5220-21 Level 2 Technical Certificate in Digital Technologies

2019

Qualification Report

Contents

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:

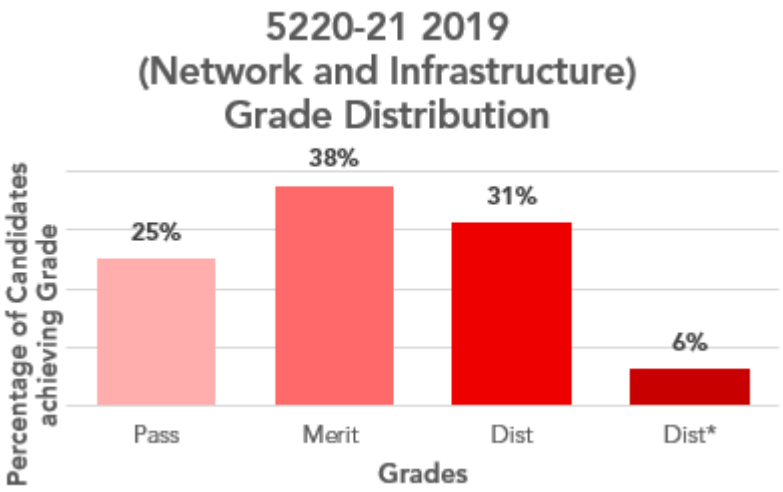
- Pathway 1
  - 5220-022/522 Level 2 Technical Certificate in Digital Technologies – Theory exam
    - March 2019 (Spring)
    - June 2019 (Summer)
  - 5220-023 Network and Infrastructure – Synoptic Assignment

- Pathway 2
  - 5220-022/522 Level 2 Technical Certificate in Digital Technologies – Theory exam
    - March 2019 (Spring)
    - June 2019 (Summer)
  - 5220-025 Software and Applications – Synoptic Assignment

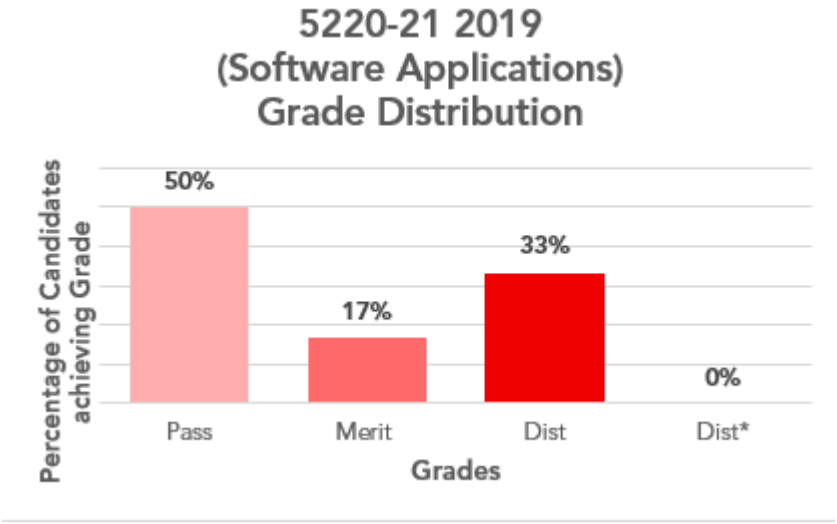
Qualification Grade Distribution

The grade distribution for this qualification is shown below:

5220-21 Technical Certificate in Digital Technologies (Network and Infrastructure) – Pathway 1



5220-21 Technical Certificate in Digital Technologies (Software Applications) – Pathway 2



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

5220-21 Technical Certificate in Digital Technologies

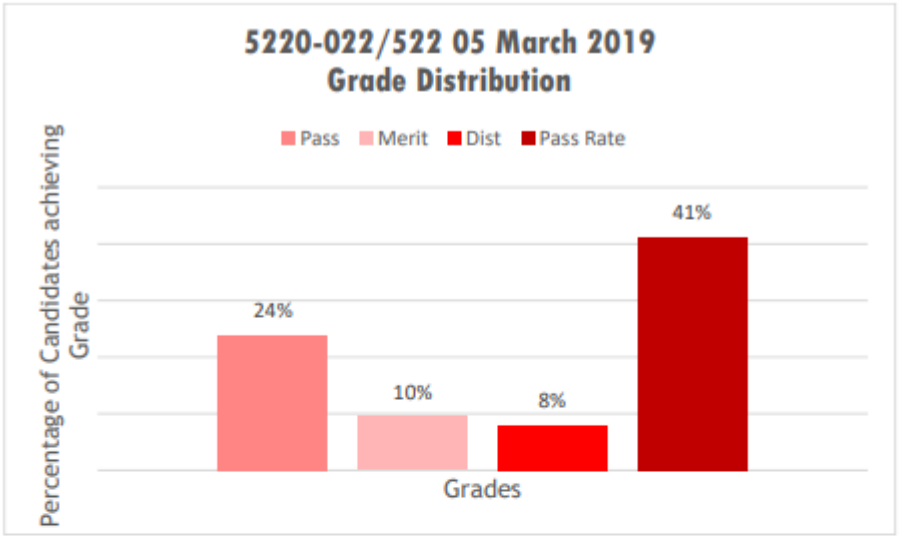
Grade Boundaries

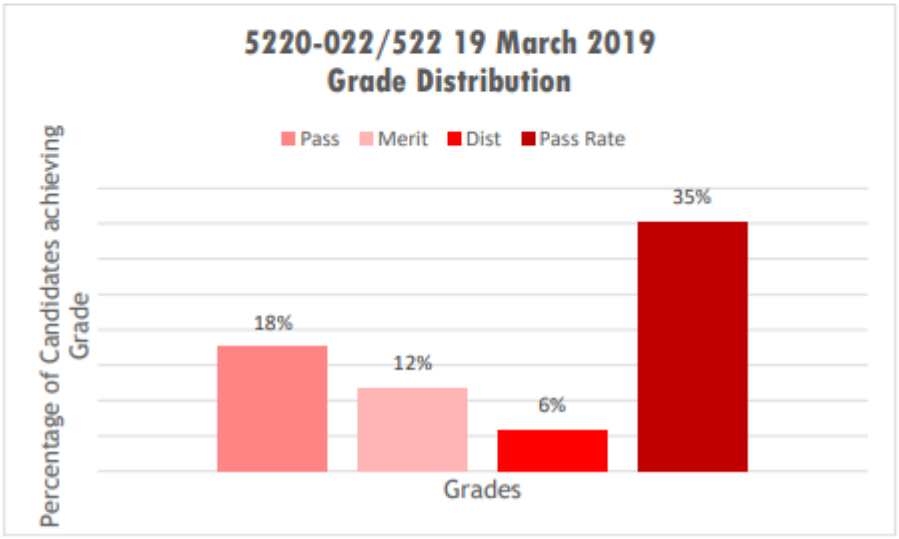
Assessment: 5220-022/522
Series: March 2019 (Spring)

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

Total marks availible	80
Pass mark	32
Merit mark	42
Distinction mark	53

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



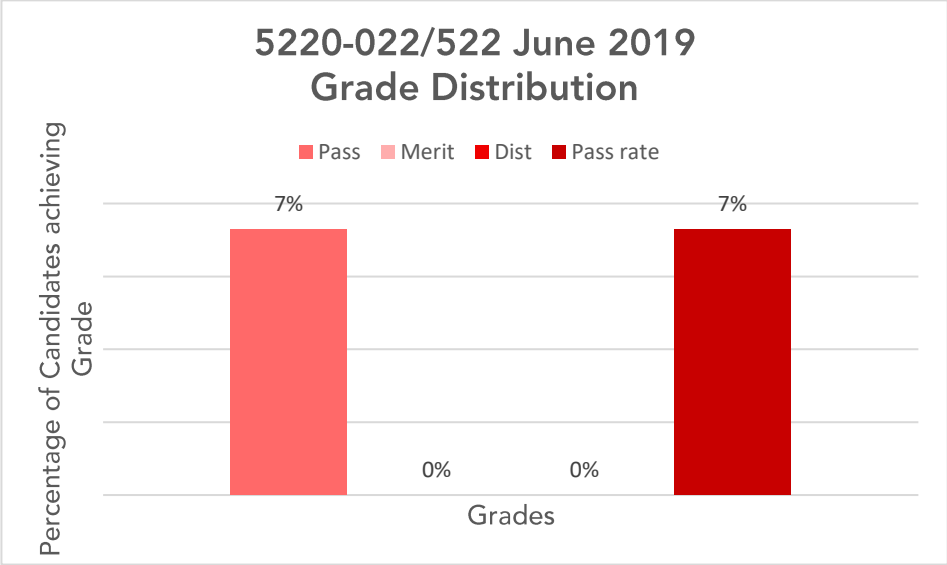


Assessment: 5220-022/522
Series: June 2019 (Summer)

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

Total marks availible	80
Pass mark	32
Merit mark	42
Distinction mark	53

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



Chief Examiner Commentary

5220-022/522 Technical Certificate in Digital Technologies - Theory exam

Series 1 – March 2019

The Theory test was completed over two separate sittings on different dates. The commentary here provides comments across both sittings.

The performance on these papers was disappointing but the paper was felt to be comparable to the previous series and where the examiner felt contained no issues.

The questions set were within the structured scope of the qualification and tested a fair range of content in line with the test specification. A broad range of marks were awarded, indicating that the test allowed stronger candidates to perform well, while challenging those who may have failed to revise to a sufficient degree.

Some of students taking this examination did well, and showed that they had been well prepared in terms of content coverage and exam techniques for the different types of questions. However, some cohorts were stronger than others and an indication of good processes of revision in their centres, whereas others were less prepared reflecting in the overall performance.

Where candidates used a paper-based test, some candidates had made a false start on their answers and then reviewed and altered their responses. This is a demonstration of very good examination strategy and an indication of some good preparation for this in those centres.

Candidate responses in questions dealing with AO2 Understanding were a little better in some cases as candidates seemed to have a good grasp of the type of response required and their answers scored well.

In a small number of cases, the candidates' answers to the scenario-based extended response questions against AO4 were well structured, showing that candidates had prepared a good strategy for these questions representing a significant proportion of the potential marks in the paper.

Many candidates failed to give the required number of items in factual answers against AO1, covering Recall. This indicates that they had failed to revise effectively.

There were some notable gaps in knowledge and understanding in questions covering core topics such as protection of data, confidentiality and policies. There were some very good responses in questions dealing with hardware and security. In some cases, candidates were only able to recall a limited number of items from a larger range and therefore failed to achieve full marks

Responses for questions addressing the candidates' understanding against AO2 questions were of variable quality. There were many cases where the candidates gave insufficient depth. It was noted that many candidates repeated items and although their wording was different the grade achieved was limited. In some cases, candidates only made 1 distinct point when dealing with questions covering understanding and this capped potential marks.

Many candidates failed to describe numbering systems sufficiently well whilst others demonstrated a fundamental lack of knowledge in this area. There was some confusion in candidates' responses to the question relating with compliance and some candidates failed to explain how legislation might affect it.

Some candidates were only able to give partial explanations of the use of firewalls in network security and many failed to identify the need to update anti-virus definitions regularly to maintain effective protection of a network.

In extended response questions, very few candidates were able to achieve marks in the higher bands, 2 and 3.

Many candidates attempted to deal with too many issues and failed to provide the analysis and discussion required to gain marks in the higher bands. Few candidates made use of the question scenario to support their answers and provide a structure that would allow them to build a fluid, logical response.

This was the case in both of the extended response questions in each paper, suggesting there was limited preparation around techniques needed to create a good answer.

Series 2 – June 2019

The performance of the cohort that sat this exam was poorer than that of the first test of the academic year. The candidates who sat this test underperformed in all assessment objectives.

Apart from questions addressing the use of mobile systems and application software, many candidates provided few items in their answers and a significant number offered no answers at all.

Some candidates were confusing the command verbs of the questions. They gave full descriptions or justifications when a statement type response was required (AO1 questions) and provided more detail for which they would not be awarded additional marks. On the other hand, in questions where candidates were given the opportunity to demonstrate their deeper understanding of topics (AO2 questions) they often provided partial answers, failing to provide justification of their points and thus missed the opportunity to score full marks. Candidates would benefit from practising exam techniques. They need to be encouraged to spend time reading the questions thoroughly and consider the command verbs before attempting their answers.

Some candidates displayed good breadth in knowledge (AO1 questions) and depth of understanding (AO2 questions) providing well-constructed answers.

Technical terms were generally used well and the candidates were able to use generic industry terminology rather than brand names. Some lower scoring candidates failed to give generic industry terminology for technologies and used brand or product names instead. This lack of correct use of generic industry terminology in some cases highlights the need for more attention to be given to this specific issue during delivery.

Higher scoring candidates showed understanding of functionality of hardware and software and could describe its purpose.

In questions where candidates are given the opportunity to demonstrate their deeper understanding of topics (AO2 questions), performance was also very poor. In many cases, candidates failed to demonstrate sufficient understanding especially when asked to explain the effect or impact of a topic when applied in a working environment.

Key areas of improvement for candidates would be in topics covering systems architecture, networking, security, system administration and backup. No topic covered in the test produced uniformly good responses.

For the extended response questions, candidates' responses had insufficient depth and in many cases were factual lists of items. Whilst answers were mostly related to the scenario, they lacked in justification of advantages and disadvantages of the solutions offered for the topics (computer system network and software requirements). Some candidates provided either irrelevant answers or failed to provide an answer at all. Very few candidates achieved marks in the higher bands where explanation and discussion are recognised.

When responding to these questions, candidates should consider the scenario and should include a wide range of considerations, addressing the key points from the scenario. They should include clear justifications to demonstrate their knowledge and understanding from across the content.

Synoptic Assignments

5220-21-023 Technical Certificate in Digital Technologies (Network and Infrastructure) - Pathway 1

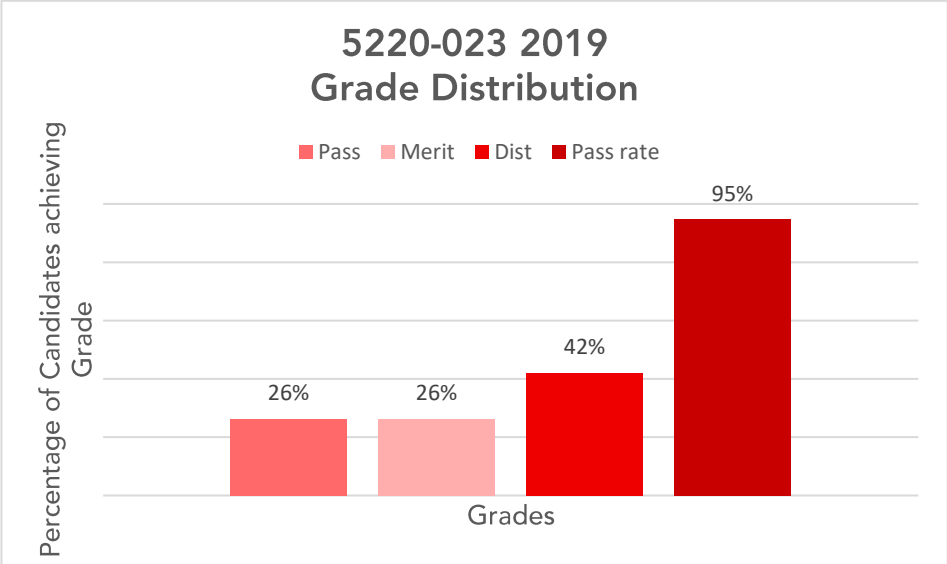
Grade Boundaries

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

Assessment: 5220-023
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

This was a small cohort, and, in a small number of cases, the uploading of the required evidence was late, and this caused delays in the moderation processes.

The candidate evidence was effective and allowed moderation of centre awarded marks. The candidate reports were effective in the presentation of evidence of having completed the required tasks across the range of the synoptic assessment. Generally, evidence was well organised, and the files uploaded were given effective names, allowing the files to be related to the correct tasks.

The quality of the completed work submitted varied by centre. In some other centres, evidence was incomplete or insufficient to demonstrate that candidates had completed their tasks to the required standard.

Higher scoring candidates demonstrated their knowledge and recall against AO1 using appropriate and accurate technical language in the correct context. They demonstrated their understanding against AO2 by going beyond the statement of mere fact. They explained the terms they used and, in the best of cases, analysed their effectiveness.

The evidence submitted for this pathway relies heavily on the use of images used to record individual candidate progress in practical tasks for the grading of AO3, Skill. Higher scoring candidates strengthened their marks against this objective through use of comprehensive testing of the systems. Such work also contributed to marks gained against AO4 and AO5.

In the better examples seen, the images were of good quality, allowing clear assessment of the task completion. It was also noted that higher scoring candidates had provided relevant and useful captions for the images, thereby given good evidence of their understanding of the requirements of the tasks. It was noted that the systems of naming of files was much better in this submission than in previous years, making the moderation process more straightforward.

Higher scoring candidates used the protocols and models of networking well. This Pathway relies on accurate use of technical language in the text written by the candidate. Higher scoring candidates demonstrated good attention to detail by providing full definitions of the terms before using the acronym to represent it. Higher scoring candidates made use of citations and references to acknowledge external sources of information used in their research, clearly addressing the attention to detail considered against AO5.

Higher scoring candidates used high-quality language with good use of referencing within report layouts. Even if the layout and style are not perfectly aligned with a standard, this practice should be encouraged in all candidates. The writing included explanation and justification, demonstrating the understanding required to achieve marks in the higher bands, particularly for Assessment Objective 02, understanding and Assessment Objective AO4, synthesis.

Lower scoring candidates failed to provide sufficient depth in their answers and therefore failed to achieve high marks in the assessment objectives where discursive skills and analysis were required.

5220-21-025 Technical Certificate in Digital Technologies (Software Applications) - Pathway 2

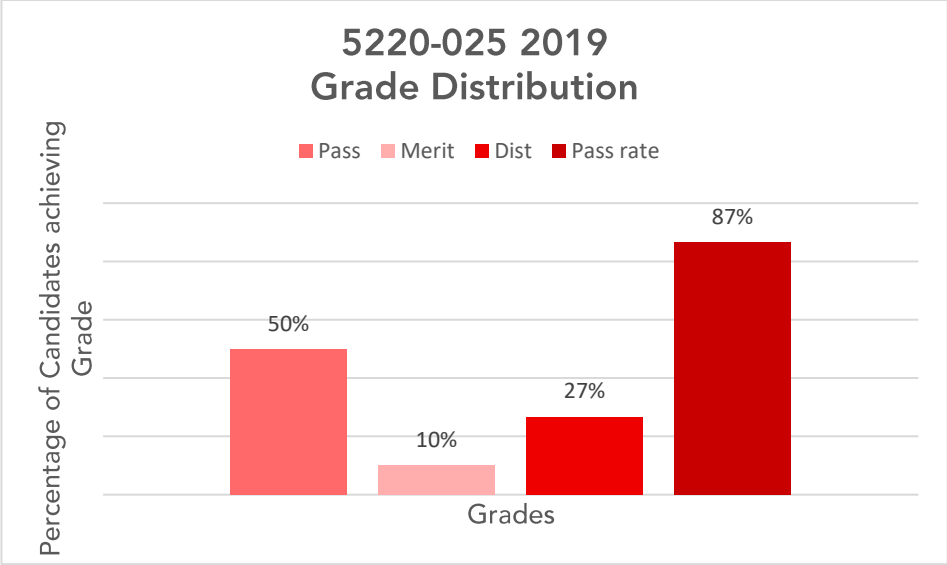
Grade Boundaries

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

Assessment: 5220-025
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

The cohort was quite small, and a large number of entered candidates did not submit evidence for the assignment.

A range of approaches were used to produce the required software solution. In some cases, the evidence presented was not in line with the assignment instructions and caused significant issues in the validation of marks in moderation. Centres must submit the required evidence in line with the instructions given for each Task in the assignment.

Some centres relied on the submission of complete Visual Studio Solution folders to give evidence of the code that had been created. This type of submission may be unsafe in terms of system security, and it does not follow the instructions given in the assignment.

The candidate reports were effective in the presentation of evidence of having completed the required tasks across the range of the synoptic assessment. Where the evidence was presented in the required format, it was easy to consider in moderation. There was some excellent use of well-formed code with consistent style of variable naming and commentary to support the reader.

Performance against AO1, Knowledge and recall, was demonstrated in higher scoring candidates through use of accurate and appropriate technical language. Lower scoring candidates used more general terms in their planning and written work. Centres should focus on the acquisition of the language terms outlined in the unit specifications.

Higher scoring candidates had made good use of annotated images, drawings and diagrams and had referred to them in their writing. Higher scoring candidates showed clear evidence of planning in advance of the creation of content. This work contributed to marks against AOs 3, 4 and 5.

Understanding, addressed in AO2, was seen where the naming conventions. In the best work, code was well-formed, correctly commented and used consistent naming styles using Camel and Pascal casing. Lower scoring candidates showed little care in the use of naming and this had a negative effect on marks against AOs 2, 3, and 5.

Some candidates failed to provide sufficient depth in their essay answers and therefore failed to achieve high marks in the assessment objectives where discursive skills and analysis were required, such as AOs 2, 4 and 5. This was most notable in review processes. However, in some cases, the answers were thoughtful and comprehensive.

In general, the candidates produced some good work and it was evident that centres had implemented a planning structure that allowed all candidates to attempt all of the required tasks in a timely manner. Such an approach helps candidates to think of the assignment as a ‘whole’ project that needs to use all aspects of the Software Development Life Cycle.

Observation forms were used effectively to confirm the completion of the tasks. All forms were appropriately signed by candidates and staff.

It is necessary to ensure that observation records contain specific and detailed information on how the candidate met the required standards. This can be achieved by centres running standardisation processes to share good practice where it is seen.