0171-015/515 – Level 3 Advanced Technical Extended Diploma in Land-Based Engineering (1080)

March 2020

Examiner Report

Contents

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 2020** 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;
0171-015/515 Level 3 Land-Based Engineering-Theory Exam (1)

Theory Exam – March 2020

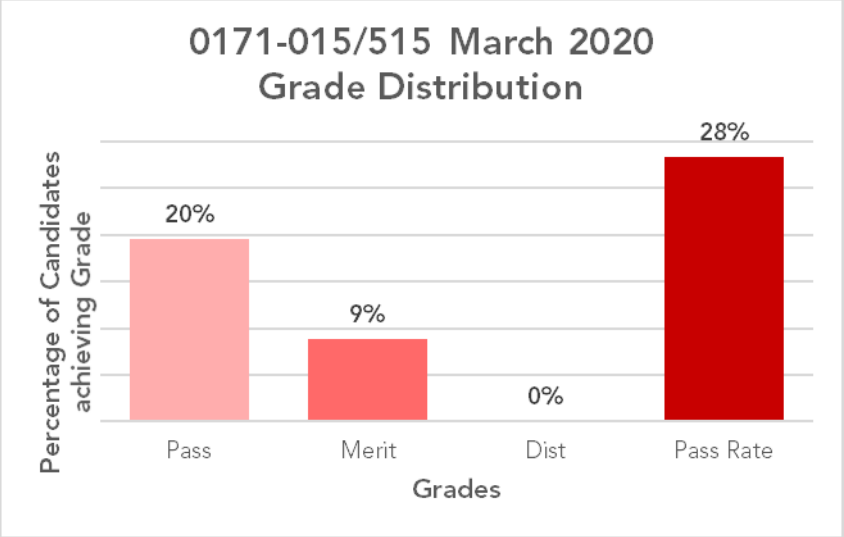
Grade Boundaries and distribution

Assessment: **0171-015/515**
Series: **March 2020**

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

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	42

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: 0171-015/515

Series 1 (March)

The 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.

Candidate performance is considerably poorer in this series than in the previous ones. Candidates showed a lack of knowledge and depth of understanding across the paper.

This year's cohort, overall, were challenged with the maths and science-based questions as well as the extended response question but performed better in topics related to the application of knowledge to practice and mechanics.

Not many strengths have been observed in candidate responses in this series. However, the majority of candidates were able to interpret the data from the table and carry out the required calculations, especially related to mean. A very limited number of candidates scored well on the maths and science topics but lost marks with the mechanical and application based questions.

The majority of candidates did not demonstrate knowledge or depth of understanding of mathematical and science-based topics, this included applying the correct formula, units of measurement, rounding and conversion of measurement units, eg mm to cm and metric to imperial conversion. This seems to be a recurring theme. For the application and mechanically based questions, candidates did not consistently show knowledge or depth of understanding to achieve higher-level marks; current emissions technology particularly proved a weak area. Topics covering traditional and current concepts, for example causes and effects of cavitation, functions of a lubricant and causes of overheating were answered with mixed achievement with no particular strong answers emerging.

The extended response question provided an opportunity for candidates to demonstrate their knowledge and understanding of a systems operation in relation to fault-finding and the ability to give typical readings in a scenario regarding an agricultural tractor with a liquid cooling system, which is overheating over a range of operating loads from light to maximum load. The majority, but not all of the candidates, were able to discuss the preparatory steps and initial diagnostic checks but did not show an understanding of liquid cooling system diagnostics and typical expected readings.

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. Explain type of questions require candidates to demonstrate reasons and justifications to support the statements or cause and effect.

Centres are reminded of the City and Guilds Technicals exam guides' available here

https://www.cityandguilds.com/-/media/productdocuments/land_based_services/agriculture/0171/level_3/assessment_materials/0171-016_and_516_technicals_exam_document_2019_v2-pdf.ashx