

1145-20 Level 2 Technical Award in Engineering

2019

Qualification Report

Contents

Introduction	3
Qualification Grade Distribution	4
Theory Exam	5
Grade Boundaries	5
Chief Examiner Commentary	7
Synoptic Assignment	9
Grade Boundaries	9
Principal Moderator Commentary	10

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.

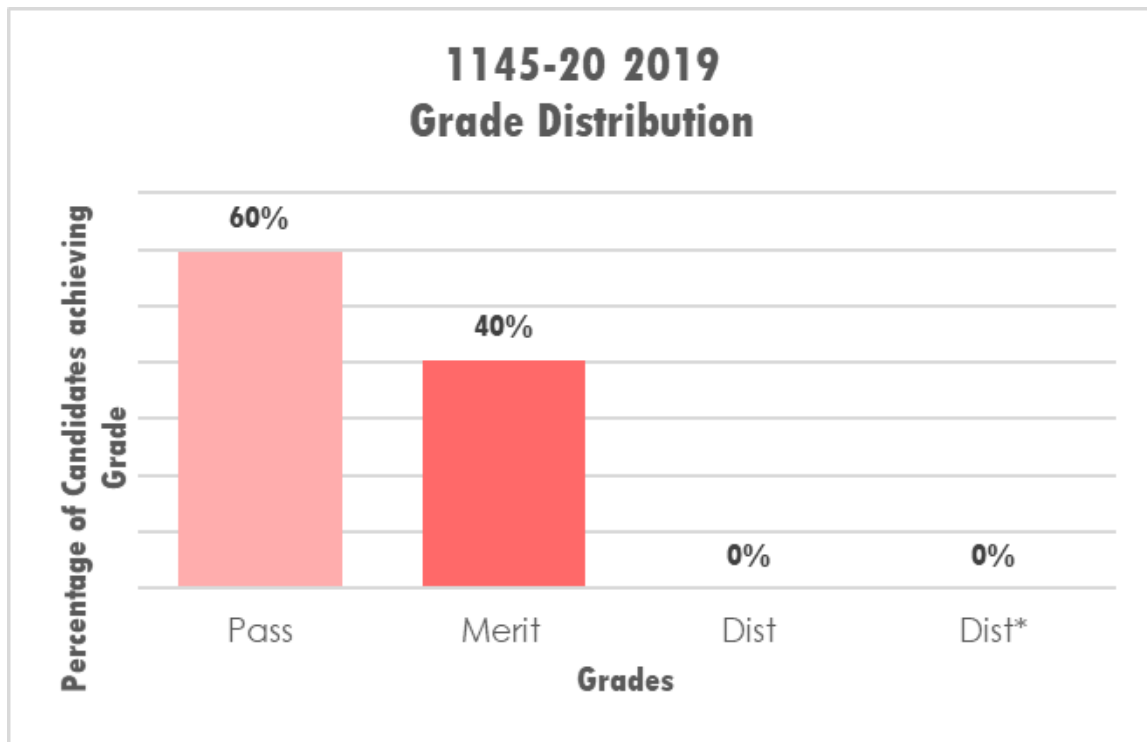
This report provides general commentary on candidate performance in both the synoptic assignment and theory exam. It highlights common themes in relation to the technical aspects explored within the assessment, giving areas of strengths and weakness demonstrated by the cohort of candidates who sat assessments 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:

- 1145-502 Level 2 Engineering - Theory exam (1)
 - March 2019 (Spring)
 - June 2019 (Summer)
- 1145-001 Level 2 Engineering - Synoptic assignment (1)

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

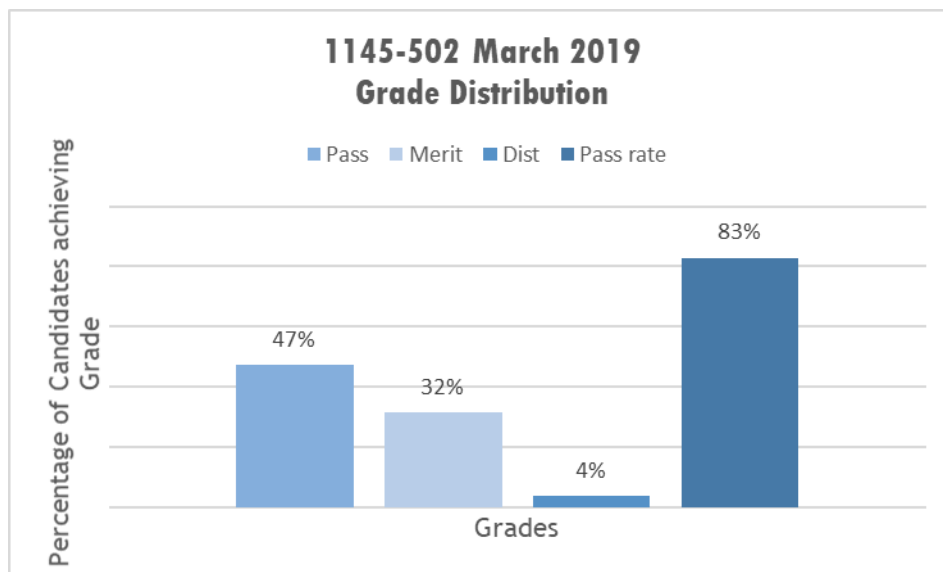
Grade Boundaries

Assessment: **1145-502 Level 2 Engineering – Theory exam (1)**
Series: **March 2019**

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

Total marks available	80
Pass mark	26
Merit mark	41
Distinction mark	56

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

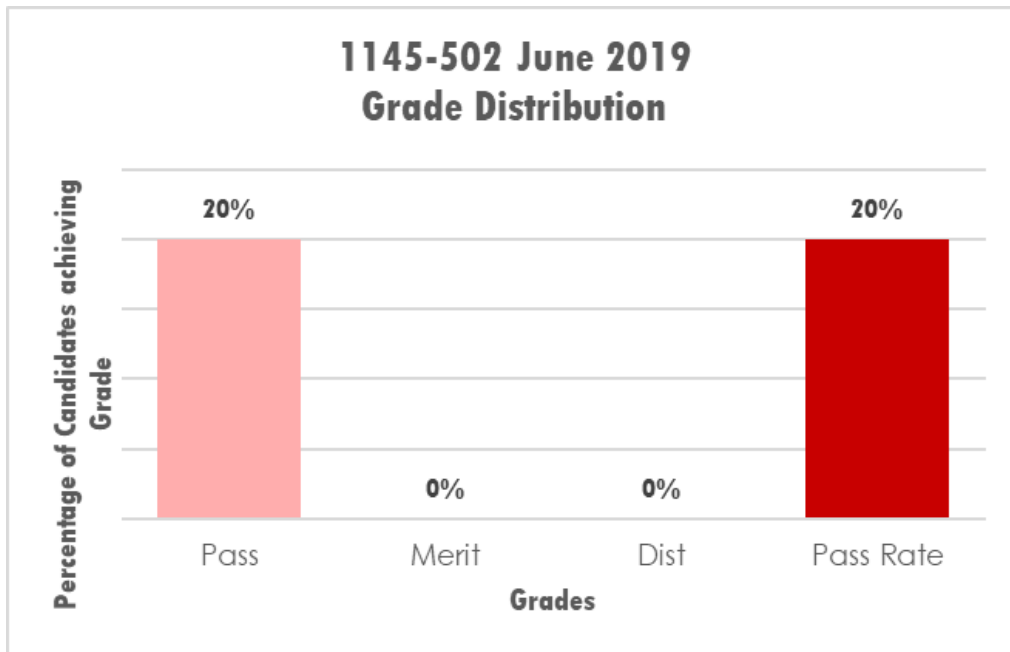


Assessment: **1145-502 Level 2 Engineering – Theory exam (1)**
Series: **June 2019**

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

Total marks available	80
Pass mark	29
Merit mark	42
Distinction mark	56

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



Chief Examiner Commentary

General Comments on Candidate Performance

Assessment component: 1145-502 Level 2 Engineering – Theory exam (1)

Series 1 (March 2019)

The paper as a whole and the individual questions met the requirements of the specification and were pitched appropriately for this level. The paper was comparable with the previous series.

The cohort for this paper was relatively small. It is therefore difficult to draw statistical conclusions regarding candidate performance.

Overall, there was a mixed response to this question paper. Candidates generally showed a good breadth of knowledge in questions relating to units and measurement, material types and manufacturing processes. However, on questions where candidates were asked to explain or evaluate a topic, most would have benefited from extending their responses further to show a greater depth of understanding.

Candidates generally struggled with questions relating to engineering drawings, electronic components and the use of design criteria. There were several questions where candidates misinterpreted the question and gave answers which were well constructed, but related to a different process or topic. Some candidates left a significant number of questions blank.

The extended response question was not well answered. Although most candidates attempted the question, responses highlighted a general lack of knowledge and understanding of the relevant specification content. A large proportion of candidates misinterpreted what was required and produced answers that were mainly irrelevant or technically incorrect.

Assessment component: 1145-502 Level 2 Engineering – Theory exam (1)

Series 2 (June 2019)

The paper met the requirements of the specification and was pitched appropriately for this level. It was comparable with the previous series.

The cohort for this paper was extremely small. It is therefore difficult to draw statistical conclusions regarding candidate performance.

Overall, the paper was poorly answered, with candidates demonstrating common areas of weakness throughout. Although the majority of candidates attempted most of the questions, responses showed a general lack of breadth and depth of knowledge and understanding in most of the areas of the specification that were assessed.

Although there were no overall areas of significant strength, candidates demonstrated some knowledge of manufacturing processes, applications of materials and tolerances. Areas of weakness included engineering drawings, virtual modelling, scientific definitions and electronics. In questions that assessed understanding (AO2), candidates frequently offered responses that displayed some basic knowledge, but without the additional explanations or justifications needed to score more marks.

Candidates generally performed slightly better in the extended response question. All candidates showed some level of relevant knowledge, with some showing additional depth and/or breadth of understanding. All candidates would have benefited from analysing and evaluating the positive and negative implications of the design criteria in a broader context, and their application in design and manufacturing.

Synoptic Assignment

Grade Boundaries

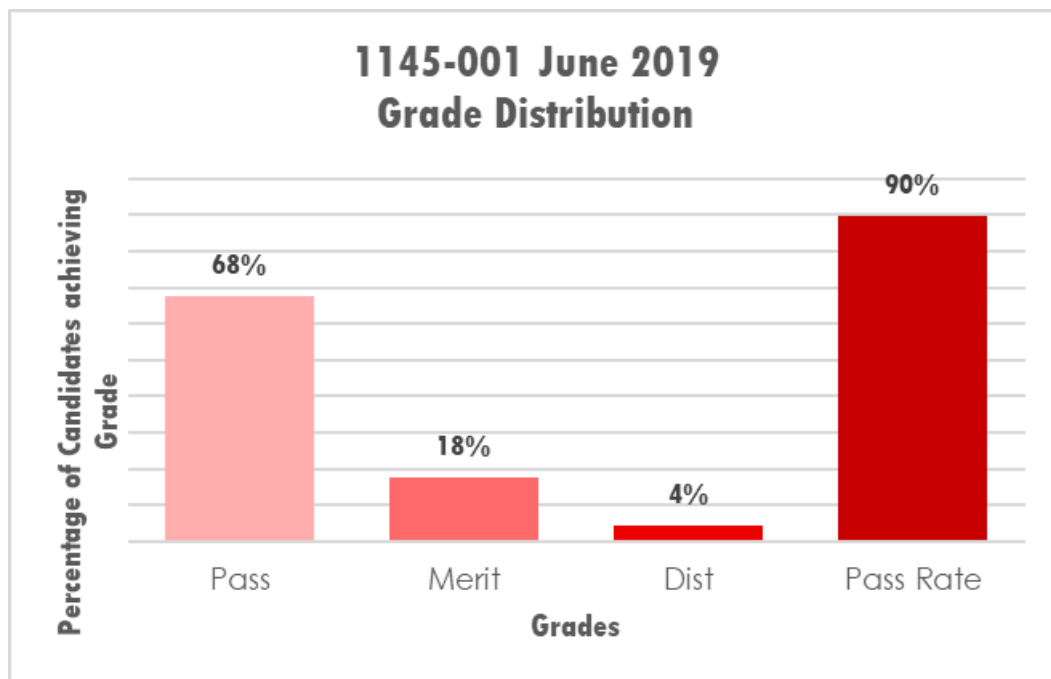
Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 1145-001

Series: 2019

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

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



Principal Moderator Commentary

This assignment was similar in level to the previous series. This view was reinforced by the evidence provided by the candidates, which was sufficient, valid and of appropriate quality to support marking and moderation.

The assignment involved the design and manufacture of an electronic circuit. This was carried out as a series of structured tasks, specified in the assignment brief. The assessment objectives assessed by this assignment were AO2 (understanding), AO3 (practical skills), AO4 (bringing it together) and AO5 (attending to detail/perfecting).

The evidence submitted by candidates for AO2 (understanding) was generally appropriate, and included circuit diagrams, CAD drawings and production plans that implicitly demonstrated the practical application of understanding, in some cases with annotation or written explanations that explicitly showed understanding.

AO3 (practical skill) was typically appropriately evidenced, with pictures of produced items and relevant commentary on the practical observation form. The circuits produced typically displayed a good level of soldering skills.

AO4 (bringing it all together) was, in general, appropriately evidenced, particularly in the modelling of circuits using different prototyping methods, the circuit drawings and the skills demonstrated in the drawing of the casing. Evidence could have been improved by giving more detailed reasons for the selection of components in terms of functionality, for example as annotations on the circuit diagram and pictures of models.

Attending to detail (AO5) was evidenced by the evaluation of the finished items, including identification of areas where improvements were required. This was well-supported by subjective comments by the tutor assessor on the practical observation forms. In some cases, this could have been further improved by including an objective, quantified test record sheet for the functional testing of the finished circuit.