

**UNIVERSITY OF MALTA**

**MATRICULATION CERTIFICATE EXAMINATION  
ADVANCED LEVEL**

**ENGINEERING DRAWING**

**MAY 2012**

**EXAMINERS' REPORT**

**MATRICULATION AND SECONDARY EDUCATION  
CERTIFICATE EXAMINATIONS BOARD**

**Engineering Drawing  
Advanced Level  
May 2012**

**Part 1: Statistical Information**

The written examination consists of two papers, each of three hours duration. A candidate's final result is determined by combining the scores obtained in Paper I and Paper II with the marks earned in a CAD portfolio compiled during the two-year course. Each of the written papers carries 40% of the total marks, with the CAD portfolio attracting the remaining 20%.

A total of 7 candidates registered for the examination. All seven candidates sat for the examination.

The distribution of grades awarded in the May 2012 session is given in Table 1.

<b>Grade</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>Abs</b>	<b>Total</b>
<b>Number</b>	0	1	0	2	0	4	0	7
<b>% of Total</b>	0	14.3	0	28.6	0	57.1	0	100

**Table 1**

**Part 2: Comments regarding performance**

This section gives comments on the performance of the candidates in each of the questions set in the two papers. They are intended to aid teachers and candidates in preparation for future examinations.

**2.2 Paper 1**

Six questions were set and candidates had to answer any five. All questions carried a total of 20 marks.

Paper 1 of this examination is the same as Paper 1 set for Graphical Communication AM15. It is therefore recommended that readers refer to the examiners' report for Graphical Communication AM15.

**2.3 Paper II**

Four questions were set in all and the candidates had to answer question 1 (compulsory) and any other two. The compulsory question was allotted 60 marks whereas the other three carried 20 marks each.

### Question 1 – Assembly drawing

This compulsory question was an assembly drawing exercise of a lathe tailstock. Four out of the 7 candidates achieved beyond half marks. The highest mark attained was 52 out of a total of 60, with the average mark being 34.

Difficulties were experienced with all aspects of the exercise, namely:

- the putting together of the various parts;
- the relative positioning of the views, based on the chosen orthographic projection system;
- sectioning practice in general;
- sectioning practice specific to particular components like shafts, webs, bolts, nuts, washers, keys and spokes which all featured in the exercise;
- the representation of threads;
- the insertion of correct centrelines;
- drawing the requested local sections through the key in the leadscrew base and the male thread on the handle (part 10).

A good overall performance was registered.

### Question 2 - Limits and Fits

This question was chosen by 3 candidates only. Of these, only one candidate produced a noteworthy answer. The others showed poor and inadequate knowledge of the area. Questions of this kind always revolve around the use of Data Sheet 4500A, which gives a selection of ten hole-based fits.

### Question 3 – Welding symbols

This question was attempted by 2 candidates. Both candidates did well scoring beyond the pass mark. This was a definite improvement over the performance registered in previous sessions. Still however both answers failed to cater for the finishing details of the welds.

### Question 4 – Sectional views

Three candidates attempted this question with no-one achieving noteworthy results. This is disappointing when one considers that the conventions associated with sectional views form an indispensable part of the knowledge any engineering draughtsperson should possess.

The Chairperson  
Board of Examiners  
July 2012