8202-20 Level 2 Technical Certificate in Electrical Installation

2025

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.

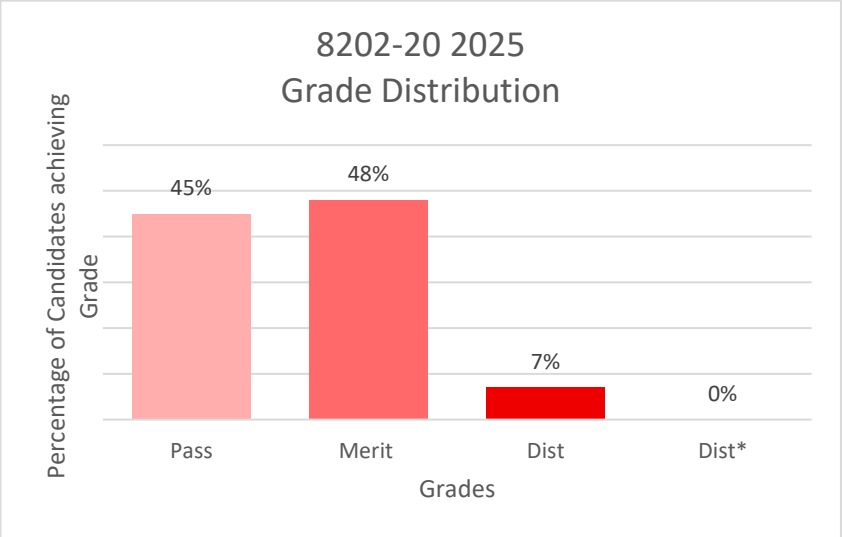
This report provides general commentary on candidate performance in both the synoptic assignment and theory exam. It highlights common themes in relation to the technical aspects explored within the assessment, giving areas of strengths and weakness demonstrated by the cohort of candidates who sat assessments in the 2025 academic year. It will explain aspects which caused difficulty and potentially why the difficulties arose.

The document provides commentary on the following assessments:

- 8202-520 Level 2 Electrical Installation – Theory Exam
    - March 2025 (Spring)
    - June 2025 (Summer)
- 8202-021 Level 2 Electrical Installation - Synoptic Assignment

Qualification Grade Distribution

The approximate 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

8202-520 – Electrical Installation

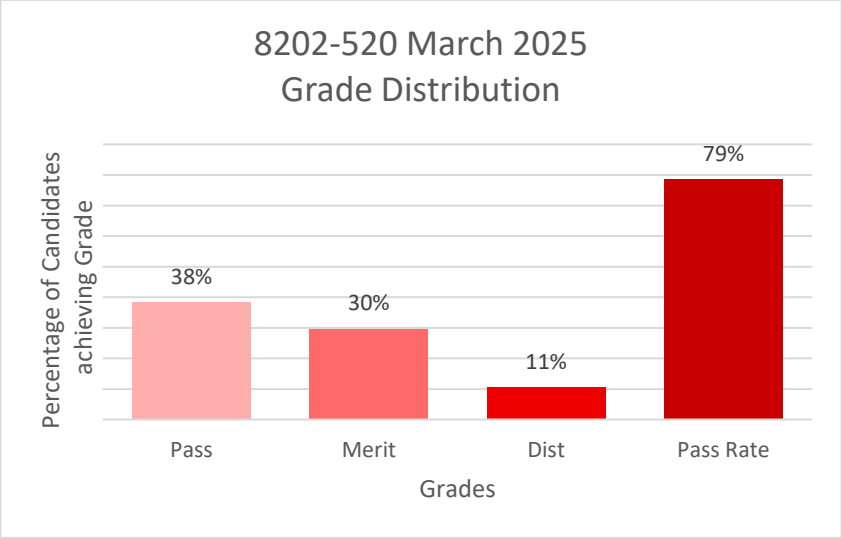
Grade Boundaries

Assessment: **8202-520**
Series: **March 2025 (Spring)**

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

Total marks available	60
Pass mark	27
Merit mark	35
Distinction mark	44

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

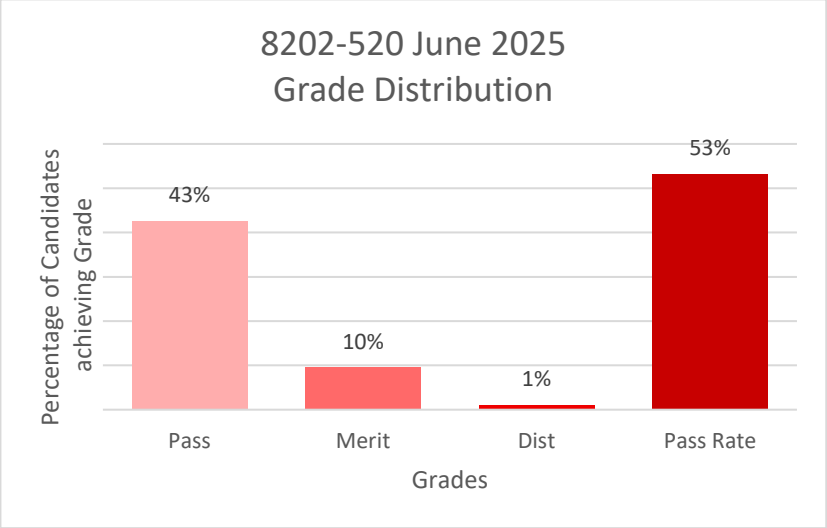


Assessment: **8202-520**
Series: **June 2025 (Summer)**

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

Total marks available	60
Pass mark	27
Merit mark	35
Distinction mark	44

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



Chief Examiner Commentary

8202-520 – Level 2 Electrical Installation – Theory Exam

Series 1 – March 2025

The March 2025 multiple-choice question (MCQ) paper was comparable to all series taken in 2024. Like previous series, this series explored a good range of the test specification, covering similar subjects.

Generally, candidates demonstrated high levels of recall across the question paper as well as recall of most formulae. Questions based on understanding and applied knowledge seemed to provide more of a challenge to candidates in this series but, even then, responses showed some good areas of knowledge from across the specification.

Areas of strength included site roles and responsibilities, health and safety requirements, basic mathematical principles, renewable energy, drawing scales and basic Ohm's law in familiar situations.

Areas of weakness included transmission voltages, power dissipated in DC circuits and circuit installation requirements, such as floor areas served by ring-final circuits. Subjects where high-scoring candidates did well, but proved a challenge for lower-scoring candidates, included component identification, operating principles of devices/components, protective devices, calculating EMF and connection/termination methods. It was evident that higher-scoring candidates were able to interpret technical language better.

As with previous series, particular areas of concern from the question paper were knowledge and understanding of magnetic principles, including Fleming's rules and the properties of a sine wave. Other areas that also attracted surprisingly poor responses were linked to identifying intake arrangements, cable fixing methods and external influences. Candidates also found simple tasks difficult to apply, such as calculating Ohm's law when applied to realistic scenarios.

Centres are encouraged to pay particular attention to the correct technical terminology as slang or colloquial terms may be used in workshop environments. These include using 'live' instead of 'line' or using 'live' in an incorrect context. Candidates are also often confused when referring to 'extra-low voltage' as 'low voltage'. Other areas that require more attention include differentiating between magnetic flux and flux density, or terms such as 'open' and 'closed' instead of 'on' and 'off'. Reinforcing the correct terminology to candidates will help this.

Candidates generally seem to favour practical learning, so linking some of the understanding into that practical environment may help reinforce learning in areas that are traditionally challenging. This could include calculating cable resistances before measuring them on installed circuits, measuring the effects of series and parallel conductors, or reinforcing types of termination, fixings and support methods.

Candidates should be reminded that the Permitted Reference Materials for this examination are: BS 7671 and IET On-Site Guide.

Centres are reminded of the City & Guilds Technicals 'Exam Guides' available here
Technicals in Building Services Engineering qualifications and training courses | City & Guilds (cityandguilds.com)

Series 2 – June 2025

The June 2025 multiple-choice question (MCQ) paper was very comparable to the Spring 2025 paper and all series taken in 2024.

Good areas of knowledge recall were shown by most candidates in questions relating to safe isolation, roles within industry, general mathematical formulae, and resistivity. Areas of the test specification where good recall was demonstrated by mainly high-scoring candidates included applications of fire extinguishers, the national grid, use of indices, and IP codes.

Areas where lower-scoring candidates indicated better knowledge and understanding than expected, especially when compared to the performance of higher-scoring candidates, included the calculation of ladder lengths using Pythagoras' theorem, selecting cable support systems, and the use of mutual induction in transformers.

Areas of strength when demonstrating understanding of the subjects was shown in areas such as the suitability of wiring accessories, standard circuit theory e.g. cooker circuits, contractual agreements, cable selection based on the environment, and use of IP codes.

Candidates need to ensure they understand and use **all** the key words in a question. As an example, one question required candidates to calculate the overall earth fault loop impedance (Z_s); many seemed to confuse the value of Z_s with the value of Z_e, with many candidates taking the value of R_1+R_2 away from the Z_e, rather than adding them together. This was unusual for what should be a well-known formula.

One subject area that performed particularly poorly was the ratings of protective devices. In addition to this, few candidates were able to identify that a 6 A RCBO was used for lighting circuits with many choosing socket-outlet circuits for their application. Earthing arrangements also proved challenging to candidates.

Areas of weakness in science and principles included the application of Fleming's rules, in particular which rule applies to which situation. Other challenging areas included the effects of parallel resistors on circuit voltage, and identifying electronic component symbols. All these areas attracted poor scores.

Normally, candidates perform well in areas of the test specification linked to practical applications, but areas of weakness linked to these subjects included the use of a bending spring, features of metallic trunking, cable support systems, and the application of a hospital saddle. One area that seems to constantly attract a mixture of responses are questions linked to insulation displacement connections, and this series was no exception.

Candidates should be reminded that the Permitted Reference Materials for this examination are: BS 7671 and IET On-site Guide.

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Synoptic Assignment

8202-021 – Electrical Installation

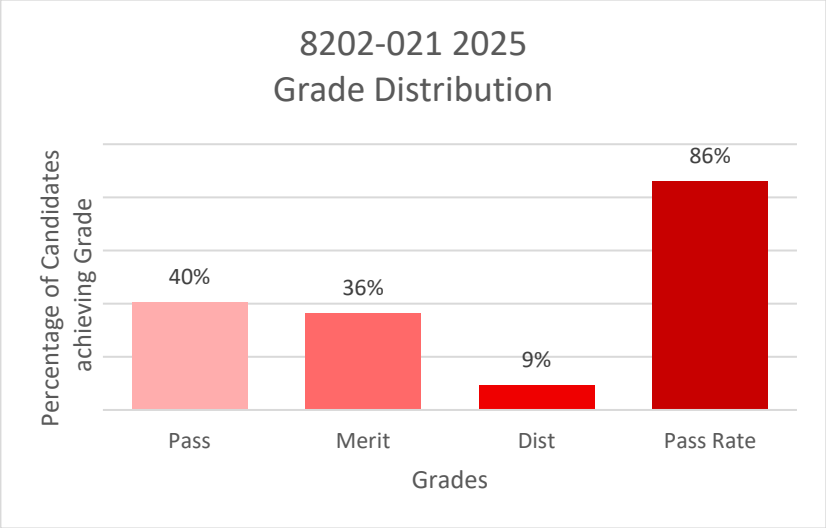
Grade Boundaries

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

Assessment: **8202-021**
Series: **2025**

Total marks available	60
Pass mark	27
Merit mark	38
Distinction mark	49

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



Principal Moderator Commentary

The synoptic assessment for 2025 was seen as very comparable to those taken in 2024 and 2023. The performance was seen as slightly better to last year in terms of the candidates.

Centres sometimes had used documentation from previous assessment series which, while this did not affect the validity of the work and marking, it made it more time-consuming to review. Centres **must** always use the most up-to-date documentation for each series and carefully read the centre guidance to identify the forms of evidence that require submission, and when and how photographic evidence is taken.

Candidates generally performed well across the assessment objectives (AOs) and the following points were noted:

- Limited recall (AO1) was observed, as evidenced by frequently inaccurate usage of technical vocabulary in materials lists and reliance on reference sources, such as the IET On-Site Guide (OSG), when determining cable conductor sizes. Positively, there was a noticeable increase in candidates performing design calculations independently rather than solely referring to table 7.1. Additionally, many candidates addressed the RCD selection task by referencing details from the OSG, albeit with minimal interpretation.

- In Task 1, candidates often referenced the OSG instead of applying it to the scenario when addressing RCD protection, which did not fully demonstrate their understanding (AO2). Many candidates described the operation of an RCD and not why RCD protection at a specific residual current rating should be provided within the installation. Some understanding was shown through calculations of circuit conductor sizes, rather than by simply recalling values from table 7.1 in the OSG.

- Performance (AO3) was a notable area of strength with candidates demonstrating good skills across all practical tasks, especially Task 4 which was the full 6-hour installation task. In some cases, however, centres allowed significant additional time to complete Task 4, which was not taken into account during marking.

- Opportunities to evidence understanding in performance (AO4) is still a challenge for many centres despite indicative evidence in the marking grids. Many centres seem to have difficulties marking this AO, with many centres incorrectly citing evidence that demonstrated AO2 understanding from Task 1, rather than noting evidence of understanding being linked to performance during practical tasks. Such evidence may include completing tasks in a logical sequence, thorough planning, or considering circuit layout when installing conductors through containment, among other relevant examples. If AO4 examples are not properly documented on PO forms during the performance, this opportunity for higher marks is lost.

- Attention to detail (AO5) is an AO that is consistently demonstrated and well-documented on all forms of evidence.

- Some candidates approached the reflective evaluation task as a personal account of their academic year, rather than focusing on the four tasks comprising the synoptic assessment. Among those who addressed the assessment objectives, many emphasised successful aspects but did not sufficiently reflect on areas for improvement.

Centres are reminded to document **all** instances of prompting and verbal questioning during assessments on the practical observations forms and ensure that the candidate record forms explicitly align with the marking grids. This ensures that all candidates are marked fairly on their synoptic performance in time for moderation.