



Course Report 2017

Subject	Design and Manufacture
Level	National 5

The statistics used in this report have been compiled before the completion of any Post Results Services.

This report provides information on the performance of candidates which it is hoped will be useful to teachers, lecturers and assessors in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding. It would be helpful to read this report in conjunction with the published assessment and marking instructions for the examination.

Section 1: Comments on the assessment

Summary of the course assessment

Component 1: assignment

The assignment for Design and Manufacture was allocated a total of 90 marks — design skills (45 marks) and practical skills (45 marks). Tasks for the assignment were set by SQA, assessed by centres and subject to external verification by SQA. Candidates undertook one task from a bank of three.

All tasks performed well and allowed candidates to access full marks. All tasks also generated a wide range of responses and marks.

Component 2: question paper

The question paper for Design and Manufacture consisted of two sections totalling 60 marks.

Section 1 Examined materials and manufacturing processes in a workshop setting. All of the questions in this section centred around one product which this year was a DVD holder, with a section total of 24 marks.

Section 2 Examined knowledge and understanding of design issues and commercial manufacturing within a framework of four individual questions, each with a different focus. Section 2 totalled 36 marks.

Section 2: Comments on candidate performance

Areas in which candidates performed well

Component 1: assignment

There was a wide range of performance:

- ◆ Design Section 1, Ideas, was generally well done by all candidates
- ◆ Design Section 3, Communication, was generally well done with a number of candidates demonstrating strong graphic skills.
- ◆ Design Section 4, Evaluation, was also generally well done.

All sections of Practical were generally well done.

Component 2: question paper

Candidate performance throughout the question paper was generally of a good standard. There were several questions that were answered very well by candidates. These included:

- Question 1 Performance throughout was mostly of a very good standard.
- Question 2(b) Answered well, the majority of candidate responses were of a good quality.
- Question 5(b) Answered well by most candidates, showing candidate understanding of marketing techniques continues to be of a high standard.
- Question 1(b) Parts (i) & (ii): Answered correctly by most candidates.
- Question 1(e) Part (i): Answered correctly by most candidates, showing a clear understanding of workshop cutting and shaping techniques.
- Question 1(e) Part (iii): Answered correctly by most candidates.
- Question 1(e) Part (iv): Answered correctly by almost all candidates, showing a good understanding of the benefits of clear varnish.
- Question 1(f) Answered correctly by most candidates, showing a clear understanding of workshop processes connected to plastics.
- Question 3(a) Answered correctly by most candidates, showing a clear understanding of the benefits of CAD/CAM technologies.

Areas in which candidates found demanding

Component 1: assignment

Section 2, Development, was generally weak, with many candidates producing very little evidence of exploration.

Component 2: question paper

- Question 4(a) Parts (i) & (ii): Some candidates found these questions demanding. There was a significant number of 'no responses' to these questions.
- Question 4(a) Part (iv): The majority of candidates found this question demanding. Thermoplastics are contained within the Course Assessment Specification (from which examiners draw question sources) and therefore the overall lower mark average and number

of no responses show that candidates are perhaps not familiar with this area of study.

Section 3: Advice for preparation of future candidates

Component 1: assignment

Candidates should be aware of the skills and knowledge that are being assessed in this component:

Practical Skills

Candidates need to be aware that their proposal will have to allow them to demonstrate all the practical skills being assessed. A very simple proposal may have to be altered to allow them to do this. Assessors should advise candidates on the suitability of their proposal for generating practical evidence.

Design Skills

Candidates should be prepared with the skills to allow them to develop design proposals. In particular, candidates should be able to explore and evolve ideas, demonstrate application of knowledge of materials, design issues and review their ideas.

Component 2: question paper

- ◆ Teachers should ensure they are familiar with the relevant Marking Instructions, which are published annually on SQA's website.
- ◆ It would be considered good practice to ensure candidates respond in sentence format rather than single-word responses. Single-word answers can attract marks where the command word is 'state', but where 'describe' and 'explain' are used as the command word, some degree of description or explanation is expected.
- ◆ The examining team continued with the strategy to ensure that low-level unqualified responses such as 'quick', 'easy', and 'cheap', are not awarded marks. This is to ensure candidates who showed deeper understanding of the topics, and are able to qualify their responses, are differentiated from those candidates who simply stated the low-level unqualified response
- ◆ The best possible preparation for the question paper is to give candidates the opportunity to work through question papers that are similar in style. Teachers would be best placed to talk through the marking instructions with candidates as they complete each question. There are specific tactics that can be employed by candidates to ensure

their responses attract marks. These can be practised to ensure candidates are fully prepared for the final examination.

- ◆ The Course Assessment Specification contains a section titled *Further mandatory information on Course coverage*. This section contains all the available areas of sampling for production of the question paper. It would be anticipated that centres use some time prior to the examination to prepare candidates to respond to these areas of questioning. This would be of specific use where candidates have not fully experienced the content during their course.
- ◆ Whilst it was pleasing to see that the conditions of assessment for coursework were adhered to in the majority of centres, there were a small number of examples where this may not have been the case. Following feedback from teachers, we have strengthened the conditions of assessment criteria for National 5 subjects and will do so for Higher and Advanced Higher. The criteria are published clearly on our website and in course materials and must be adhered to. SQA takes very seriously its obligation to ensure fairness and equity for all candidates in all qualifications through consistent application of assessment conditions and investigates all cases alerted to us where conditions may not have been met.

Grade Boundary and Statistical information:

Statistical information: update on Courses

Number of resulted entries in 2016	4903
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Number of resulted entries in 2017	4980
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Statistical information: Performance of candidates

Distribution of Course awards including grade boundaries

Distribution of Course awards	%	Cum. %	Number of candidates	Lowest mark
Maximum Mark -				
A	35.2%	35.2%	1753	109
B	27.3%	62.5%	1360	94
C	21.3%	83.8%	1061	79
D	6.7%	90.5%	334	71
No award	9.5%	-	472	-

General commentary on grade boundaries

- ◆ While SQA aims to set examinations and create marking instructions which will allow a competent candidate to score a minimum of 50% of the available marks (the notional C boundary) and a well prepared, very competent candidate to score at least 70% of the available marks (the notional A boundary), it is very challenging to get the standard on target every year, in every subject at every level.
- ◆ Each year, SQA therefore holds a grade boundary meeting for each subject at each level where it brings together all the information available (statistical and judgemental). The Principal Assessor and SQA Qualifications Manager meet with the relevant SQA Business Manager and Statistician to discuss the evidence and make decisions. The meetings are chaired by members of the management team at SQA.
- ◆ The grade boundaries can be adjusted downwards if there is evidence that the exam is more challenging than usual, allowing the pass rate to be unaffected by this circumstance.
- ◆ The grade boundaries can be adjusted upwards if there is evidence that the exam is less challenging than usual, allowing the pass rate to be unaffected by this circumstance.
- ◆ Where standards are comparable to previous years, similar grade boundaries are maintained.
- ◆ An exam paper at a particular level in a subject in one year tends to have a marginally different set of grade boundaries from exam papers in that subject at that level in other years. This is because the particular questions, and the mix of questions, are different. This is also the case for exams set in centres. If SQA has already altered a boundary in a particular year in, say, Higher Chemistry, this does not mean that centres should necessarily alter boundaries in their prelim exam in Higher Chemistry. The two are not that closely related, as they do not contain identical questions.
- ◆ SQA's main aim is to be fair to candidates across all subjects and all levels and maintain comparable standards across the years, even as arrangements evolve and change.