/commercial buildings. Candidates need to be able to specify and describe construction methods and techniques. They need to underpin that knowledge with explanations of how both are used and why they have been selected for the task in hand. Centres are reminded that examiners are looking for breadth and depth of knowledge and that both are generally indicated by the command verb used (identify, describe, explain how, explain why, for example).

In many instances, candidates limited their responses to stating, naming or identifying methods and techniques, rather than describing or explaining them, as the question demanded. There were several scripts where the candidates failed to attempt all of the questions. Centres are reminded that this will inevitably impact on the overall mark.

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

Extended Response Question

The Extended Response Question generated many reasonable to very good responses and, by and large, those candidates who did well in the paper generally, were those who provided the clearest and most accurate responses. Candidates who did less well on this question tended not to discuss the issues raised by it and restricted themselves to identification and, on occasions, description.

Series 2 – June 2018 (Summer)

Overall the performance of this paper was good. Candidates generally performed well on items 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. The questions relating the Unit 304 Construction site supervision were answered with limited understanding shown, particularly on project documentation.

Higher scoring candidates were able to give linked responses to the explanation of Energy Performance Certificates (EPCs), thin joint construction technique, why laminated timber may be specified for a portal frame design, most health & safety items and some site supervision questions. 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 what the question asked which was to give 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' as applied to masonry wall specifications. They also lacked detail in questions relating to Unit 304 Construction Site Supervision, for example, in one question many candidates were unable to give a coherent explanation of the link between the site supervisor and buyer with respect to procurement practices. The lower scoring candidates only focused on the need to seek prices and to check materials when they arrived on site.

Extended Response Question

Candidates gave responses to issues on health and safety, and sustainable techniques were identified and then expanded on with some linked explanation to the benefits of adopting such practices/methods. Candidates were able to explain some aspects linked to construction forms, sustainability methods and health & safety requirements. However, in many cases responses did not discuss in any real detail site supervision issues. The responses on why the local authority is keen on using locally-sourced materials and components were weakly answered and the majority of candidates did not give the correct documents that would be used to reduce risk on site during construction.

Lower scoring candidate responses 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.

Pathway 2 - Design and Planning

Grade Boundaries

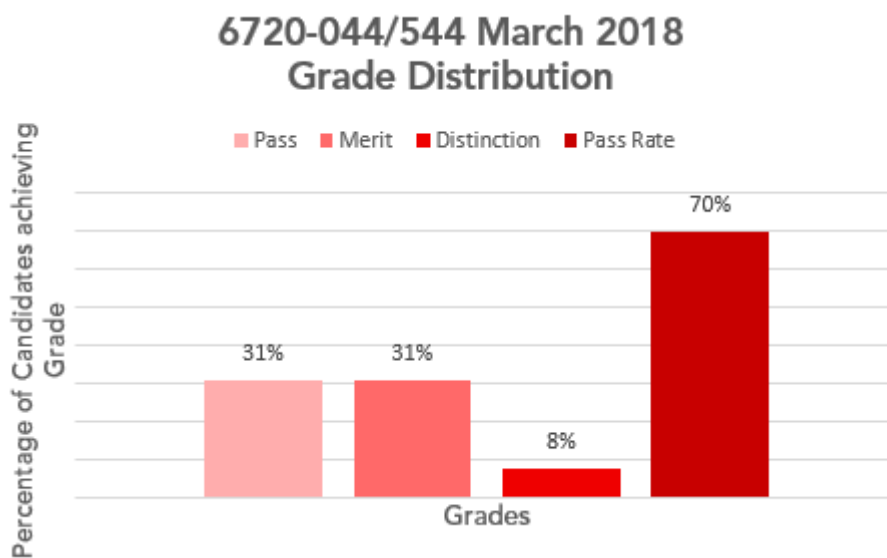
Assessment: 6720-044/544

Series: March 2018 (Spring)

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

Total marks available	90
Pass mark	34
Merit mark	47
Distinction mark	61

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



Assessment: 6720-044/544
Series: June 2018 (Summer)

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

Total marks available	90
Pass mark	34
Merit mark	47
Distinction mark	61

There is no grade distribution as no candidates passed the Summer series of the theory exam.

Chief Examiner Commentary

6720-044/544 Level 3 Constructing the Built Environment – Theory exam

Series 1 – March 2018 (Spring)

The general level of candidate' performance across the paper was reasonable, with most of the candidates being able to answer many of the AO1 (Recall knowledge) questions and some being able to provide reasonable to good responses to the AO2 (Demonstrates understanding) type questions. In general, those candidates who answered the AO1 questions accurately and fully went on to answer the AO2 questions more clearly and hence to achieve higher marks.

Candidates performed better on questions that dealt with health and safety and domestic construction than on the more technical detail involved in the construction of industrial and commercial buildings and associated design issues. The latter was not always well developed and the treatment of questions on unit 312 was not as strong compared to other areas. Candidates need to be able to specify and describe construction methods and design issues and to underpin that knowledge with explanations of how both are used, why they have been selected for the task in hand and why the design decisions were made. Centres are reminded that examiners are looking for both breadth and depth of knowledge and that both are generally indicated by the command verb used (identify, describe, explain how, explain why, for example) and by the marks available for a particular question.

In many instances candidates, limited their responses to stating, naming or identifying methods and techniques, rather than describing or explaining them, as the question demanded. There were several scripts where the candidates failed to attempt all of the questions. Centres are reminded that this will inevitably impact on the overall mark.

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

Extended Response Question

The Extended Response Question generated many reasonable to very good responses and, by and large, those candidates who did well in the paper generally, were those who provided the clearest and most accurate responses. Candidates who did less well on this question tended not to discuss the issues raised in it and restricted themselves to identification and, on occasions, description.

Series 2 – June 2018 (Summer)

Overall, responses in this examination were of a low standard and responses to questions addressing AO1 (Recall Knowledge), indicate that there had been insufficient preparation for the theory exam. There were several scripts where the candidates failed to attempt all of the questions. Centres are reminded that this will inevitably impact on the overall mark.

Of the questions attempted, the ones that were answered well by candidates included the naming of secondary elements, disadvantages of traditional methods of construction, green roof construction and questions relating to Unit 303 health and safety in the built environment.

All candidates struggled with questions on 'thin joint' construction techniques for masonry walls, where local government planning is required as well as the CDM regulations. Centres are reminded to ensure candidates are referring to the most up-to-date technical terminology in their responses.

Extended Response Question

Candidates generally failed to offer enough detail or a wider range of responses to support higher marks being awarded. As a result of this, many candidates have failed to access the middle and upper bands within this examination.

The higher scoring candidates in the lower mark band were able to explain some health and safety considerations that would need to be taken into account and generally were able to list some sustainable energy sources that could be implemented in the construction. They were also able to comment on pre-fabricated construction techniques and use correct construction terminology to support answers.

Synoptic Assignments

Pathway 1 - Construction

Grade Boundaries

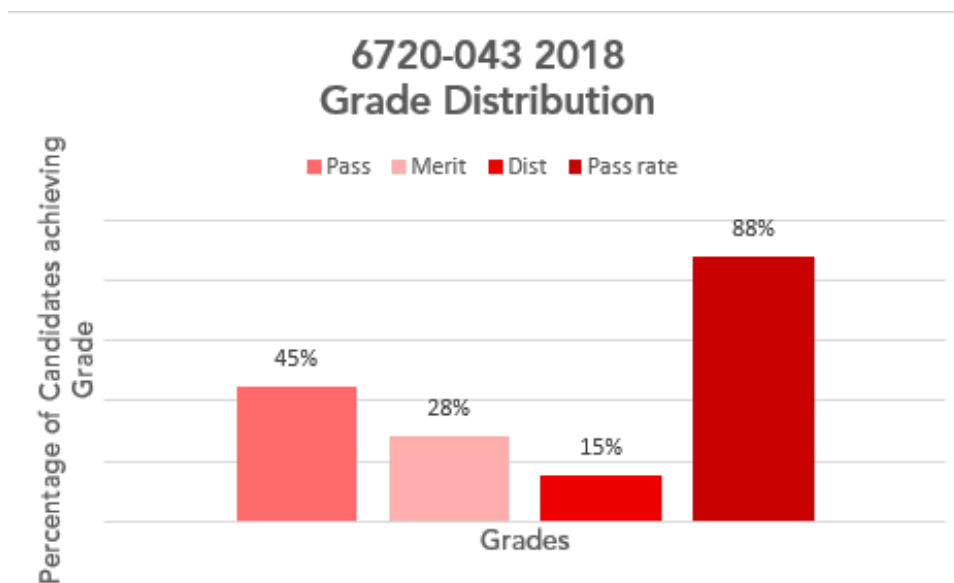
Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel;

Assessment: 6720-043

Series: 2018

Total marks available	60
Pass mark	24
Merit mark	35
Distinction mark	46

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



Principal Moderator Commentary

The assignment brief which is scenario based is appropriate for candidates to consider an approach to the tasks. The outcomes from the tasks were varied and demonstrate the amount of effort that candidates are willing to make and in the amount of care taken in the presentation of their work.

AO1 Recall of knowledge relating to the qualification learning outcomes

General recall was good throughout the assignment, for example, candidates could discuss materials that were appropriate in Task 1 and they considered the obvious risks when working at height in Task 2. Measuring and estimating was also good and most candidates could present the work in a logical sequence and could support their work with annotated sketches in Task 4.

AO2 Understanding of concepts, theories and processes relating to the learning outcomes

The higher scoring assignments presented clients with reasoned arguments as to why materials had been chosen for the project and sometimes this could include comparisons with similar materials that would be competing on the market to fulfil the same purpose. This demonstrated analysis, application and evaluation and reflected candidates operating in the higher domains of a learning taxonomy. The higher scoring assignments could also demonstrate a knowledge of heat loss rather than some loosely quoted values for a specific material, which allowed candidates to demonstrate understanding, particularly in Task 1. Where candidates achieved higher marks, there was clear referencing, candidates used approved documents and were able to cover more than the basic points showing originality in their work, such as Task 2.

It was noted that some candidates failed to show their workings out when using calculations in their work. Centres are reminded that candidates should always show all workings out for any calculations given in their work.

AO3 Application of practical/technical skills

Work was variable for AO3. Distinction level assignments included high quality annotated sketches that provided strong supporting evidence for AO2, AO4 and AO5. In the lower scoring assignments, candidates were using incorrect hatchings and had no sense of scale and proportion in their sketching. Tutor's marking for this was accurate and very few amends were made to the scoring of the application of practical / technical skills. It was noted that some centres have had difficulty in copying pencil drawings to an electronic format to provide strong supporting evidence.

AO4 Bringing it all together - coherence of the whole subject

Some candidates did not expand upon the risk assessment pro-forma provided by centres for the health and safety task, meaning they often only gave the most basic information required and did not reassess when control measures were in place in their report. Candidates tended to follow a style of formatting the work, which meant they missed opportunities to demonstrate originality in its presentation and had difficulty in demonstrating higher levels of understanding.

AO5 Attending to detail/perfecting

Where assignments failed to score high marks for this outcome, there was a general lack of depth to discussion, calculations lacked structure and drawings were not of a consistently high quality. 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. The standard of assessment has been good and in many samples, the candidate record forms have been used well to provide candidates with useful quality feedback on their performance.

Pathway 2 - Design and Planning

Grade Boundaries

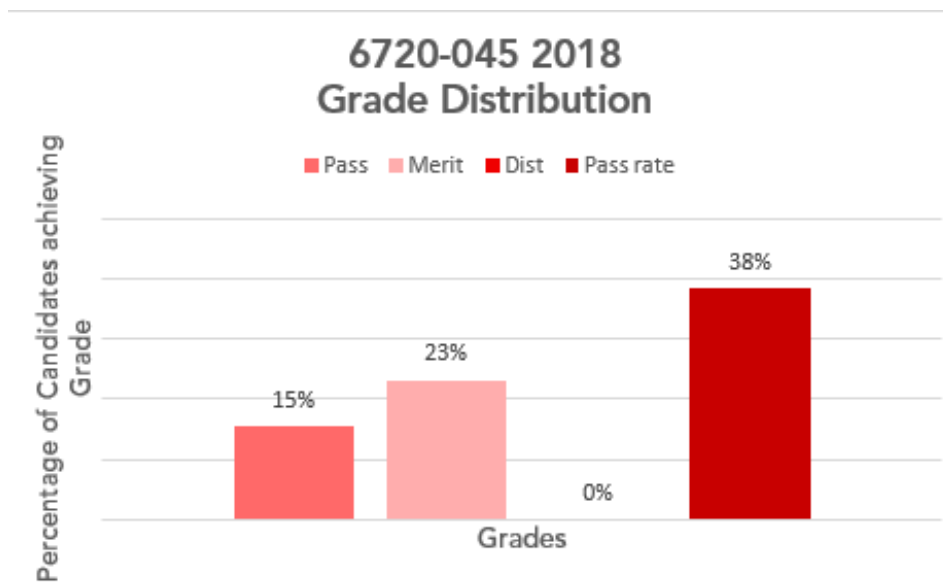
Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel;

Assessment: 6720-045

Series: 2018

Total marks available	60
Pass mark	26
Merit mark	36
Distinction mark	47

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



Principal Moderator Commentary

The assignment brief is scenario based and has images that are appropriate for candidates carry out research to provide direction to their assignments. The outcomes from the tasks varied and demonstrated the amount of effort that candidates 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 of knowledge was sound and candidates could talk confidently about a range of materials in Task 1. They also considered the obvious risks when working at height in Task 2. They could also discuss the advantages of using solar PV. The tutor marking of A01 was accurate and the moderators found the majority of these to be in tolerance.

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

Higher scoring assignments provided clear evidence of research and this improved work such as the presentation on the disability regulations from the approved documents. For the concrete testing task, candidates used correct terminology with confidence and referenced the manufacturer's technical information and approved documents. Accurate sketches were used to support candidate's notes and the calculations provided were accurate, well laid out and showed all workings out for the solar PV task. The drawings are key to providing evidence of understanding for this assignment and high scoring assignments used scale, proportion and hatchings appropriately with detailed labelling that was to industry standard.

Some of the lower scoring assignments offered unnecessary information that did not link theory to practice to illustrate how this would be applied to the construction team and in the work place or what it meant in terms of the design of the building.

A03 Application of practical/technical skills

Work was variable and in the higher scoring assignments, there was a good structure to the calculations and a demonstration of heat loss calculations. There were also examples of effective use of hand sketches and images, some drawn on CAD, that supported Task 4.

A04 Bringing it all together - coherence of the whole subject

Centres seem to have a fixed approach to formatting the work which candidates tended to follow, meaning that they often missed opportunities to demonstrate originality in the presentation of their work. Reports often feel like they are completed in terms of achieving tasks, thereby resembling an assignment more than a report that would be used by an actual client.

A05 Attending to detail/perfecting

Many assignments failed to score the highest marks for this outcome. 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 a report that would be acceptable in the industry. Some of the higher scoring assignments did produce high quality scale drawings with appropriate proportion.

From the evidence submitted, it is clear that the centres have interpreted the assignments appropriately. The majority of candidates have approached each task fully and have followed the assignment brief. The standard of assessment has been good and in many samples, the candidate record forms have been used well to provide candidates with useful quality feedback on their performance.

