A-LEVEL

DESIGN & TECHNOLOGY: FASHION AND TEXTILES

7562/1: Paper 1
Report on the Examination

7562
June 2019

Version: 1.1

General

This was the first year for the A-level fashion and textiles examination, The focus for this paper is on technical principles. Students were also required to demonstrate their application and knowledge of maths and science through the context of fashion and textiles. There were a variety of responses to the mathematical questions which proved to be challenging for some, but overall the responses were pleasingly successful. However, there was sometimes a lack of knowledge of the specification content. At A-level we anticipate a certain level of understanding that reflects the amount of study invested in the qualification. Examiners mark and interpret responses positively, but some students were not awarded credit because of a lack of detail and often, breadth of knowledge.

Many questions were answered well, with most responses attracting credit from the middle mark bands. It seemed that students were prepared for this written element of assessment; however, there are a few points below that should be shared with students to improve success in the examination.

- Careful reading of the questions and planning of answers would help students structure their responses. It is acceptable and should be encouraged for students to plan their answers in the margin or around the question on the exam paper.

- Highlighting key terms from the questions is important. Often students overlooked essential wording and didn't therefore fully focus on the demands of the question. Quite often subject specific terms such as 'testing' and 'engineered fibres' were misinterpreted, adversely changing the type of response students presented.

- Introductions were unnecessarily given, often with no information that was creditworthy, especially for extended response questions. Given the available space in the answer booklet, students would benefit from answering the questions directly and getting straight to the point.

- The use of the word 'etc' in student responses is not appropriate. It is important that they fully explain answers; there could be relevant and creditworthy information in the full explanation.

- Students must consider the space provided in the answer booklet; this will guide them to judge the amount of information to present. The number of marks awarded per question is also vitally important - it is an indication of the level of information and detail examiners are looking for in responses.

Students should be encouraged to research and investigate different aspects of fashion and textiles and consider the impacts of these to reinforce and gain a wider appreciation of the specification.

Question 1

Students were asked to give two benefits of using standardised components in fashion product manufacture. Around 36% of responses were awarded 2 marks, whilst about 40% were awarded 1

mark. Overall there was good knowledge of standardised components, with most students correctly referring to the phrase 'cheaper to buy, easily sourced and makes production more efficient'. Some references to 'quick' were without explanation – at A-level we are looking for a more specific understanding. Many students did not grasp the concept of standardised components and explained that they were easier for the consumer to use or replace.

Question 2

This question, surprisingly, scored fairly low. An explanation of how sub-assembly is used in fashion manufacture was required and 35% of students failed to gain any credit. Many referred to line manufacture, demonstrating confusion with the different types of manufacturing systems. Students should consider the number of marks allocated for the question – examiners were looking to award up to three marks for three discussion points relevant to sub-assembly. Around 20% of students achieved 3 marks, while around 30% of students achieved 2 marks.

Question 3

For this question students were asked to describe the structure of satin fabric. This is a basic fabric construction that all students should be familiar with. About 60% of responses were awarded either 1 or 2 marks; only around 17% of answers achieved the full 3 marks. Any references to characteristics or fabric properties were not awarded credit as examiners were looking for details about the fabric structure only. There was clearly some confusion with the role of the warp and weft yarns in the structure; satin weave is a warp faced fabric – it's the *warp yarns* that travel over the weft yarns. Many responses suggested the *weft yarns* create the 'float' over the warp, which is incorrect. Students who chose to draw a satin weave construction often gave an incorrectly drawn structure.

Question 4

This question elicited a fairly good response from nearly all students. Most showed some understanding of the impact of offshore production on industrial and commercial practice. Pleasingly, a good balance of positive and negative points was given in evaluative responses, and from a reasonable range of different aspects. References to cheaper manufacturing costs and the use of specialist machinery or skills alongside environmental concerns were typical of the main impacts that were discussed. More than half of all responses gained 2 or 3 marks; however, only around 7% gained marks from the 5-6 mark band. It was clear that students had a grasp of the main issues, but few responses went beyond these to give more detail.

Question 5

The question presented two pockets and students were asked to calculate the cost of thread needed for each pocket using the information in the question.

Pocket A was square in shape, but students often failed to recognise that the line of stitching was 5mm in from the edge which changed the amount of thread required. The calculation for pocket A should have been 11.5 + 11.5 + 11cm; however, many students multiplied 3 sides x 12 cm, or calculated 11.5 + 11.5 + 11.5, giving incorrect perimeters of 36 and 34.5 respectively. Correctly adding on 5% and finding the cost often allowed 2 marks to be gained by those candidates using incorrect perimeters.

Pocket B proved to be more challenging. Many students failed to recognise that the diameter of the semicircle was 11cm, ie 12cm pocket width, minus 5mm for each of the two sides.

Finding the total cost or the percentage increase could be scored for either pocket A or B allowed candidates to gain marks. Although multiplying by 0.25 and 1.05 was seen, too often the percentage method was given as 'add 5%' without a method shown.

The final answer needed the correct money notation so those who gave £8.93 or just 8.93, for example, failed to gain the final mark.

Question 6

This question was poorly answered. Students were asked to analyse and evaluate
the different ways manufacturing processes could be reduced in garment production to increase efficiency. Many misunderstood the context of the question and incorrectly discussed the different manufacturing systems such as JIT, line manufacture and sub-assembly. CAM was also discussed at length, outlining the ways in which computers can be efficient, but the focus of the question was about *reducing the number of garment-making processes*. Examiners were anticipating references to lay plans, simplifying designs and reducing the amount of dyes and finishes to suggest a few. Around 30% of responses were given no credit, while half were awarded 1 to 3 marks out of a possible 12 marks. Of the answers that gained credit, many correctly analysed aspects such as reducing seams through whole garment knitting and fully-fashioned panels, while many recognised that adding dye into the dope solution for synthetic or growing naturally coloured cotton increased efficiency.

Question 7

This was a very good differentiator. It was pleasing to see around 30% of responses gain full marks. Around 36% gained 3 marks, while a fifth gained 2 marks. It was clear that students were confident in interpreting data relating to fabric testing and showing the results on a dual bar chart. Where students missed out on marks was in not labelling both axes with the time and category, or in not providing a key to the two types of testing methods. Some students did not give the correct structure for a bar chart. Those who gave stacked bar charts, for example, were credited for other correct points but would have failed to gain a mark for giving the incorrect structure.

Question 8

This question required students to analyse and evaluate how designers and manufacturers ensure textile products are safe for consumers to use. There was a mixed response, with three quarters of responses awarded marks from the lowest mark band (1-4). Very few students managed to gain marks from the top mark band and none gained full marks. Overall, there was a fairly basic understanding of the different ways to ensure consumers' safety.

Many responses typically discussed safety in relation to children's clothing, the role of the BSI and the use of metal detectors to ensure no sharp objects are hidden in clothing.

There was a lack of detail in answers and many students incorrectly referred to health & safety in the workplace, quality checks and fabrics appropriate for different consumers. Many incorrect references were also made to the Lion mark for the safety of *clothing* and care labels for *safety information.*

Question 9

There were a range of responses to this question but many were very successful with a clear understanding of the factors that affect the dye fastness of fashion and textile products. It was pleasing to see examples given of different products to illustrate the points made in answers. Marks were awarded across the range 1-6, with about 5% of answers achieving full marks.

Many students interpreted the question as dye absorbency and how the dye attaches itself to different types of fibre types or different fabric construction types. This was incorrect – this is dye affinity, not dye fastness. There was also some misunderstanding about dye fastness itself and many responses incorrectly suggested it is how quickly colour fades from a fabric. Examiners were looking for an explanation of the factors affecting dye fastness; some students simply presented a list with no explanation. However, more effective answers cited crocking, often of denim, transferring colour through rubbing, especially onto other, lighter coloured fabrics.

Question 10.1

Few students could confidently describe the characteristics of brocade fabric. Around 60% of all responses were not awarded credit; however, marks were fairly evenly spread between the 1-3 mark range. There were many incorrect attempts at describing brocade as a knitted or plain weave construction. Most students were able to recognise that brocade is a complex weave with an embroidery style effect, often in a floral design. Students who described it as embroidery were not awarded the mark as this is incorrect.

Question 10.2

There was a good response to this question. Three quarters of student responses achieved 1 or 2 marks with 12% awarded 3 marks. Popular responses were 'twill weave, checked appearance and traditionally made with wool'. There was clearly a difficulty in describing how the yarns are arranged in the loom to create the checked appearance. Many said 'coloured warp and weft yarns make the fabric' – we felt this was unclear and in fact described a shot fabric. What we were looking for was an understanding of *alternating coloured yarns in both the warp and weft arrangements*. Many students also gave a number of properties of tartan or detailed explanations of a plain weave – these were not given credit as the question asked for characteristics only.

Question 11

This maths question asked students to calculate the length of tape required for the bunting illustrated in the question paper. Most students attempted to answer the question but sometimes were confused with the angle and information provided in the illustration, for example, assuming the triangle was equilateral and therefore using x = 12.5. Many students either didn't use trigonometry or, if they did, it was used incorrectly. Students frequently calculated the width of the single bunting correctly plus the 18cm of tape required, but then forgot that there were 6 triangles to make up the whole bunting length. Some had also rounded up too early in their working out, making the final answer out of the accepted range.

Question 12

The engineering of fibres proved to be challenging for most students. They were asked to explain how the properties of fabrics can be improved by engineering synthetic and manmade fibres. Half of the responses were not awarded credit, while around 38% scored in the 1-2 mark band. There

was clearly some confusion with interpreting the question and many answers incorrectly focused on blending, fabric finishes, textured or core spun yarns. Where students had correctly identified that the cross section of the spinneret could be changed in synthetic fibre production, answers focused on obvious points eg trilobal shape for next to skin comfort and an irregular cross section to increase warmth in a garment. Few went beyond these obvious points, resulting in 1 mark as the average for this question.

Question 13

Overall, there was a very positive response to the question, with marks spread across the full range. Most students were able to describe the different processes that need to be followed when preparing cotton fabric for printing and dyeing. Most understood the processes of scouring, desizing and bleaching with some detail; many also understood the process of mercerisation. A few students misunderstood the question and gave the processes of printing or dyeing as specific processes, eg how to make batik. Where students may have missed out on marks, this was due to a lack of detail. For example, some responses explained that bleaching would take away discolouration of the cotton fibres; this is correct, but lacked detail about the type of chemical used and that the final dye colour would be even and vibrant.

Question 14

Students were fairly confident with use of maths in a textile context. Two lay plans were presented; students were asked to calculate which of the two lay plans gave more rectangular pieces. The main errors were incorrectly converting 10m to 100cm, resulting in gaining no marks, and not using integers to find the total number of rectangles. Examiners were looking for supporting evidence in the working out to award credit for the correct final answer.

Question 15

This question asked for an explanation of how ceramic and carbon fibres can be used to enhance fashion and textile products. There was a reasonable understanding of the properties of the two inorganic fibres but many responses lacked detail about both fibres. Many references were made to 'strength and lightweight' for carbon and 'strength and UV or heat protection' for ceramic fibres. Some students did achieve credit in the top mark band; however around 55% of responses were awarded either 1 or 2 marks. More detail and specific reference to the enhancing of fashion and textile products would have shown a clearer understanding.

Question 16

Students were asked to describe how virtual modelling and testing is used in fashion design and manufacture. There was a mixed response with 4 marks as the average. Most students presented knowledgeable responses of the different ways virtual modelling is used, especially information about customisation and new developments in body scanning technology. Some of the less effective responses gave repeated information and mostly described making changes to colour and patterns, saving designs electronically and visualising a garment in 3D. There was no requirement to evaluate, which many students attempted. A large number of responses also misunderstood the term 'testing' in the question and gave detailed descriptions of a variety of physical fabric tests such as abrasion and strength; these were not awarded credit.

Question 17

This was a simple recall question to name two aramid fibres. Most students were able to correctly identify Kevlar and Nomex, as the two most popular aramid fibres, with around 38% achieving 2 marks. Approximately a further 15% were able to correctly name one aramid fibre. However, about 41% of responses did not score any credit. There were many incorrect suggestions; it is important that students know and understand fibre classification.

Question 18

There was a mixed response to this question. Students were required to explain the purposes and processes involved in establishing copyright, patents and registered designs. About 40% of answers gained 1 mark only; this credit was often for simply explaining that these three elements prevent others from copying original designs. The most effective responses had presented three sections and explained each one in turn. Other answers often presented inaccurate information, with confusion over the number of years' protection these gave the designer and also in lodging copyright with solicitors and government bodies.

Question 19

Surprisingly, this question was not answered well. Students did not give the breadth of examples that examiners were anticipating. The average was 2 marks, with only around 4% of responses reaching the top mark band. The question asked students to explain why it is important to select the correct type of thread to achieve different decorative effects.

Embroidery, metallic and glow in the dark thread were typical of the most popular answers, but a limited knowledge and understanding was shown in some of these. One of the key errors was in not realising the question asked for *decorative effects* and many students suggested sewing thread for seams and garment construction, or matching the thread to the fibre type of the fabric eg silk thread for silk garments, so the stitching could not be seen. These types of points were not given credit.

Question 20

Students were required to explain the difference between fad, standard and classic fashion cycles. For all three cycles, examiners were looking for a reference to the approximate length of time and an understanding of the characteristics of each cycle. Credit was awarded across the range, however the average for this question was 3 marks. Marks were not awarded for giving examples as such, but they are useful in demonstrating understanding.

There was a very good understanding of a fad; many answers referenced their short-lived nature and mass appeal, with many examples given to help explain the point made.

The classic cycle was also well explained with relevant references to timeless fashion and slight changes in style over the years, but with the iconic style remaining the same. Examples of products such as the LBD, Burberry's trench coat and Levi jeans helped to demonstrate knowledge.

Reponses showed a much less effective understanding of a standard cycle, with many students suggesting they are basic or essential garments, such as socks, that are continually produced and are standard to everybody's wardrobes. Many explained that standard trend products are mass

produced. This is incorrect as the standard cycle lends itself to batch production where trends and style features are adjusted quickly to meet changes in fashion and consumer demand.

Use of statistics
Statistics used in this report may be taken from incomplete processing data. However, this data still gives a true account on how students have performed for each question.

Mark Ranges and Award of Grades
Grade boundaries and cumulative percentage grades are available on the Results Statistics page of the AQA Website.