

6720-36 Level 3 Advanced Extended Technical Diploma in Constructing the Built Environment (720)

Pathways: Construction

Design and Planning

Civil Engineering

2018

Qualification Report

Contents

Introduction.....	3
Qualification Grade Distribution.....	4
Pathway 1 – Construction.....	4
Pathway 2 – Design and Planning.....	5
Pathway 3 – Civil Engineering.....	6
Theory Exams – Year 1.....	7
All Pathways.....	7
Grade Boundaries.....	7
Chief Examiner Commentary.....	9
Theory Exams – Year 2.....	11
Pathway 1 – Construction.....	11
Grade Boundaries.....	11
Chief Examiner Commentary.....	13
Pathway 2 – Design and Planning.....	15
Grade Boundaries.....	15
Chief Examiner Commentary.....	18
Synoptic Assignment – Year 1.....	20
Constructing the Built Environment.....	20
Grade Boundaries.....	20
Principal Moderator Commentary.....	21
Synoptic Assignments – Year 2.....	22
Pathway 1 Construction.....	22
Grade Boundaries.....	22
Principal Moderator Commentary.....	23
Pathway 2 – Design and Planning.....	24
Principal Moderator Commentary.....	25

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;

Year 1

- All Pathways:
 - 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

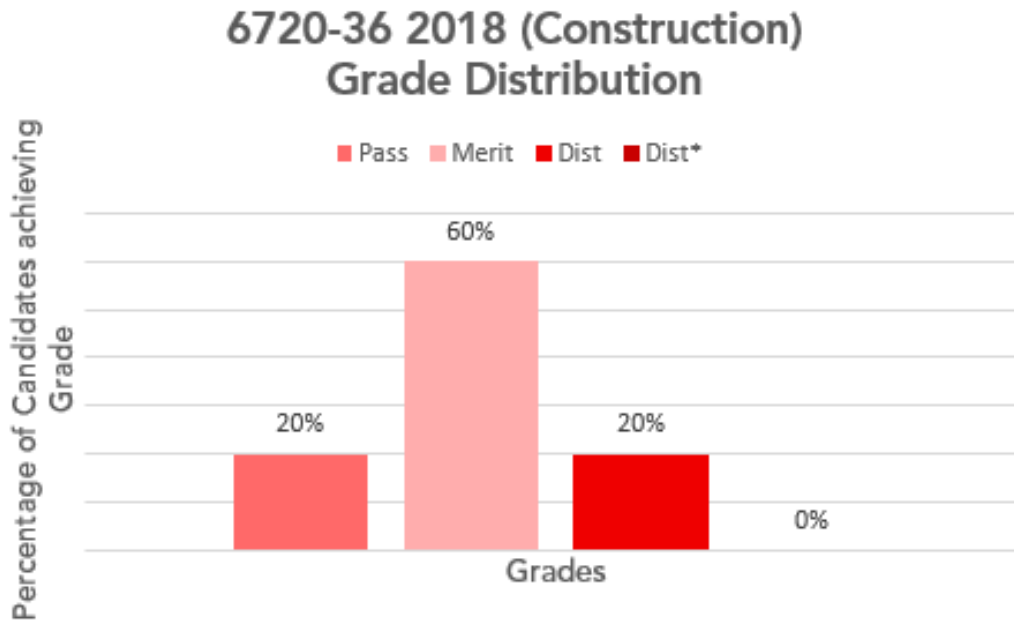
Year 2

- Pathway 1 – Construction:
 - 6720-046/546 Level 3 Constructing the Built Environment – Theory exam
 - March 2018 (Spring)
 - June 2018 (Summer)
 - 6720-047 Level 3 Constructing the Built Environment – Synoptic Assignment
- Pathway 2 – Design and Planning:
 - 6720-048/548 Level 3 Constructing the Built Environment – Theory exam
 - March 2018 (Spring)
 - June 2018 (Summer)
 - 6720-049 Level 3 Constructing the Built Environment – Synoptic Assignment
- Pathway 3 – Civil Engineering:
 - No registrations this year.

Qualification Grade Distribution

Pathway 1 - Construction

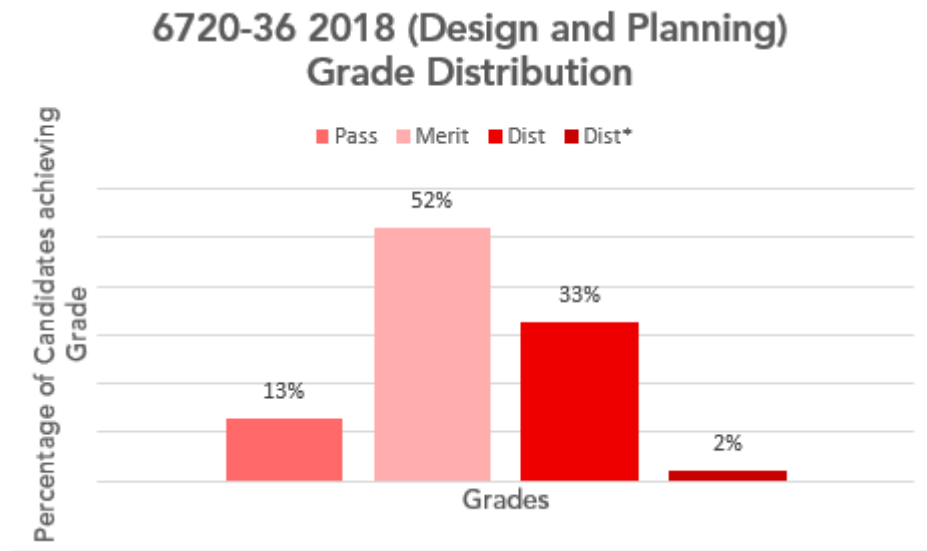
The grade distribution for this qualification is shown below;



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.

Pathway 3 - Civil Engineering

There is no grade distribution for this qualification pathway as there were no entries in 2018.

Theory Exams – Year 1

All Pathways

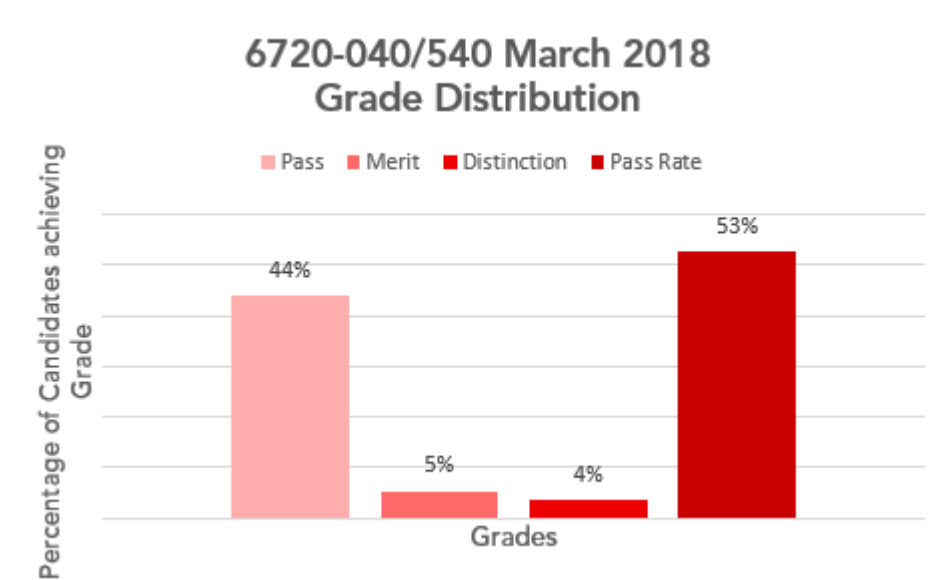
Grade Boundaries

Assessment: 6720-040/540
Series: March 2018 (Spring)

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

Total marks available	60
Pass mark	23
Merit mark	32
Distinction mark	42

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

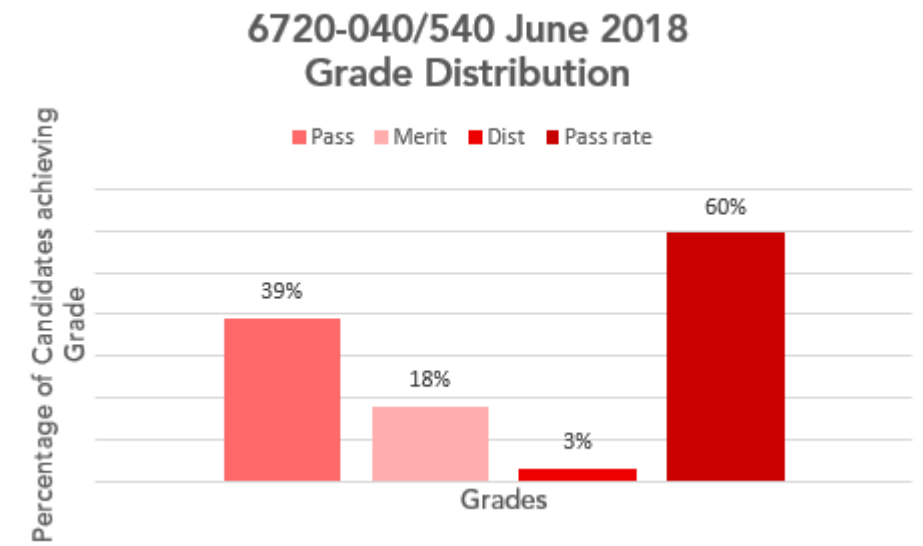


Assessment: 6720-040/540
Series: June 2018 (Summer)

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

Total marks available	60
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.

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

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.

Theory Exams – Year 2

Pathway 1 - Construction

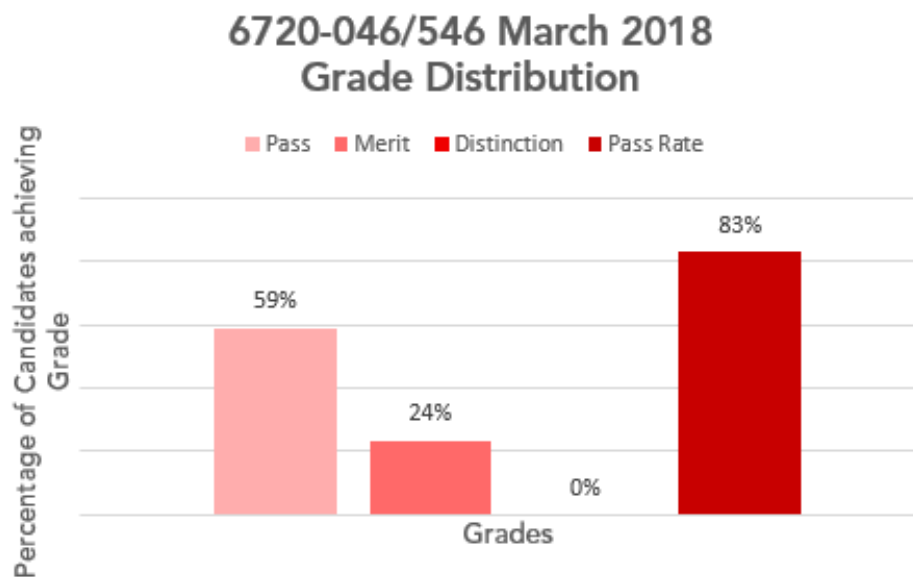
Grade Boundaries

Assessment: 6720-046/546
Series: March 2018 (Spring)

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

Total marks available	60
Pass mark	23
Merit mark	32
Distinction mark	41

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

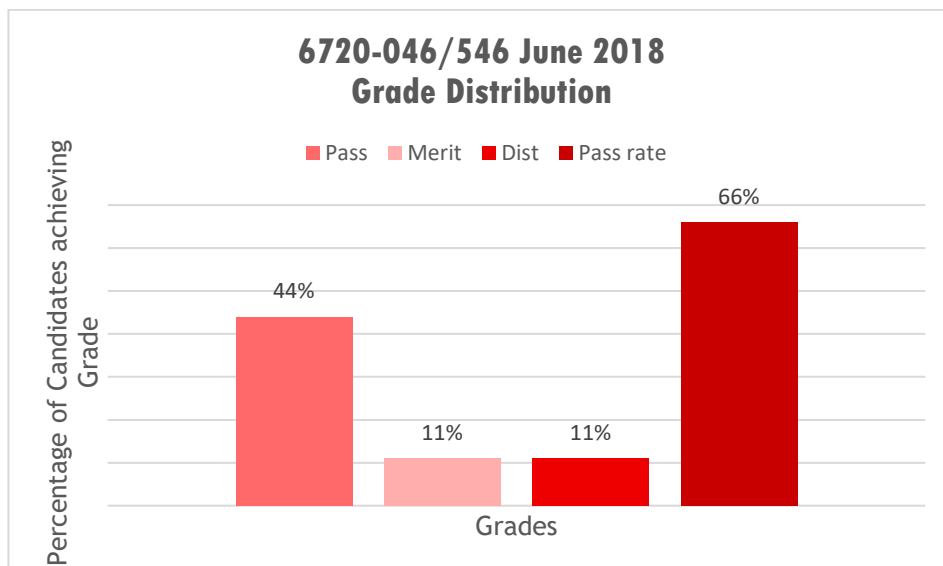


Assessment: 6720-046/546
Series: June 2018 (Summer)

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

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	42

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



Chief Examiner Commentary

6720-046/546 Level 3 Constructing the Built Environment – Theory exam

Series 1 – March 2018 (Spring)

The candidates generally did well in dealing with the examination requirements. There was evidence of good preparation being taken by candidates. Centres are to be commended on their interpretation of the pathway topics. There were a few (but noticeably few) questions or parts of questions not attempted by candidates and centres should be asked to remind candidates of the importance of attempting an answer in all cases.

Notable strengths included knowledge of building technology, building surveying, maintenance and building refurbishment details. Very good knowledge of building regulations and specific approved documents was shown.

Areas of weakness within this paper included questions that related to measurement, tendering and estimating.

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

Extended Response Question

A key aspect of the Extended Response Question was to show a good level of understanding of the tendering procedures and processes in the construction industry.

Lower ranges of marks were awarded where a candidate answered only on the technical side of things and often only in a brief, descriptive way that did not get to the depth of a construction technology point.

Candidates were awarded higher marks in this question when they dealt with both the technical details and contract tendering and estimating procedures in the context of the stated brief. Making sure to note as many elements of building refurbishment and conversion as possible, applying knowledge and understanding of the main principles of tendering and building construction costs estimating.

6720-046/546 Level 3 Constructing the Built Environment – Theory exam

Series 2 – June 2018 (Summer)

The candidates did very well in dealing with the examination requirements. There was evidence of good preparation of the candidates and centres are to be commended on their interpretation of the pathway topics and sub-topics. There were very few non-attempts at specific questions, which is also a good indicator of effective centre and candidate preparation.

Notable strengths included knowledge and understanding of using spreadsheets in construction estimates, the importance of planned maintenance in buildings / built environment management and the rationale for qualified contractors in building services installations (electricity and gas). Sound knowledge of the Building Act, the importance of respecting neighbours in a party wall construction alteration and the increasing importance of Approved Document L (energy efficiency, fuel supplies, renewables, climate change), was demonstrated.

Areas of weakness within this paper included questions that related to measurement and the tendering process, including the two-stage tendering process. Candidates also performed poorly on important estimating details and terminology and the purpose of NRM1.

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

Extended Response Question

The answers to the 046/546 ERQ showed that some candidates had prepared very well for this part of the examination, read the question and noted its requirements: (procurement, building regulations and planned maintenance). The knowledge of the Building Regulations Approved Documents was generally good, but for procurement procedures, less so.

Pathway 2 - Design and Planning

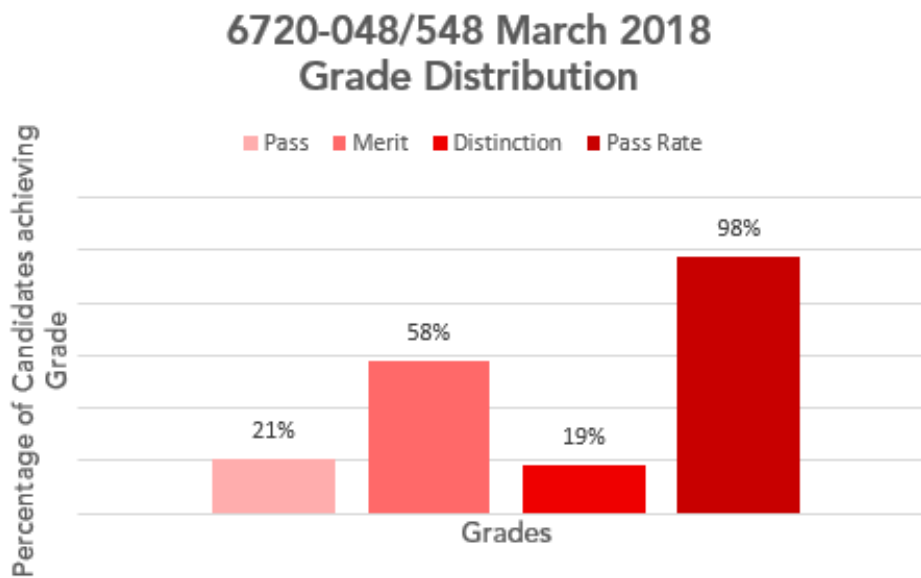
Grade Boundaries

Assessment: 6720-048/548
Series: March 2018 (Spring)

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

Total marks available	60
Pass mark	23
Merit mark	32
Distinction mark	41

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

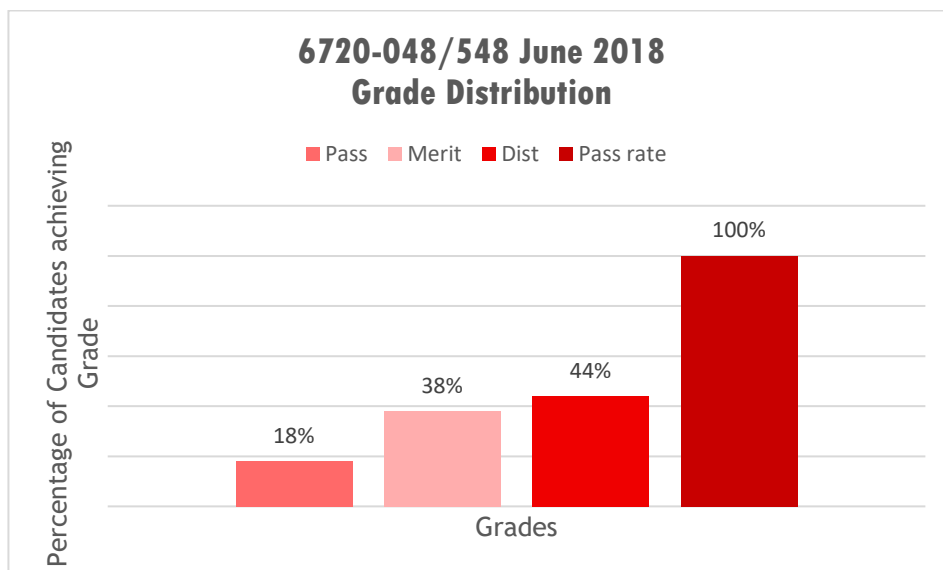


Assessment: 6720-048/548
Series: June 2018 (Summer)

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

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	42

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



Chief Examiner Commentary

6720-048/548 Level 3 Constructing the Built Environment – Theory exam

Series 1 – March 2018 (Spring)

The candidates generally did well in dealing with the examination requirements. There was evidence of good preparation being taken by candidates. Centres are to be commended on their interpretation of the pathway topics. There were a few (but noticeably few) questions or parts of questions not attempted by candidates and centres should be asked to remind candidates of the importance of attempting an answer in all cases.

Notable strengths included knowledge of building technology, building surveying, maintenance, building refurbishment details and legislation. Very good knowledge of building regulations and specific approved documents was shown.

Areas of weakness included those related to professional building surveying practice. These are important specific examples of knowledge in building surveying and should be noted as teaching and learning points for centres going forward.

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

Extended Response Question

A key aspect of the Extended Response Question was to show a good level of understanding of the types of building surveys needed and the procedures used in a building refurbishment and conversion project.

Lower ranges of marks were awarded where a candidate answered only on the technical side of construction technology and often only in a brief, descriptive way that did not get to the depth of a point.

Candidates were awarded higher marks in this question when they dealt with both the technical details and building survey procedures and practice in the context of the stated brief. Making sure to note as many elements of building refurbishment and conversion as possible and also applying knowledge and understanding of the main principles and practices of building surveying.

6720-048/548 Level 3 Constructing the Built Environment – Theory exam

Series 2 – June 2018 (Summer)

The candidates did very well in dealing with the examination requirements. There was evidence of good preparation of the candidates and centres are to be commended on their interpretation of the pathway topics and sub-topics. There were very few non-attempts at specific questions, which is also a good indicator of effective centre and candidate preparation.

Notable strengths included knowledge and understanding of the importance of planned maintenance in buildings / built environment management and the rationale for qualified contractors in building services installations (electricity and gas) and the critical importance of construction workmanship and the implications of poor workmanship.

Sound knowledge of the role of RICS, risk reduction in working at height, safety precautions in advance of going to a building survey site and the increasing importance of Approved Document L (energy efficiency, fuel supplies, renewables, climate change), was demonstrated.

Areas of weakness within this paper included questions that related to the role of a building surveyor in the legal context of built environment matters (such as boundary disputes or expert witness consulting) and the tendering process (design specification sent out, contractors prices received, contractor appointed).

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

Extended Response Question

Responses to the Extended Response Question demonstrated that candidates had prepared very well for this part of the examination, read the question and noted its requirements: (surveyor role, building regulations and planned maintenance). The knowledge of the building regulations approved documents (letter codes and what each one refers to) was impressive. Answers to the Extended Response Question generally showed a significant improvement over those in the March 2018 series.

Synoptic Assignment – Year 1

Constructing the Built Environment

Grade Boundaries

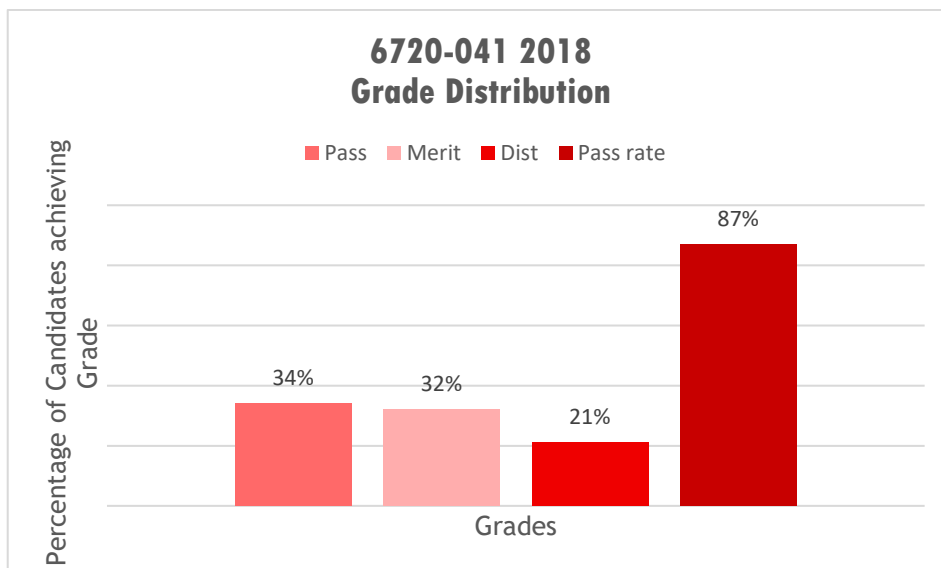
Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel;

Assessment: 6720-041

Series: 2018

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	42

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 set tasks. 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.

AO1 Recalls knowledge from across the breadth of the qualification

General recall of knowledge tended to be good throughout this assignment, for example, candidates discussed a range of activities and used appropriate trade technical terms.

AO2 Demonstrates understanding of concepts, theories and processes from across the breadth of the qualification

The higher scoring assignments provided accurate information relating to concrete testing that demonstrated understanding of the process. Calculations were well presented and showed all workings out. Sketches were included to support the candidates work to provide an industry acceptable standard to the reports.

On the lower scoring assignments, candidates provided insufficient evidence of research and statements were left unsupported. Some candidates discussed the incorrect concrete test for testing strength.

On occasions, candidates would stumble across subjects such as asbestos and then cast it aside as inconsequential just saying that it would cost thousands to get rid of, and therefore missed opportunities to really provide a depth of understanding in their work. The majority of reports failed to highlight key issues in the demolition phase with very little understanding demonstrated of difficulties surrounding demolition work and the cost incurred through removal and re-instatement of services.

AO3 Demonstrates technical skills from across the breadth of the qualification.

Work was variable in AO3. The higher scoring assignments provided a good structure to the calculations and a good demonstration of drawing skills.

AO4 Applies knowledge, understanding and skills from across the breadth of the qualification in an integrated and holistic way to achieve specified purposes.

The drawings are again key in bringing this assignment together and demonstrating clear links between theory and practice.

AO5 Demonstrates perseverance in achieving high standards and attention to detail while showing an understanding of wider impact of their actions.

Where assignments failed to score the highest marks for this outcome, was when drawings were not of a consistently high quality. Candidates did not always present a professional presentation of sufficient quality for task 5 and the information being conveyed was not as concise as would be expected at industry level.

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 good quality feedback on their performance.

Synoptic Assignments – Year 2

6720-36 Level 3 Advanced Extended Technical Diploma in Constructing the Built Environment (720)

Pathway 1 Construction

Grade Boundaries

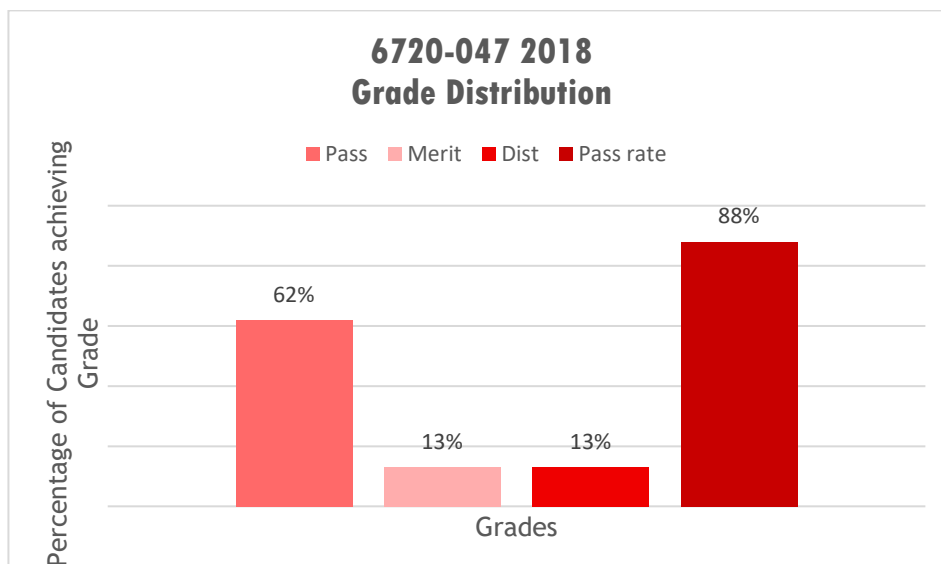
Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel;

Assessment: 6720-047

Series: 2018

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	42

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 set tasks. 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.

AO1 Recalls knowledge from across the breadth of the qualification

General Recall tended to be good for example candidates could talk about a range of activities and used appropriate trade technical terms.

AO2 Demonstrates understanding of concepts, theories and processes from across the breadth of the qualification.

The higher scoring marks, in addition to recalling terms and producing lists, provided accurate information relating to testing. Candidates were also able to demonstrate understanding through supporting their arguments with researched data and structured calculations

Lower scoring assignments tended to discuss inappropriate tests for testing strength. Some Gantt charts were overly basic, one dimensional and did not adequately reflect the complexities of planning construction projects and looked very linear, neglecting to consider the actual number of activities that could overlap. The majority of reports failed to highlight key issues in the demolition phase with very little understanding demonstrated of difficulties surrounding demolition work and the cost incurred through removal and re-instatement of services. In some assignments, there was little research and frequently 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.

Some learners would stumble across subjects such as asbestos and then cast them aside as inconsequential, opportunities that could have been used to really provide in-depth understanding of their work.

AO3 Demonstrates technical skills from across the breadth of the qualification.

In the high scoring assignments, there was a good structure to the calculations and a good demonstration of drawing skills.

AO4 Applies knowledge, understanding and skills from across the breadth of the qualification in an integrated and holistic way to achieve specified purposes.

The drawings are again key in bringing this assignment together and demonstrating clear causative links between theory and practice. Centre marking was good for this outcome.

AO5 Demonstrates perseverance in achieving high standards and attention to detail while showing an understanding of wider impact of their actions.

Where assignments failed to score the highest marks for this outcome, the drawings did not provide sufficient supporting evidence for the mark and where this was over-marked, the tutors had not attached significant importance to the quality of the drawings. Centres have difficulty in attaching drawings, particularly those done by hand and in pencil. In some instances, the original may have had a better appearance than copied versions.

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 marking effectively and the marks moderated have been consistently within tolerance. The standard of assessment has been good and in many samples, the Candidate Record Forms have been used well to provide good quality statements that demonstrate performance.

Pathway 2 - Design and Planning

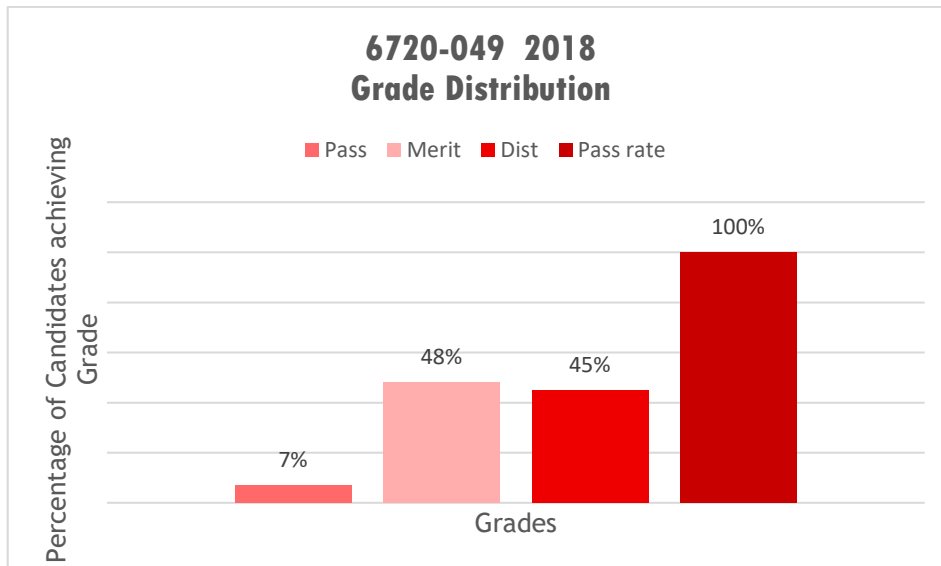
Grade Boundaries

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

Assessment: 6720-049
Series: 2018

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	42

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



Principal Moderator Commentary

The assignment brief which is scenario based with images is appropriate for candidates to consider what they could research and it provided direction for the areas to be discussed through 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.

AO1 Recalls knowledge from across the breadth of the qualification

General Recall tended to be good for example candidates could talk about a range of activities and used appropriate trade technical terms. The tutor marking of AO1 was accurate and the moderators tended to agree with these marks.

AO2 Demonstrates understanding of concepts, theories and processes from across the breadth of the qualification.

The higher scoring marks in addition to recalling terms and producing lists provided accurate information relating to testing Task 4 that demonstrated knowledge, some assignments were discussing the wrong concrete test for testing strength. Calculations were well presented and showed all working out and sketches supported text to provide an industry acceptable standard of report Task 3. On occasions, learners would stumble across subjects such as asbestos and then cast it aside as inconsequential just saying that it would cost thousands to get rid of, and these were opportunities that candidates could have used to really provide a depth of understanding in their work. The majority of reports failed to highlight key issues in the demolition phase with very little understanding demonstrated of difficulties surrounding and cost incurred through removal and reinstatement of services. On the lower scoring assignments, candidates provided insufficient evidence of research and statements were left unsupported.

AO3 Demonstrates technical skills from across the breadth of the qualification.

Work was variable and in the higher scoring assignments there was a good structure to the calculations and a good demonstration of drawing skills.

AO4 Applies knowledge, understanding and skills from across the breadth of the qualification in an integrated and holistic way to achieve specified purposes.

The drawings are again key in bringing this assignment together and demonstrating clear causative links between theory and practice. Centre marking was good for this outcome.

AO5 Demonstrates perseverance in achieving high standards and attention to detail while showing an understanding of wider impact of their actions.

Where assignments failed to score the highest marks for this outcome, the drawings did not provide sufficient supporting evidence for the mark and where this was over-marked, the tutors had not attached significant importance to the quality of the drawings. Centres have difficulty in attaching drawings, particularly those done by hand and in pencil. In some instances, the original may have had a better appearance than copied versions. Task 5, a professional presentation, should not be too wordy. However, some candidates used it to present lots of information and it provided evidence against AO2.

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 marking effectively and the marks moderated have been consistently within tolerance. The standard of assessment has been good and in many samples, the Candidate Record Forms have been used well to provide good quality statements that demonstrate performance.