

0171-016/516 – Level 3 Land-based Engineering – Theory Exam (1)

March 2022

Chief Examiner Report

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Introduction

This document has been prepared by the Chief Examiner, it is designed to be used as a feedback tool for centres to use in order to enhance teaching and preparation for assessment. It is advised that this document be referred to when preparing to teach and then again when candidates are preparing to sit examinations for City & Guilds Technical qualifications.

This report provides general commentary on candidate performance and 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 the **March 2022** examination series. It will explain aspects which caused difficulty and potentially why the difficulties arose, whether it was caused by a lack of knowledge, incorrect examination technique or responses that failed to demonstrate the required depth of understanding.

The document provides commentary on the following assessment;
0171-016/516 Level 3 Land-based Engineering – Theory Exam (1).

Theory Exam – March 2022

Grade Boundaries and distribution

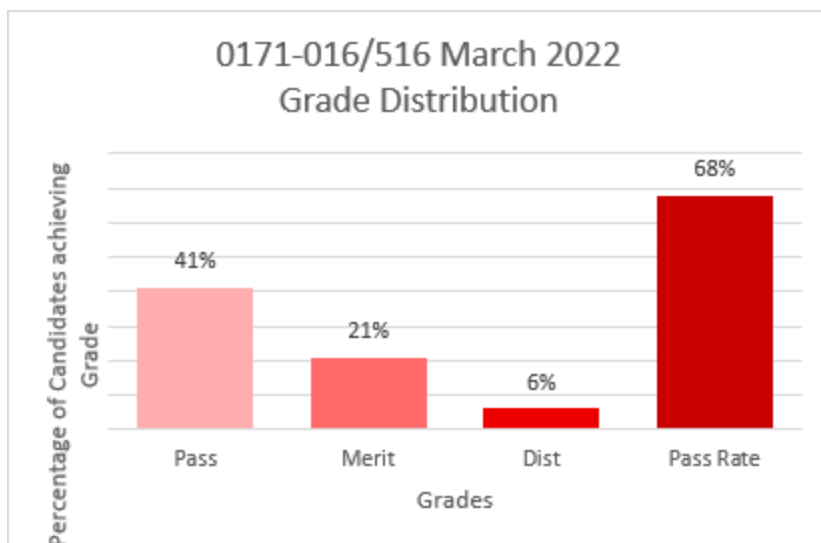
Assessment: **0171-016/516**

Series: **March 2022**

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

Total marks available	60
Pass mark	24
Merit mark	32
Distinction mark	41

The graph below shows the approximate distribution of grades and pass rates for this assessment:



Chief Examiner Commentary

General Comments on Candidate Performance

Assessment component: 0171-016/516

Series 1 (March)

The March 2022 examination paper covered a good range of learning outcomes across the qualification and was similar to the comparable previous series in terms of range, suitability and level. Overall candidates performed well on this paper, with higher achievement rates than in the previous March series.

Candidates performed well in areas which included basic electrical knowledge as well as standard identification of images. However, some candidates confused variable displacement pump term as opposed to gear type term. The topic of steering geometry showed a positive differentiation between the higher and lower scoring candidates. Overall candidates performed well on the straightforward land-based engineering knowledge questions.

Candidates did however struggle to expand on their electrical knowledge. Many candidates did not attempt to provide an answer in some areas, especially concerning electronic components. With candidates showing limited knowledge of battery chemical operation and how to apply the knowledge to practice. Candidates also showed inconsistent knowledge and understanding related to specific components of pneumatic braking systems.

Extended Response Question (ERQ)

The extended response question (ERQ) highlighted the above strengths and weaknesses, with basic tests carried out gaining candidates marks but then limited technical understanding of the electronic and hydraulic systems being separated to produce a logical diagnostic plan. An example is using a diagnostic tool too early in the process before basic checks were investigated. Very few candidates provided any technical data or typical test figures, those that did achieved the higher band grades.

Centres are advised to help candidates develop their use and understanding of technical terminology across the qualification. Candidates would further benefit from practising examination techniques when preparing for this exam to fully understand the requirements of the question before attempting to answer, particularly those that require candidates to demonstrate reasoning in support of statements.

Past papers and marking schemes are available on the City and Guilds website which should be used for exam practice.

City & Guilds also offers a technical exam guide to support the work on the exam technique.

All documents are available to download from [Technicals in Agriculture and Land-based Engineering qualifications and training courses | City & Guilds \(cityandguilds.com\)](https://www.cityandguilds.com/qualifications/technical-qualifications-and-training-courses)

Past papers and marking schemes: Documents – Level 3 – Assessment materials – Past Papers tabs

Exam guide: Documents – Level 3 – Assessment materials