

6720-37 Level 3 Advanced Technical Extended Diploma in Constructing the Built Environment (1080)

Pathways: Construction

Design and Planning

Civil Engineering

2019

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 2019 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:
 - 6720-042/542 Level 3 Constructing the Built Environment – Theory exam (1)
 - March 2019 (Spring)
 - June 2019 (Summer)
 - 6720-043 Level 3 Constructing the Built Environment – Synoptic Assignment (1)

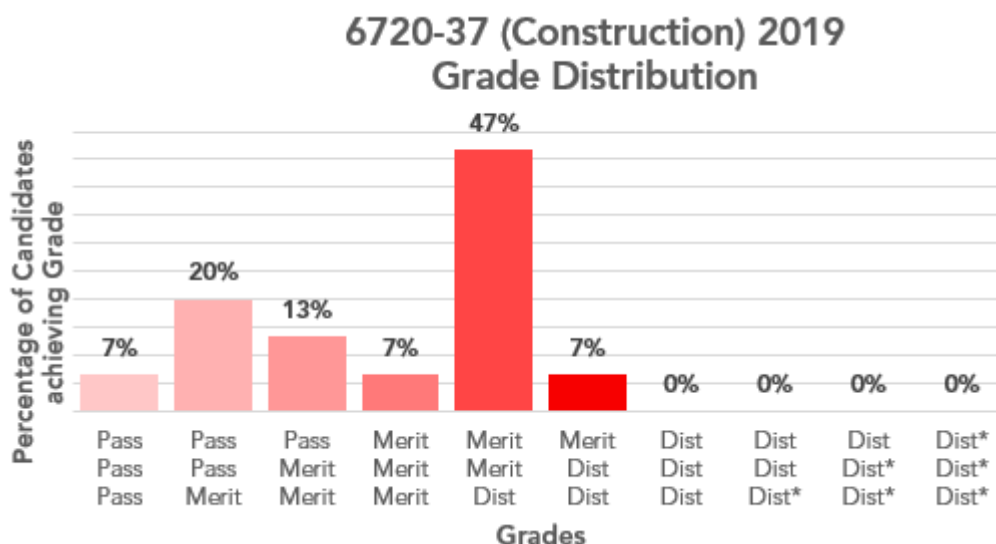
Year 2

- Pathway 1 – Construction
 - 6720-052/552 Level 3 Constructing the Built Environment – Theory exam (2)
 - March 2019 (Spring)
 - June 2019 (Summer)
 - 6720-053 Level 3 Constructing the Built Environment – Synoptic Assignment (2)
- Pathway 2 – Design and Planning
 - 6720-054/554 Level 3 Constructing the Built Environment – Theory exam (2)
 - March 2019 (Spring)
 - June 2019 (Summer) – no entries for this series
 - 6720-055 Level 3 Constructing the Built Environment – Synoptic Assignment (2)
- Pathway 3 – Civil Engineering
 - 6720-556 Level 3 Constructing the Built Environment – Theory exam (2)
 - March 2019 (Spring)
 - June 2019 (Summer)
 - 6720-057 Level 3 Constructing the Built Environment – Synoptic Assignment (2)

Qualification Grade Distribution

Pathway 1 – Construction

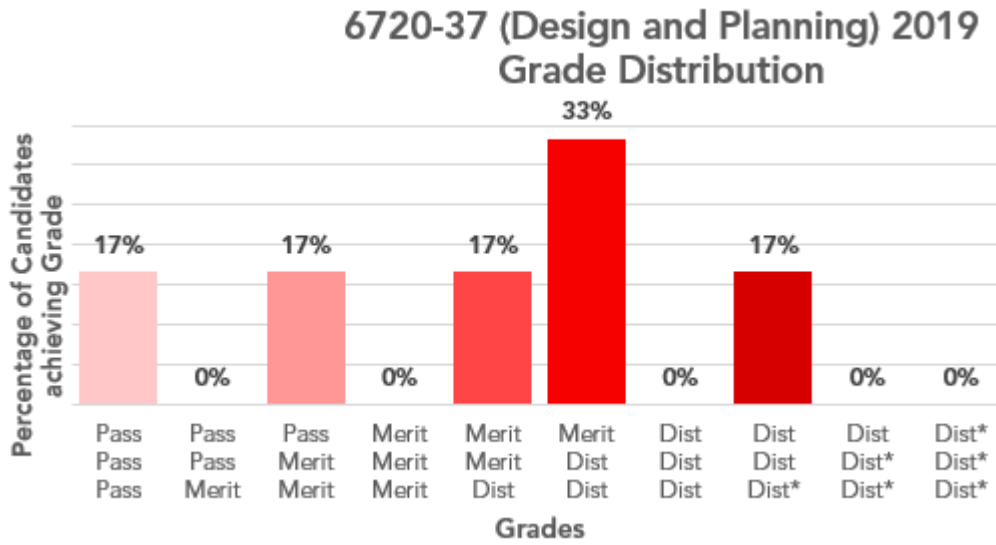
The grade distribution for this qualification pathway is shown below:



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

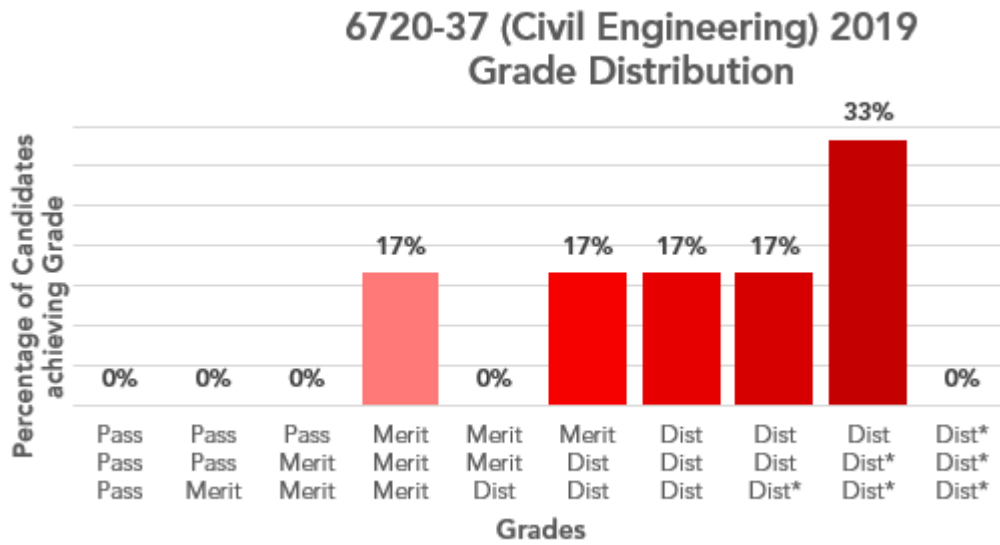
The grade distribution for this qualification pathway is shown below:



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

The grade distribution for this qualification pathway 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 – Year 1

All Pathways

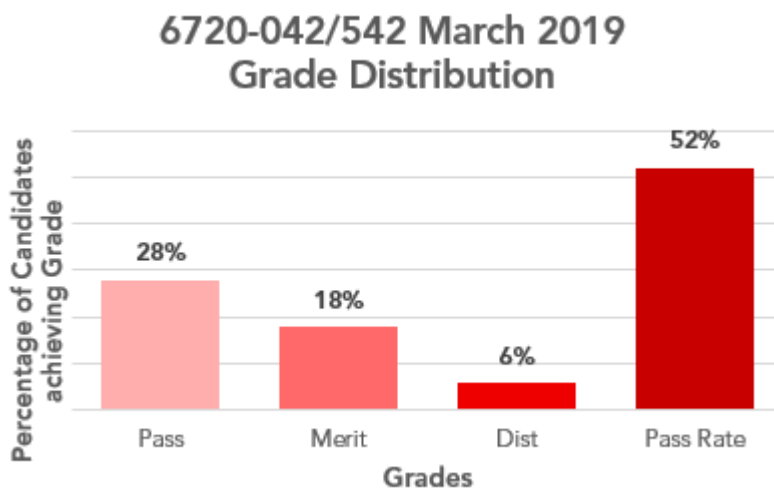
Grade Boundaries

Assessment: 6720-042/542
Series: March 2019 (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 approximate distributions of grades and pass rate for this assessment.

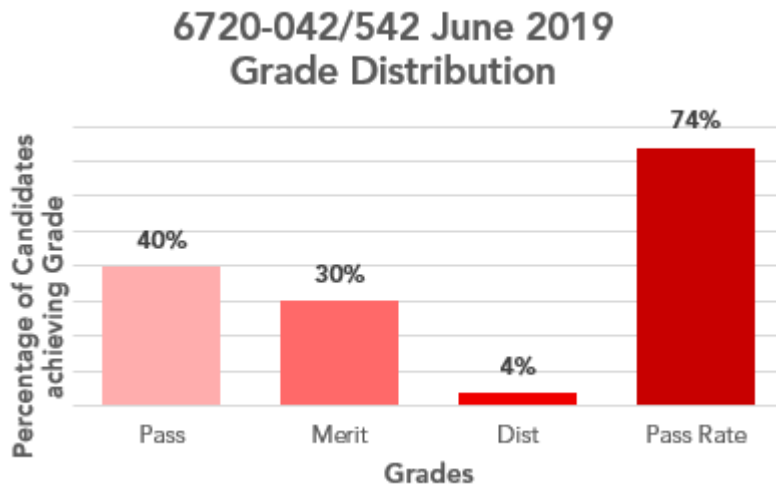


Assessment: 6720-042/542
Series: June 2019 (Summer)

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

Total marks available	90
Pass mark	36
Merit mark	48
Distinction mark	61

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



Chief Examiner Commentary

6720-042/542 Level 3 Constructing the Built Environment – Theory exam (1)

Series 1 – March 2019

Candidates performed well on AO1 (recall of knowledge) questions throughout the paper. However, the AO2 (understanding) and the extended writing questions were not as well answered. This indicates either a lack in depth of knowledge or experience of visiting construction sites where valuable insights could be gained which would have improved performance.

Both systems of entry were evidenced with candidates using both 'Evolve' (online) and paper-based examinations. Centre examination officers need to make it clear to paper-based candidates that they can request additional sheets to attach to their papers for additional space.

Candidates were often able to achieve identification marks at pass level, whilst some were able to achieve merit and distinction results with a series of linked explanation responses relevant to the contextualisation of question stems.

Technical areas that were answered well by candidates included the benefits of thin joint masonry systems, gaining acceptable thermal performance of external walls and the functions of windows. The explanation on recording trees hedges and fences was also answered well by candidates. A mixed response was received from candidates on the additional pathway questions that this paper contained, unit 304 Site Supervision.

Areas of weakness included the question about suspended ceilings and the use of helical thin-joint masonry wall ties. The use of a permit to work on site was also misunderstood by candidates as a right to work within the UK. This is not the case and centres should stress the importance of 'permits to work'.

Higher-scoring candidates were able to give linked responses to the stem within responses opening with identification and then developing into the 'how' and 'why' with an explanation, to gain the additional mark(s).

Lower-scoring candidates struggled with contextualised questions, often not relating their responses to the question stem, or failing to provide linked responses to identified issues. Some candidates struggled to explain their responses clearly and often gave brief superficial responses such as, 'it is cheaper, quicker, easier, safer and more sustainable'. Generic answers such as these will not attract marks and should be avoided.

For the extended response question, very few candidates sitting this examination were able to give linked responses to the provided case study. Candidates did not appear to know the different techniques that are deployed on construction projects such as materials storage and handling to avoid damage, timesheets, job cards, general forepersons etc. Candidates did not appear to connect a portal frame with the requirement of a pad foundation and often diversified at a tangent. A site visit or simple technical video of similar retail and commercial developments would have greatly enhanced the candidates' responses by demonstrating their depth of understanding.

Centres are advised to revisit current handbooks, test specifications, schemes of work and previous papers to fine-tune the delivery of their programmes. Getting candidates to embrace a CPD culture of exploring construction technology in general through site visits, videos and reading current textbooks will benefit them in future examination series.

Series 2 – June 2019

The overall performance by candidates for this paper was good. Most of the questions were attempted by candidates and some provided responses to the extended writing questions that contained detail and depth of understanding.

Both systems of entry were evidenced, with candidates using evolve and paper based examinations. Centre examination officers need to make it clear to candidates that they can request additional sheets to attach to their papers for additional space.

Candidates were often able to achieve recall of knowledge marks at pass level. Those candidates demonstrating a series of linked explanation responses relating back to the scenario's context were able to obtain a merit or distinction grade. Candidates should be encouraged to leave no questions blank as responses may gain marks.

Technical areas that were answered well by candidates included the identification of primary and secondary elements of superstructures, aspects of volumetric construction, site waste management and types of industrial buildings. The questions for unit 304 site supervision were generally answered well, especially on communication and motivation and job roles in the construction industry.

Areas of weakness include questions on volumetric construction, fire regulations for single storey structures, technical languages, diaphragm walling and site welfare facilities.

What is evident still is that many candidates had a limited grasp of knowledge and understanding of technical descriptions and the language within an exam question. For example, candidates did not know what "site welfare" was in the context of a construction site. Centres would be advised to take candidates to a live site for a knowledge visit or shown videos of different types of construction to address this lack of awareness. Revision and extending their core knowledge is the key to a successful candidate's performance.

Higher scoring candidates were able to give linked responses to the questions, correctly identifying an item and then providing an explanation to gain the second or additional mark.

Lower scoring candidates struggled with contextualised questions, often not relating their responses to the question stem or being unable to provide linked responses to identified issues.

Candidates on this pathway would benefit from a site manager as a guest speaker to interview and establish the full roles and responsibilities of such a position. This would give candidate the opportunity to cover the unit aspects of what a site manager/supervisor does on a day to day basis.

For the extended response question, the scenario of an agricultural building conversion produced good responses, with candidates applying health and safety and construction technology to show depth of understanding. Candidates were able to grasp concepts and relate to parts of the scenario, for example modern methods of construction and contaminated ground, and use this imaginatively and in context within their answers. However, candidates did not know what procurement was and this part of the extended response question was not answered well.

Centres are advised to revisit current handbooks, test specifications and previous papers to fine-tune the delivery of their programmes. Getting candidates to embrace a CPD culture of exploring construction technology in general through site visits, videos and reading current textbooks will benefit them in future examination series.

Theory Exams – Year 2

Pathway 1 – Construction

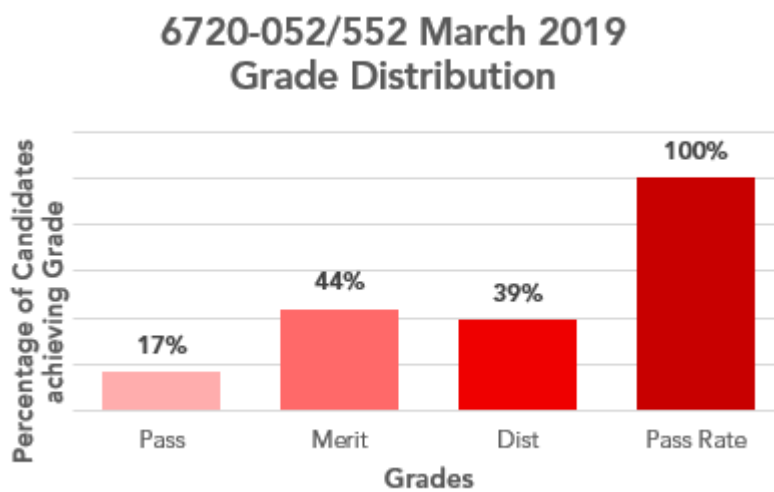
Grade Boundaries

Assessment: 6720-052/552
Series: March 2019 (Spring)

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

Total marks available	90
Pass mark	36
Merit mark	49
Distinction mark	62

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

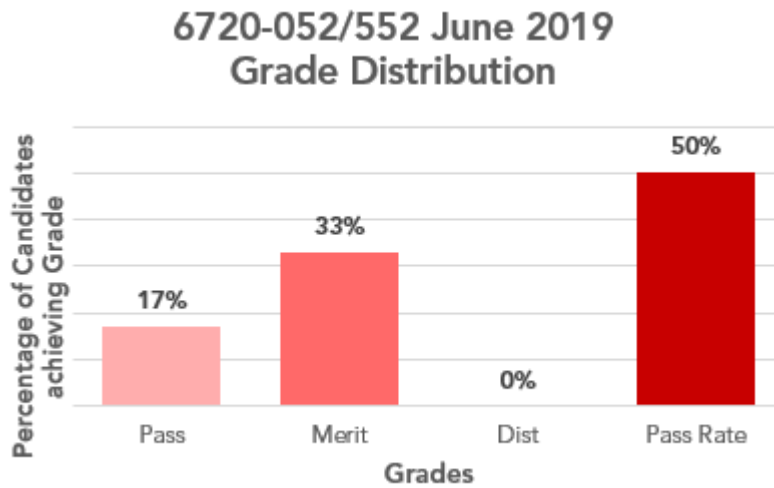


Assessment: 6720-052/552
Series: June 2019 (Summer)

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

Total marks available	90
Pass mark	34
Merit mark	48
Distinction mark	62

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



Chief Examiner Commentary

6720-052/552 Level 3 Constructing the Built Environment – Theory exam (1)

Series 1 – March 2019

There was evidence of good preparation having been done by candidates and centres are to be commended on their interpretation of the pathway topics and sub-topics.

Topic areas that were addressed well were those on construction industry health and safety, including fire safety. This is very encouraging, as the industry aims at fully embedding a safety culture in its future professional practitioners. Building services in general, building property surveying practice, refurbishment topics and the building regulations were also answered very well by candidates.

Topic areas that proved the most challenging generally involved the correct use of construction materials i.e. for a restoration project and repairing an external wall. This difficulty may indicate that specialist technical points on construction industry practices are more difficult for a student group and perhaps require some industry exposure to such practices i.e. on a construction site. Centres and candidates can take from this that building surveying outcomes and refurbishment decisions often depend on architects, surveyors and skilled tradesmen finding and using the correct materials for a project.

Lower ranges of marks were awarded where a candidate provided only a limited response that did not get into the required depth of a technical point. Higher marks were awarded where a candidate made sure to note as many elements as possible of, for example, building services design specifications (breadth), but then also applying knowledge and understanding of the underlying technical principles and practices of building services design analysis (depth). It is advised to note the use of 'command verbs' in questions and appreciate the requirement to go beyond an identification where a question is asking for a description, and to include clear evidence of understanding when asked to 'explain why' or 'explain how' especially where a question is worth 4 marks or more.

The extended response question was answered very well and showed that candidates had prepared well for this part of the examination. Where candidates did not achieve a high mark, the answers illustrated less knowledge, understanding and technical insight, than what was required.

Students may develop knowledge and understanding of the main design and construction terms (e.g. in building services, building surveying and restoration and rebuilding), with a practice quiz and weekly targeted (formative) tests for example. In this way centres can develop AO1 and AO2 skills throughout the learning process.

Centres are advised to revisit current handbooks, test specifications, schemes of work and previous papers to fine-tune the delivery of their programmes. Getting candidates to embrace a CPD culture of exploring construction technology in general through site visits, videos and reading current textbooks will benefit them in future examination series.

Series 2 – June 2019

There was evidence of good preparation having been done by some candidates on the pathway topics and sub-topics from units 310, 313, 314 and 316. Centres are encouraged to help students develop knowledge and understanding of the main design, construction, building services and building surveying terminology and processes but also the importance of reading and understanding the detail of a question. There were cases where candidates did not pick up marks because of missing the main aspect of a question, even though they may have written a coherent and generally correct series of points. For example, for one question, a number of answers seemed to miss that this question was fundamentally about working time efficiency (getting a high volume of houses surveyed in as short a timescale as possible). Understanding this would have led to marks being awarded for any reasonable point on the use of smartphone technology, checklists etc.

The question types including identifying and describing (AO1), explaining and comparing (AO2) and integrating across all relevant pathway units in the extended response question (AO4). Most questions were attempted by candidates in the expected ways, but there were some questions that were clearly a more difficult challenge than others.

Question topics that were broadly answered well were those on construction, building maintenance, planning and building regulations. Knowledge of Approved Document sections and their building design application has been impressively dealt with in most of the recent 6720 series'.

The questions that were not answered well by candidates were mostly in the surveying practice subject areas (the professional accreditation APC, working time efficiency in surveying methods and the surveyor and CDM). The question on specific terminology on stairs construction was also notable for low marks being awarded. This difficulty may indicate that specialist technical points on building surveying industry practices are more difficult for a student group and perhaps require some industry insight.

The extended response question was answered quite well by some of the candidates. The ERQ challenge is to keep improving as much as possible on written answers that fully integrate all required subject areas in the question. Sometimes candidates answered some of the ERQ topics but not all. Encouraging an answer checklist approach may help here in future that can then be used in a coherent discussion of the ERQ. Candidates were awarded higher marks in this question when they described and discussed (discussion being very important to show an AO4 level of response) design (e.g. improved thermal performance), construction, building services aspects of the office / student residences brief as well as building surveying practice and building costs estimating aspects. Higher scoring candidates were able to give linked responses to the scenario with good references to these topics.

Centres are advised to revisit current handbooks, test specifications and previous papers to fine-tune the delivery of their programmes. Getting candidates to embrace learning opportunities in building design and construction and surveying practice through site visits, videos, reading and debating will benefit them in future examination series'.

Pathway 2 – Design and Planning

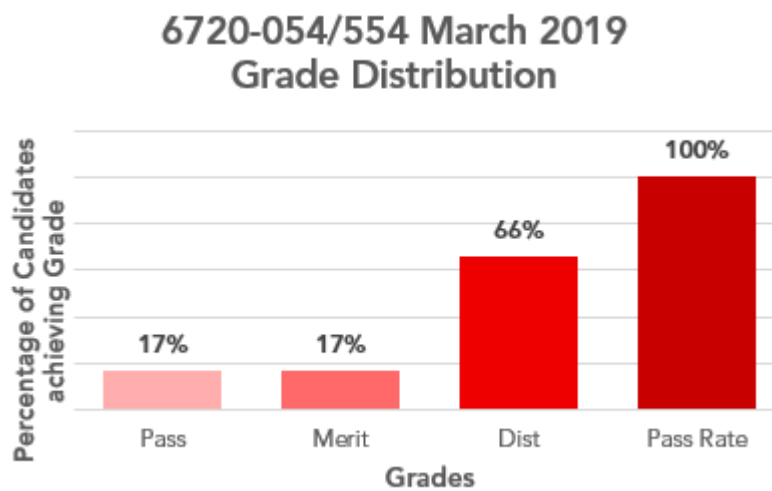
Grade Boundaries

Assessment: 6720-054/554
Series: March 2019 (Spring)

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

Total marks available	90
Pass mark	36
Merit mark	48
Distinction mark	61

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



Assessment: 6720-054/554
Series: June 2019 (Summer)

No candidates sat this examination for the June 2019 (Summer) series.

Chief Examiner Commentary

6720-054/554 Level 3 Constructing the Built Environment – Theory exam (2)

Series 1 – March 2019

There was evidence of good preparation having been done by candidates and centres are to be commended on their interpretation of the pathway topics and sub-topics from units 312, 313, 314 and 316. Most candidates were able to attempt every question.

Topic areas that were particularly well answered were those on construction industry health and safety, including building surveyor practice safety and fire safety, which is very encouraging as the industry aims at fully embedding a safety culture in its future professional practitioners.

Topic areas that proved the most challenging generally involved the correct use of construction materials i.e. for a restoration project and repairing an external wall. This difficulty may indicate that specialist technical points on construction industry practices are more difficult for a student group and perhaps require some industry exposure to such practices i.e. on a construction site. Centres and candidates can take from this that building surveying outcomes and refurbishment decisions often depend on architects, surveyors and skilled tradesmen finding and using the correct materials for a project. The topic area of ventilation of buildings was challenging for some of the candidates. Calculations are regarded as valid topics to be tested in external examination for this subject.

Lower ranges of marks were awarded where a candidate provided only a limited response that did not get into the required depth of a technical point. Higher marks were awarded where a candidate made sure to note as many elements as possible of, for example, building services design specifications (breadth), but then also applying knowledge and understanding of the underlying technical principles and practices of building services design analysis (depth). It is advised to note the use of 'command verbs' in questions and appreciate the requirement to go beyond an identification where a question is asking for a description, and to include both clear evidence of understanding when asked to 'explain why' or 'explain how' especially where a question is worth 4 marks or more.

The extended response question was answered very well by some candidates and showed that these candidates had prepared well for this part of the examination.

Students may develop knowledge and understanding of the main design and construction terms (e.g. in architectural design and planning, building surveying, building maintenance and restoration / re-construction), with a practice quiz and weekly targeted (formative) tests for example. In this way centres can develop AO1 and AO2 skills throughout the learning process.

Centres are advised to revisit current handbooks, test specifications, schemes of work and previous papers to fine-tune the delivery of their programmes. Getting candidates to embrace a CPD culture of exploring construction technology in general through site visits, videos and reading current textbooks will benefit them in future examination series.

Pathway 3 – Civil Engineering

Grade Boundaries

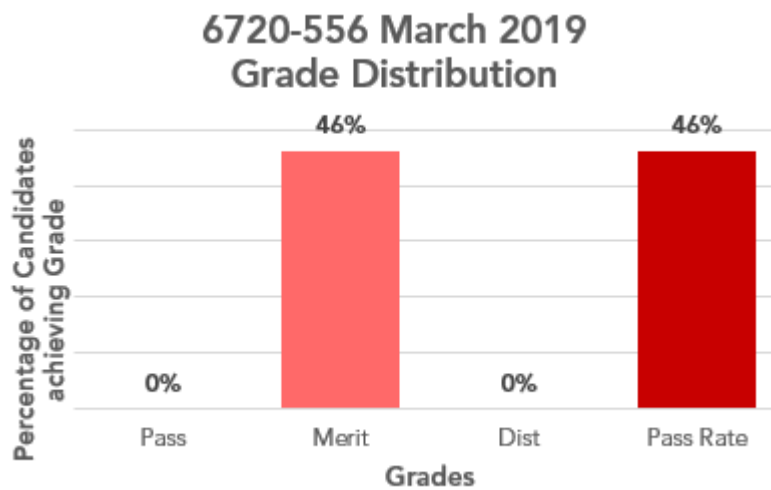
Assessment: 6720-556

Series: March 2019 (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 approximate distributions of grades and pass rate for this assessment.

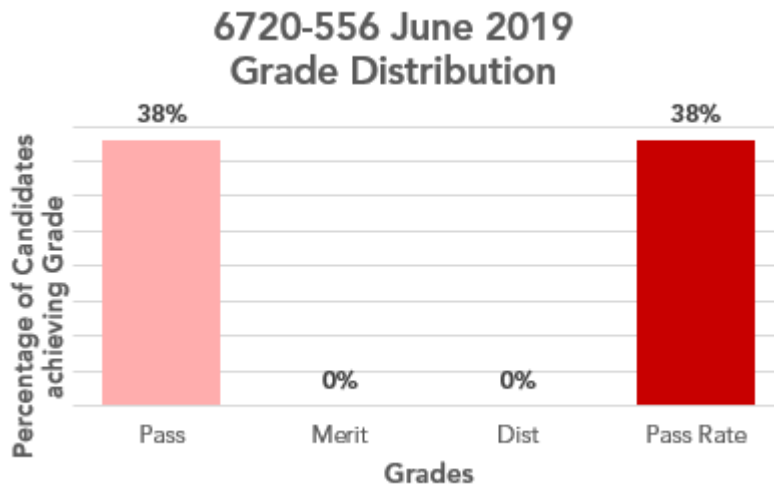


Assessment: 6720-556
Series: June 2019 (Summer)

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

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



Chief Examiner Commentary

6720-556 Level 3 Constructing the Built Environment – Theory exam (2)

Series 1 – March 2019

The question paper was structured in a similar format to previous series with questions that demanded written responses, annotated sketches and calculations, culminating in an extended response question in a synoptic contextualised setting.

The candidates' responses suggested an imbalance of knowledge and understanding across the four units that form a basis for the questions in this examination. Candidates appeared to be better prepared for questions that related to the learning outcomes of units 311 Graphical Communication and 320 Further Mathematics for the Built Environment. This was particularly evident where the candidates were expected to provide extended responses. The questions relating to aspects of civil engineering technology and structural mechanics were less well-answered, and centres are advised to consider how these areas are delivered to ensure depth of understanding.

To demonstrate their depth and breadth of knowledge and understanding more consistently, the candidates would benefit from reading the questions more thoroughly and recognising the key verbs. In particular, where a question requires a candidate to 'explain', it is usually the case that simply recalling knowledge or failing to offer an explanation means that full marks cannot be achieved. Another area for attention is sketching, where skills were generally weak.

Centre examination officers should emphasise to candidates that they can request additional sheets if they run out of space for this paper-based examination.

The responses to the extended response question showed a reasonable understanding of the benefits of a steel portal frame design and the key construction details. However, most candidates failed to discuss the structural issues to be considered when designing the steel portal frame and focussed on points that were irrelevant to the scenario. This resulted in most candidates achieving marks no higher than mark band 1.

Centres are advised to revisit current handbooks, test specifications, schemes of work and previous papers to fine-tune the delivery of their programmes. Getting candidates to embrace a CPD culture of exploring civil engineering technology and structural mechanics in general through site visits, videos and reading current textbooks will benefit them in future examination series.

Series 2 – June 2019

The question paper was structured in a similar format to Series 1 (March 2019) in that questions demanded written responses, annotated sketches and calculations culminating in an extended response question in a synoptic, contextualised setting.

The candidates' responses suggested a balance of knowledge and understanding across the four units that form a basis for the questions in this examination.

Candidates appeared to be better prepared than the previous series for questions based on the learning outcomes of Unit 309 Civil Engineering Technology. In particular, responses on the methods used to carry out deep excavations and the application of health and safety considerations were very good. This was evident where the candidates were expected to provide extended responses. Other areas of strengths included transposing formulae and differential and integral calculus.

Candidates showed a reasonable breadth of knowledge on Building Information Modelling (BIM) but failed to demonstrate depth of understanding of this subject.

The questions relating to aspects of structural mechanics were not answered as well. For example, candidates confused forces in a frame with loading and were unable to calculate the moment of inertia and the least radius of gyration. There appeared to be a lack of understanding of the parallel axes theorem and interpreting statistic data. Candidates also struggled with the equipment and processes involved in manual drawing.

To demonstrate their depth and breadth of knowledge and understanding more consistently, the candidates should read the questions thoroughly, enabling them to maintain focus on the key points. Similarly, an area for attention is sketching, where skills were generally weak.

The responses to the extended response question showed a reasonable understanding of road construction and the materials used. However, most candidates failed to discuss the design considerations of axially loaded columns for the steel framed building and focussed on points that did not relate directly to the scenario. Consequently, this resulted in most candidates not achieving high marks for this question.

Centres are advised to revisit current handbooks, test specifications, schemes of work and previous papers to fine-tune the delivery of their programmes. Getting candidates to embrace a CPD culture of exploring civil engineering technology and structural mechanics in general through site visits, videos and reading current textbooks will benefit them in future examination series.

Synoptic Assignments – Year 1

All Pathways

Grade Boundaries

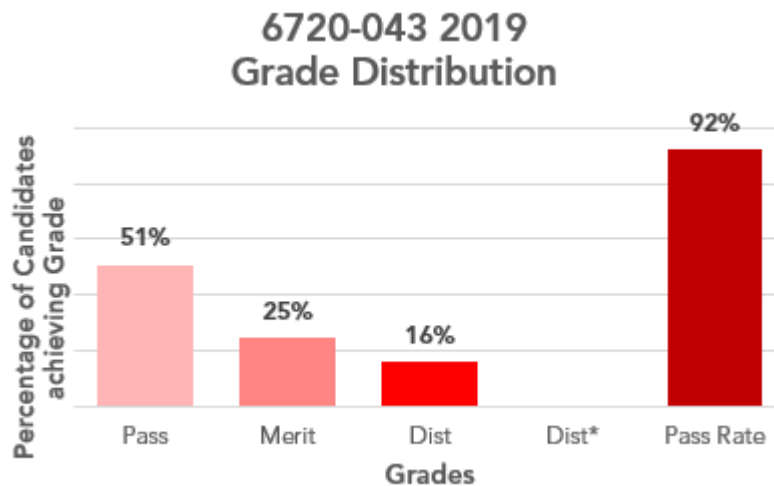
Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel.

Assessment: 6720-043

Series: 2019

Total marks available	60
Pass mark	24
Merit mark	34
Distinction mark	44

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



Principal Moderator Commentary

6720-043 Level 3 Constructing the Built Environment – Synoptic assignment (1)

The assignment brief was based on a project to create residential and commercial buildings in a town's high street. The brief was realistic, allowed candidates to consider what they could research and provided direction for the areas to be assessed within the tasks.

The overall performance for this synoptic assignment was generally high, with candidates performing well in task 1, producing good specification reports on the external wall and U-Value calculations.

AO1 Recall of knowledge

General recall tended to be good throughout the assignment and has improved this year. In particular, candidates showed good knowledge on the health and safety report and risk assessment in task 2. Higher end responses showed clear knowledge of the technical points required in the tasks. For example, specifying brickwork, blockwork and thermal insulation materials; health and safety and land surveying procedures. Less effective responses did not have the same level of technical detail.

AO2 Understanding of concepts, theories and processes

Overall, candidates didn't do so well on this assessment objective, except in the health & safety report and risk assessment. Higher end responses showed clear understanding (evidenced by reading and references) of woodchip fuel and community or district heating schemes and that woodchip fuel is from a renewable source, but is not specifically a zero carbon fuel. Less effective responses evaluated woodchip biomass boilers and district heating only in a superficial manner.

AO3 Application of practical/technical skills

There was a mixed approach Candidate performance for this assessment objective varied. Higher end responses did the levelling survey calculations correctly and used these to position the contour lines accurately on the scale drawing. Weaker candidates did the levelling analysis correctly without applying the detail of the calculations to the drawing.

AO4 Bringing it all together – coherence of the whole subject

Higher scoring candidates were able to grasp the passivhaus concept and draw conclusions from their calculations in the tasks and link them to the scenario. For example, linking the external wall specification (task 1) aimed at excellent energy efficiency standards along with the heating system subject matter (task 3).

Less effective responses connected some aspects of the various tasks, but in a limited way. For example, some candidates stated correctly that tasks 1 and 3 were both about heating energy efficiency, but without considering energy demand estimates (task 1) and energy supply systems (task 3) in combination.

AO5 Attending to detail/perfecting

There was a mixed response for this assessment objective. Higher scoring assignments showed good attention to detail by giving details of the various options for achieving a U-value that was as low as possible (task 1) for a sensible budget (task 4). Weaker responses did not connect construction quality with the available project budget.

Best practice

It was clear from the evidence submitted that centres have interpreted the assignments appropriately and the majority of candidates have approached each task fully and following the assignment briefs.

Centres are reminded that the information given within the assignment brief is designed largely to assess the candidates' ability to research, balance arguments, make decisions and specify actions to be taken.

There were no issues within the assignment that made it difficult for the candidates to complete or the moderators to moderate. Centres have risen to the challenge of marking holistically, and are improving on a year-by-year basis. CRFs and authenticity statements are rarely missing or incomplete and employer involvement issues are now well-understood. Also, there are far fewer examples of where a centre has been 'over-optimistic' in their assessment and moderators have found that centres are less likely to be assessing out of tolerance.

Centres are reminded that all evidence must be uploaded to the Moderation Portal in a format that can be accessed by all, for example Microsoft Word, Excel, PowerPoint or PDF. Any CAD drawings must be converted to PDF before being uploaded.

Synoptic Assignments – Year 2

Pathway 1 – Construction

Grade Boundaries

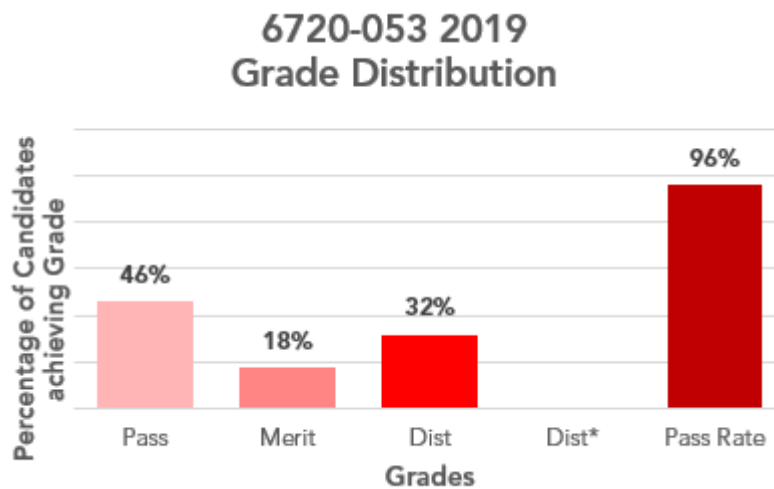
Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 6720-053

Series: 2019

Total marks available	90
Pass mark	24
Merit mark	34
Distinction mark	44

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



Principal Moderator Commentary

6720-053 Level 3 Constructing the Built Environment – Synoptic assignment (2)

The assignment brief asked candidates to advise on a building project for a commercial business and evaluate two options to demolish or refurbish. It was both credible and realistic and the language used was accessible to a typical Level 3 learner. It also allowed candidates to consider what they could research and provided direction for the areas to be assessed within the tasks.

The performance of this year's cohort was on par with previous years. The candidates did reasonably well in structural mechanics and building services, drainage for example, and demonstrated some understanding of site processes as well as design and specification.

AO1 Recall of knowledge relating to the qualification learning outcomes

The majority of candidates demonstrated a good range of knowledge from across the qualification, including structural mechanics, building services and business management techniques. There was good use of terminology throughout and the required documentation for tasks 1 and 2 was produced to a competent standard, which included a pre-construction report evaluating the two options and a presentation on ventilation. There was good knowledge of shear forces and bending moments.

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

There was evidence of understanding across the tasks of site processes as well as design and specification. Also, most candidates performed well in the structural beam calculations which is a good indicator of this assessment objective.

AO3 Application of practical/technical skills

The majority of candidates worked within industry guidelines and generally performed satisfactorily in tasks 3 and 4, the sketching/drawing tasks, although AO3 marks were a small part of overall assignment. Positive aspects included correct lines and proportions and areas of weakness were a lack annotations/dimensions and incorrect hatchings.

AO4 Bringing it all together – coherence of the whole subject

Candidate performance improved this year in terms of coherence. Those achieving higher marks demonstrated clear understanding of all the topics and this was reflected in the structural mechanics calculations, in the way they presented their findings and industry standard documentation.

AO5 Attending to detail/perfecting

The majority of candidates showed good attention to detail by checking their work, being accurate in their use of text and producing good quality drawings.

Generally, where candidates did not excel in the AO2 understanding objective, they then struggled on AO4 and AO5.

Best practice

It was clear from the evidence submitted that centres have interpreted the assignments appropriately and the majority of candidates have approached each task fully and following the assignment briefs.

Centres are reminded that the information given within the assignment brief is designed largely to assess the candidates' ability to research, balance arguments, make decisions and specify actions to be taken.

There were no issues within the assignment that made it difficult for the candidates to complete or the moderators to moderate. Centres have risen to the challenge of marking holistically, and are improving on a year-by-year basis. CRFs and authenticity statements are rarely missing or incomplete and employer involvement issues are now well-understood. Also, there are far fewer examples of where a centre has been 'over-optimistic' in their assessment and moderators have found that centres are less likely to be assessing out of tolerance.

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Pathway 2 – Design and Planning

Grade Boundaries

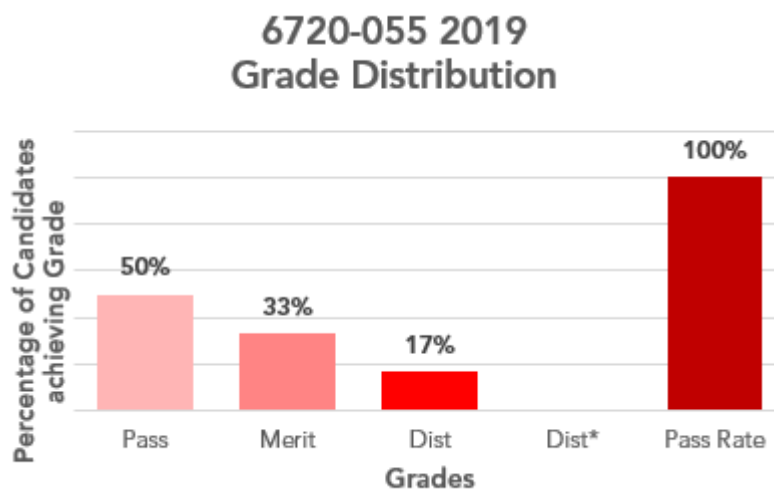
Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 6720-055

Series: 2019

Total marks available	60
Pass mark	24
Merit mark	34
Distinction mark	44

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



Principal Moderator Commentary

6720-055 Level 3 Constructing the Built Environment – Synoptic assignment (2)

The assignment brief asked candidates to advise on a building project for a commercial business and evaluate three options: to demolish, refurbish or sell the land. It was both credible and realistic and the language used was accessible to a typical Level 3 learner. It also allowed candidates to consider what they could research and provided direction for the areas to be assessed within the tasks.

This was the first time this particular synoptic assignment was taken, by a small cohort, so it could not be compared to previous years. All the candidates performed reasonably well, showing a good grasp of terminology and architectural design and planning, a key theme in the assignment given that this was the design and planning pathway.

AO1 Recall of knowledge relating to the qualification learning outcomes

All the candidates demonstrated a good range of knowledge from across the qualification, including civil engineering technology, building services and business management techniques. They used terminology and referenced approved documents correctly and showed knowledge of appropriate mechanical plant and site practices.

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

Most candidates demonstrated good understanding of architectural design, for example, making informative comparisons of modern methods versus traditional methods. There were good explanations of the principles underpinning the knowledge they had used.

AO3 Application of practical/technical skills

The majority of candidates worked within industry guidelines and generally performed well in the drawing tasks, presenting detailed and well produced section drawings of the walls.

AO4 Bringing it all together – coherence of the whole subject

Candidates' ability to link all their knowledge and understanding together was evident in their cost comparisons for demolition and new build compared to refurbishment and extension or land sale (task 1) and the setting out of the client's decision-making challenge, bringing together the advantages and disadvantages of all the options. Less effective responses described the project options separately without considering them in combination.

AO5 Attending to detail/perfecting

All the candidates showed a competent degree of accuracy and checking throughout their work.

Best practice

It was clear from the evidence submitted that centres have interpreted the assignments appropriately and the majority of candidates have approached each task fully and followed the assignment briefs.

Centres are reminded that the information given within the assignment brief is designed largely to assess the candidates' ability to research, balance arguments, make decisions and specify actions to be taken.

There were no issues within the assignment that made it difficult for the candidates to complete or the moderators to moderate. Centres have risen to the challenge of marking holistically, and are improving on a year-by-year basis. CRFs and authenticity statements are rarely missing or incomplete and employer involvement issues are now well-understood. Also, there are far fewer examples of where a centre has been 'over-optimistic' in their assessment and moderators have found that centres are less likely to be assessing out of tolerance.

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Pathway 3 – Civil Engineering

Grade Boundaries

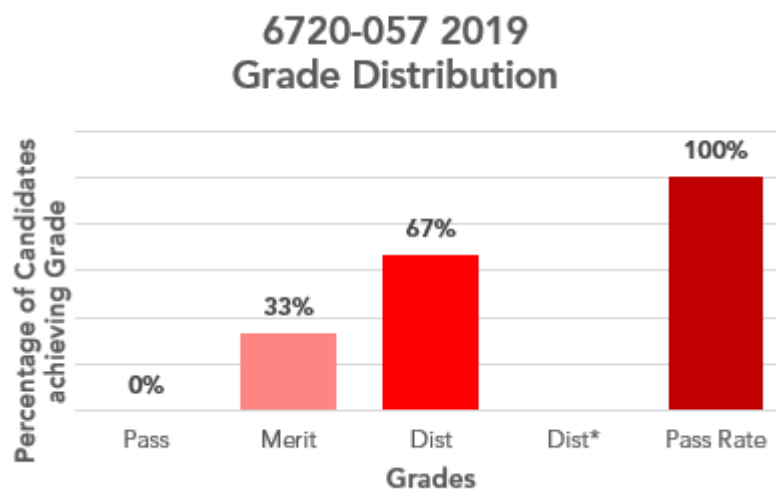
Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 6720-057

Series: 2019

Total marks available	60
Pass mark	25
Merit mark	34
Distinction mark	44

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



Principal Moderator Commentary

6720-057 Level 3 Constructing the Built Environment – Synoptic assignment (2)

The assignment brief asked candidates to advise on a building project for a commercial business and evaluate two options to demolish or refurbish. It was both credible and realistic and the language used was accessible to a typical Level 3 learner. It also allowed candidates to consider what they could research and provided direction for the areas to be assessed within the tasks

Candidates' overall performance for this synoptic assignment was encouraging given the challenging nature of the subject area with its focus on civil engineering, structural mechanics and civil engineering technology.

AO1 Recall of knowledge relating to the qualification learning outcomes

General breadth of recall was good throughout the performance of the cohort and has improved compared to the previous year. All candidates showed a reasonable breadth and depth of civil engineering knowledge and their mathematical knowledge, which underpinned many of the tasks, was competent.

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

Overall, understanding shown by candidates was good and illustrated a broadly confident and accurate use of mathematics in structural mechanics and civil engineering. There was also understanding of heavy elements in concrete, drainage, ground works and infrastructure demonstrated.

AO3 Application of practical/technical skills

Generally, candidates produced clear drawings with appropriate annotations/scale and demonstrated confident use of structural engineering formulae and calculations.

AO4 Bringing it all together – coherence of the whole subject

Generally, candidates were able to convert descriptions and explanations, drawn from their understanding, into conclusions. For example, in task 5, where they had to write a report, using calculations, that summarised the importance of statistical data in confirming that a concrete mix meets a compressive strength specification, analysis of statistics was clearly evident and sound.

AO5 Attending to detail/perfecting

All the candidates showed a competent degree of accuracy and checking throughout their work.

Best practice

It was clear from the evidence submitted that centres have interpreted the assignments appropriately and the majority of candidates have approached each task fully and followed the assignment briefs.

Centres are reminded that the information given within the assignment brief is designed largely to assess the candidates' ability to research, balance arguments, make decisions and specify actions to be taken.

There were no issues within the assignment that made it difficult for the candidates to complete or the moderators to moderate. Centres have risen to the challenge of marking holistically, and are improving on a year-by-year basis. CRFs and authenticity statements are rarely missing or incomplete and employer involvement issues are now well-understood. Also, there are far fewer examples of where a centre has been 'over-optimistic' in their assessment and moderators have found that centres are less likely to be assessing out of tolerance.

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