

6720-21 Level 2 Technical Award in Constructing and Maintaining the Built Environment

Qualification Report 2018

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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.

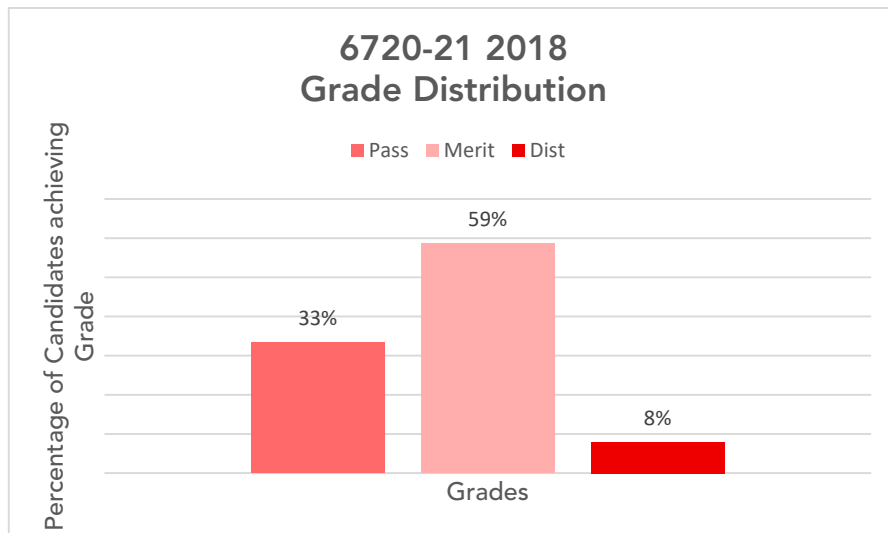
This report provides general commentary on candidate performance in both the synoptic assignment and theory exam. It highlights common themes in relation to the technical aspects explored within the assessment, giving areas of strengths and weakness demonstrated by the cohort of candidates who sat assessments 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;

- 6720-002/502 – Level 2 Technical Award in Constructing and Maintaining the Built Environment – Theory exam
 - March 2018 (Spring)
 - June 2018 (Summer)
- 6720-001 – Level 2 Technical Award in Constructing and Maintaining 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

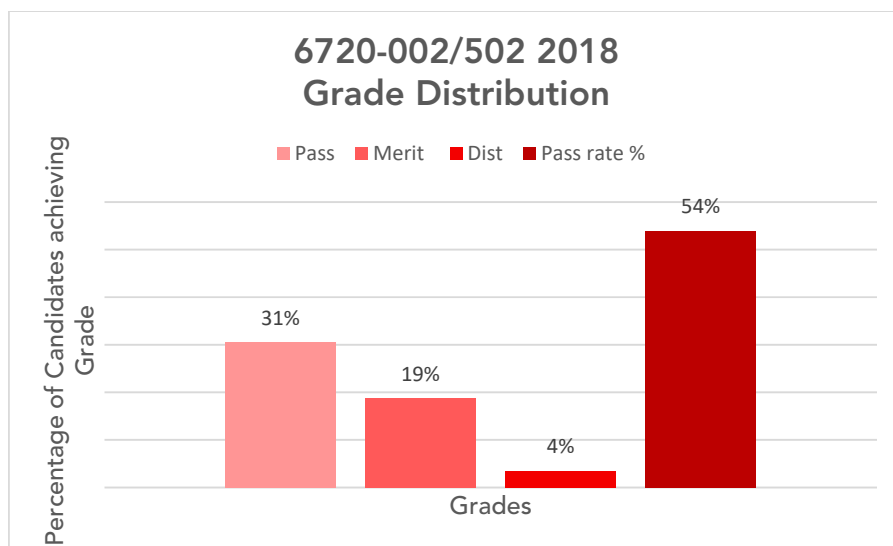
Assessment: 6720-002/502

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	20
Merit mark	28
Distinction mark	37

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

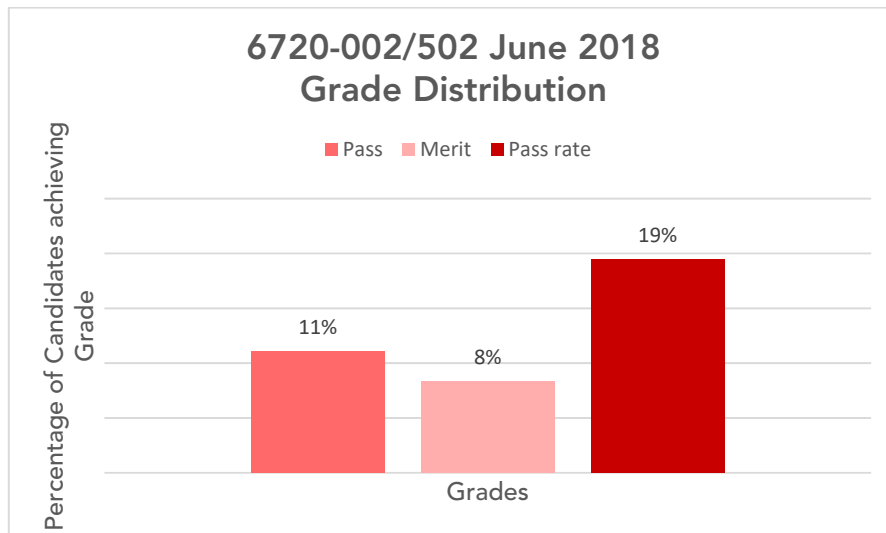


Assessment: 6720-002/502
Series: June 2018 (Summer)

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

Total marks available	60
Pass mark	23
Merit mark	31
Distinction mark	40

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



Chief Examiner Commentary

6720-002/502 Level 2 Constructing and Maintaining the Built Environment - **Theory exam**

Series 1 – March 2018 (Spring)

Candidates were generally able to demonstrate simple recall of fact and knowledge more so than demonstrating any real depth or breadth of understanding. The performance of the cohort against this examination was lower than expected, with significant gaps in knowledge highlighted across the qualification. However, it has to be considered that primarily candidates sitting this series will be using it as a resit opportunity.

When asked to state an area of construction work the majority of candidates responded with a building services role i.e. plumber or electrician etc. Candidates must understand the clear separation between craft roles and building services roles and the range and variety of work carried out by each operative.

Far too many candidates confused the 'Building Cycle' with the construction/building process. Although this phrasing is clearly stated in the specification, the word building will naturally direct some candidates towards the physical process of construction.

Generally, candidates demonstrated knowledge around the types of communication used on site, but many struggled to clearly differentiate between programmes of work and precedence diagrams. However, it was pleasing to see candidates attempt the question using their knowledge of other communication methods. It is important that candidates are exposed to real working examples in a vocational context to develop a greater depth of understanding.

Generally candidates performed well when recalling knowledge of common low-rise domestic foundation types. However a small number of candidates had identified the correct answers in the wrong order. For image related questions, candidates must ensure they insert each answer next to a, b, c, d etc correctly to ensure marking can be carried out accurately.

Candidates lacked understanding when required to differentiate between wet and dry finishes, with many only being able to recall paint and plaster as wet finishes and plaster board as a dry finish. It is important that all candidates are exposed to the range of wet and dry finishes and where possible in a practical context.

Candidates demonstrated a lack of understanding of key building elements and components (in particular sub-structures) and this was highlighted in the weak responses to the section drawing of a suspended timber floor. The majority of candidates repeatedly identified the foundation but then chose to name the materials for the other components.

On the theme of steel framed construction most candidates performed well, commenting on speed of erection, strength, durability and load-bearing capacity. Candidates frequently referred to steel being cheaper or sustainable but scored no marks, as they failed to justify their response.

The theme of building deterioration was reasonably well answered. Candidates generally understood the benefits of preventive maintenance but in the context of a sports club, a small number of candidates focused on the equipment rather than the building itself. There was some confusion over why buildings require maintenance over time and the reasons for choosing to refurbish a building.

Candidates struggled when tasked with identifying retrospective Damp Proof Course (DPC) methods, with only a limited few loosely identifying manual insertion as an option. This theme identified a gap in their knowledge and whilst candidates may understand the purpose of a DPC

as a component of domestic construction, they clearly had very limited understanding of the inherent issues regarding rising damp in older, solid wall constructed buildings and the failure or absence of a Damp Proof Course. It is important that candidates understand the importance of the vast existing housing stock and the common repairs/refurbishment work required to keep them functioning for the 21st century.

Candidates performed reasonably well when tasked with identifying the jobs carried out by electricians and plumbers. However, the question required the candidates to focus on specific roles that can only be carried out by qualified personnel. The question would have enjoyed a more successful response had it included 'by a qualified', however this was discussed and taken into account at the awarding meeting. Candidates were correctly identifying jobs undertaken by these tradespeople but not necessarily focusing on site specific activities, as grouped by 1st and 2nd fix operations.

Candidates demonstrated a confidence when discussing health and safety in the workplace and the use of risk assessments and PPE to inform safe ways of working. However, when candidates were required to identify specific items of PPE and safety equipment for the ERQ, too many referred to generic items of PPE and did not consider the hierarchy of control and employ equipment that could eliminate the risk, or relate their response to the scenario.

The extended response question was not answered well by candidates, with the majority of candidates only meeting the requirements for mark band 1. Most candidates ignored or failed to read the key indicators/issues in the brief/scenario and the full range of remediation work required. Candidates would be able to access the middle to higher bands by providing responses showing more depth of their knowledge, rather than trying to demonstrate the breadth of their knowledge. Candidates should take time to consider the scenario given within the question and ensure their responses clearly relate back to the scenario. Candidates need to practise ERQ responses and be familiar enough with discussion questions that they can confidently respond in a systematic way and without confusion.

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

Series 2 – June 2018 (Summer)

The paper covered the syllabus well and at the appropriate level. Candidates were generally able to demonstrate simple recall of fact and knowledge more so than demonstrating any real depth or breadth of understanding. On the whole candidates did not respond well to the paper and the range of questions highlighted far too many gaps in their knowledge.

When asked to identify an area of the construction industry which bridges and roads are designed and constructed most candidates did not make the connection between infrastructures and civil engineering, which is a key area of the industry. Candidates must be able to understand the various areas of the industry and the many sectors they feed.

Candidates were able to make the connection between the precedence diagram and scheduling but a limited number of candidates had the depth of understanding to be able to explain the key elements of the planning diagram i.e. activities and the dependences, indicated by boxes/nodes and arrows.

When explaining why clients' representatives should attend formal meetings with the contractor, candidates made reasonable connections with the importance of monitoring progress and the budget. However, although it was pleasing to see candidates attempt the question using their limited knowledge, it is important that they are exposed to real working examples in a vocational context in order to develop a greater depth of understanding. This is best achieved through the use of guest speakers and the opportunity for candidates to listen to the consequences of missing such meetings.

The majority of candidates failed to show the required recall when posed with a question about land drainage, with many only managing a poorly calculated guess. This question showed a clear gap in their knowledge. To fully understand the various drainage systems candidates must be exposed to site visits or video footage of the installation and operation of the full range of services mentioned in the specification.

It was pleasing to see candidates respond confidently to the question on the advantages of using cavity walls over solid walls. Overall, the responses from candidates demonstrated a basic recall with most referencing stability/structural integrity and acoustic and thermal insulative qualities.

Candidates generally struggled to demonstrate the necessary depth or breadth of understanding when posed with a question on ground floor systems, even though they were provided with detailed and labelled section details of both a suspended timber floor and a solid concrete floor. It was very disappointing to see so few candidates being able to respond to this question. At this level candidates should be able to recall basic sub and superstructure elements and be able to articulate the merits of each. Candidates should be familiar with all construction drawing types and know how to identify hatchings as defined in BS1192 and this familiarity can only be achieved through regular exposure to such materials and through detailed discussion or modelling. Candidates respond best when they can experience the installation at first hand and be able to cement their knowledge and understanding through investigation and discussion with industry experts.

Once again candidates did not respond confidently to the question on fixtures and fittings. The candidates attempted the question and most worked out that fixtures related to permanent elements of the building but many struggled to articulate the differences between fixtures and fittings with any real confidence. More attention needs to be given to the delivery of this content, as it is a key stage of the construction process and has many implications when buying and selling a property.

Whilst candidates performed well when required to state material properties of masonry the question on the performance qualities of expanded polystyrene confused most candidates.

Instead of linking the question to rigid insulation board most candidates began to describe the benefits of expanded foam.

Candidates were able to identify advantages of gypsum plaster and ceramic wall tiles but many failed to access higher marks as they did not recognise that one is a dry finish and the other is a wet finish. Most candidates were only able to state that ceramic tiles were impermeable and easier to install and maintain but failed to provide a linked comparison.

Most candidates were able to identify a part of the superstructure to be inspected on a condition survey and responded well when explaining why a client may request a condition survey when purchasing a domestic property. The responses were varied and generally well explained.

Candidates did not respond well to the question about which building services should be carried out by a competent and qualified person. Too many candidates lost marks due to listing electrician rather than electricity. When listing one check to be carried out by a competent person candidates lacked breadth, only citing boiler servicing or electrical cables. Candidates would benefit from researching the full range of jobs carried out by electricians and plumbers and relate them to 1st and 2nd fix operations and finals. When teaching the construction process it is important to develop the depth of understanding for each key stage and the variety of work/activities carried out.

The majority of candidates did not perform well when answering the math's question where they were required to carry out some simple calculations to identify how many tipper trucks were needed. Only a few candidates were able to score any marks with this question. Candidates need to be exposed to functional maths questions in preparation for these exams as there was little structure to their approach.

The most successful question was a simple recall question requiring candidates to identify the building service trades who would carry out the tasks shown in each picture. Candidates seemed well versed in this type of question.

Candidates responded well to the question on barrier cream, with most being able to recall that it is used to protect the skin/hands, however most answers lacked any real depth of understanding.

Most candidates did not recognise CDM as the abbreviation for Construction Design and Management. Although listed in the specification as Construction Design and Management, unlike Control of Substances Hazardous to Health (COSHH), it is not abbreviated. This was possibly an oversight when delivering this legislation. Every effort should be made to teach candidates the industry recognised abbreviations. However, some candidates were able to pick up a single mark by identifying that the safety of workers was one of the main functions of CDM but did not show any depth in their responses.

It was clear from the poor responses that candidates struggled to differentiate between carpenters and joiners roles and responsibilities. Even with the clues in the question 'site' carpenter' and 'bench' joiner, candidates still struggled to understand the fundamental differences, with the main one being that one does site based jobs (exhaustive list) and the other is based in a workshop manufacturing the items to be fixed/fitted. Carpentry and joinery are often interchangeable on poorly researched websites and this misinformation is often too easily fed to candidates, which may have led to the confusion evidenced in some of their responses. It is an area that needs attention and candidates would benefit from understanding the job roles of each through guest speakers or site based visits.

The extended response question was very disappointing, with the majority of candidates only meeting the requirements for mark band 1. Most candidates ignored or failed to read the key indicators/issues in the brief/scenario or grasp the full range of factors to be considered. Candidates would have been able to access the middle to higher bands by providing responses showing more depth of their knowledge, rather than trying to demonstrate the breadth of their

knowledge. Candidates should take time to consider the scenario given within the question and ensure their responses clearly relate back to this situation. Far too many candidates would identify work without explaining the process, tools/equipment and safe systems of work etc. Too many candidates focused on peripheral factors, without justifying their responses or showcasing their knowledge of topics. Candidates need to practise ERQ responses and be familiar enough with discussion questions that they can confidently respond in a systematic way and without confusion. There is not enough discussion taking place with most candidates just identifying a sequence of work without justification or consideration of the processes involved.

Synoptic Assignment

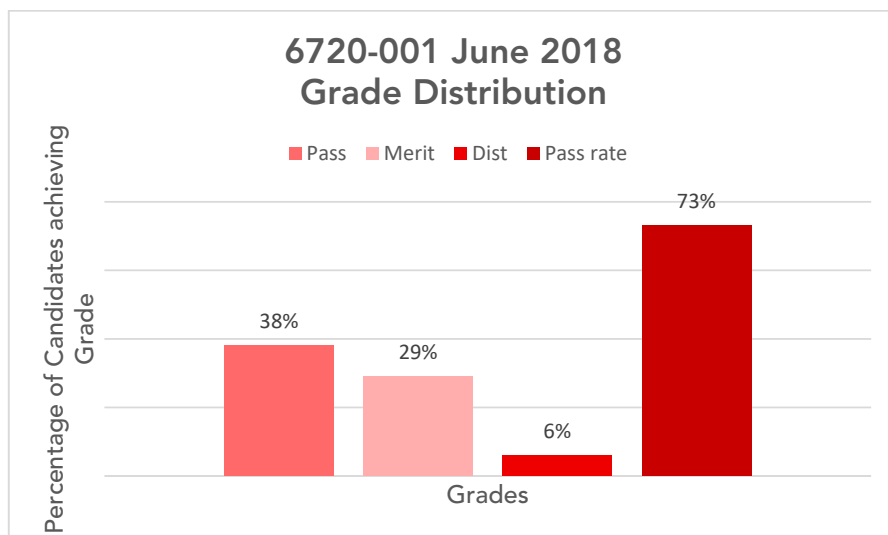
Grade Boundaries

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

Assessment: 6720-001
Series: 2018

Total marks available	60
Pass mark	24
Merit mark	32
Distinction mark	40

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



Principal Moderator Commentary

The assignment brief was based on a real life scenario with images and plans appropriate for candidates to consider what they could research. This will provide 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 General recall of knowledge was disappointing, for example for Task 1 it was apparent that some learners didn't understand the key roles within in the industry by craft operatives and professionals which is an essential part of the grading for AO1. Centres must ensure delivery of all aspects of the units is taught fully.

Recall was limited, which is apparent in the presentation of evidence from learners. Centres should ensure learners are provided with the correct information to allow them to reach maximum marks, for example, there was evidence of candidates using measurements that are no longer used in industry (Cubic ft. for concrete).

A02 Some candidates provided little research, and there was little attempt to interrupt that research to inform the decisions they were making as part of the assignment. Candidates showed a lack of understanding of concepts, theories and processes relating to the scenarios in the synoptic assignment and presentation for task 2 was generally poor. In some cases it appeared that tutors had slightly over-marked, having awarding extra marks as extensive use of recall was interpreted as understanding.

A03 Work was variable and on the better-graded assignments there was a good structure to the presentations. Some candidates however didn't use any form of presentation software. Presentation evidence (PowerPoint, Prezi or similar) for Task 3 condition surveys was not present for majority of the candidates work. This is a key element of the work and marking by centre should have taken this into account.

Some centres did not upload any practical observation reports or photographs, which is a key requirement in Task 4, this simplifies a justification of marks awarded. Some candidates only gave a brief recap/evaluation of work submitted which is a key part of Task 4 and AO3, AO5. Centres should try to support learners to provide reflective accounts of their work (AO3/Task 4) to ensure they can improve standards of work.

A04 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 lenient for this outcome 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.

Comments made regards to the presentation to a client which in itself is a new skill standing up in front of someone new and bringing it all together. Candidates in some cases struggle to draw all the evidence gained throughout the qualification to bring it all together. Evidence from candidates is fragmented and disjointed.

A05 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. In some cases it's unclear how the centre has graded AO5.

From the evidence submitted it is clear that some centres have interpreted the assignments appropriately and the majority of candidates have approached each task fully and have followed the assignment briefs. Some centres would benefit from a standardised approach to marking effectively and the marks moderated would have been consistent and within tolerance.

Other help for centres would be to:

- Ensuring authenticity of work, there were examples where candidates had presented information drawn from other sources as their own without appropriate referencing, this was not commented on or reflected in marks awarded by centres and often marks were adjusted in moderation for this reason.
- Ensure all evidence required, as stated within the assignment pack, is submitted for moderation – this includes practical observation reports and photographs where stated as a minimum requirement within the assignment.
- Tutor observations and marking commentary should always include what went well and what could be improved in the future, making it transparent to all why marks have been awarded.