AS

# Design and Technology: Fashion and Textiles 

7561/W-Paper 1 Written Paper

Mark scheme

June 2018

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this mark scheme are available from aqa.org.uk

## Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

## Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

## Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Section A - Technical Principles

| Qu | Part | Marking Guidance | Total <br> marks | AO |
| :---: | :---: | :---: | :---: | :---: |


| 1 |  | Which one of the following is a chemical finish? <br> Correct answer D Treating cotton fabric to make it flame retardant | 1 mark | AO4 |
| :---: | :--- | :--- | :--- | :--- |





|  | chemicals. <br> - Inexpensive disposable products eg flame retardant headrest <br> covers on public transport for safety and hygiene. <br> - Inexpensive interfacings to add structure and stability, fabric <br> stabilizer for embroidery. |  |
| :--- | :--- | :--- | :--- |
| - Quilt batting for padding that may be inexpensive and can be |  |  |
| - hypoallergenic to cause fewer allergic reactions. |  |  |
| - Felt hats which can be moulded into shape, or felt used in textile |  |  |
| crafts or ease of cutting and no fraying. |  |  |
| - Carbon fibres made into non-woven fabric for engineering uses |  |  |
| that can be customised for specialist applications such as |  |  |
| insulation material to dampen sound and mouldable decorative |  |  |
| fabric for car interiors. |  |  |
| - Tyvek used in buildings and for overalls as it is inexpensive, |  |  |
| strong, tough and durable. Also used in textile craftwork to create |  |  |
| surface texture. |  |  |
| - Needle-felt/needle-punched fabric for textile crafts for creative |  |  |
| work. |  |  |
| - Decorative Angelina fibre heat pressed to form non-woven fabric. |  |  |
| - Light weight, disposable and inexpensive industrial filters, tea |  |  |
| bags and vacuum cleaner bags. |  |  |
| - Stitch bonded fabric for inexpensive home furnishings. |  |  |
| - Geotextile membranes for soil erosion control. |  |  |
| - Reusable, inexpensive lightweight shopping bags to replace |  |  |
| plastic bags and packaging material. |  |  |$\quad$.


| 4 | Complete the table below to give the type of woven structure for <br> each named fabric. <br> An example has been completed for you. <br> 1 mark for each correct answer, up to a maximum of 5 marks. <br> If two or more answers are given and one of them is incorrect, no <br> marks awarded. <br> Do not award marks for 'three spun weave', 'pile weave' or 'three <br> system weave' <br> Accept 'cut loop' (velvet) and 'uncut loop' (terry towelling) | 5 marks | AO4 |
| :--- | :--- | :--- | :--- | :--- |
|  | Fabric name Type of woven fabric <br> structure  <br> Chiffon Plain weave (answer given)  |  |  |


|  | Denim | Twill |
| :---: | :---: | :---: |
|  | Gabardine | Twill |
|  | Velvet | Three yarn system weave/cut pile weave |
|  | Calico | Plain weave/Tabby |
|  | Terry towelling | Three yarn system weave/loop pile weave |



|  | make a set number of identical products in one production run. <br> Batch size varies from only a few items manufactured to over <br> 100.000 products made in a batch. <br> Manufacturers can respond quickly to changes in demand using <br> quick response manufacturing (QRM). <br> - This is where workers are grouped in teams and each team is <br> responsible for the quality and rate of production within the team. <br> - Machines are arranged in a horseshoe shape and workers move <br> between the machines as required, passing the work onto the next <br> person within the team. <br> - Workers are trained to carry out a variety of different processes so <br> they can work flexibly within the team to complete orders as <br> quickly as possible. <br> - Multi-skilled workers can make small batches of a wide range of <br> products quickly. <br> - Use of computer controlled systems for production increases <br> efficiency in process control and stock management, including use <br> of barcodes to track products at each stage of production. <br> Just In Time (JIT) manufacture to increase efficiency and <br> decrease waste by receiving the materials used in manufacture <br> only as they are required during the production process. This <br> reduces the cost of storing stock and damage to stock. <br> Award any other valid responses. |  |
| :--- | :--- | :--- | :--- |


| 5 | 2 | The high street fashion top includes standardised components. <br> Give three advantages of using standardised components when <br> manufacturing a garment. <br> Indicative content: | 3 marks | AO4 |
| :--- | :--- | :--- | :--- | :--- |
| 1 mark for any appropriate answer, up to a maximum of 3 marks. |  |  |  |  |
| - Sourcing standardised components will be straightforward and |  |  |  |  |
| there may be more choice of supplier. |  |  |  |  |
| - Standardised or pre-manufactured components can be ordered |  |  |  |  |
| from supplier's stock. |  |  |  |  |
| Just in time (JIT) stock control can be used for standardised |  |  |  |  |
| components to increase efficiency and reduce costs of storage |  |  |  |  |
| and potential damage to component stock. |  |  |  |  |
| Standardised components are less expensive than made to order |  |  |  |  |
| components so would reduce overall cost of product compared to |  |  |  |  |
| using individually designed components. |  |  |  |  |
| Standard sized and shaped components can be applied to |  |  |  |  |
| products using existing machines and standard machine settings |  |  |  |  |
| which reduces production set up time and production costs. |  |  |  |  |
| - Manufacturers do not need to invest in specialist machines to |  |  |  |  |
| make individual components. |  |  |  |  |$~\left(\begin{array}{l}\text { ( }\end{array}\right.$


|  |  | Award any other valid responses. |  |  |
| :--- | :--- | :--- | :--- | :--- |

\(\left.$$
\begin{array}{|l|l|l|l|l|}\hline 5 & 3 & \begin{array}{l}\text { A manufacturer produces fashion tops. In a batch of } 2600 \text { fashion } \\
\text { tops, } 9 \% \text { are faulty. } \\
\text { The manufacturer introduces further training for the workforce in } \\
\text { order to reduce the number of faulty fashion tops. } \\
\text { A batch of } 1250 \text { are now produced. The percentage of faulty fashion } \\
\text { tops in this batch is reduced by } 12 \% . \\
\text { Work out the number of faulty fashion tops in each batch, to the } \\
\text { nearest whole number. Show your working. }\end{array} & \begin{array}{l}\text { Total }\end{array} & \\
\hline & \begin{array}{l}\text { Number faulty in batch of } 2600 \\
\frac{9}{100} \times 2600 \\
\text { or } 0.09 \times 2600 \\
234\end{array} & \begin{array}{l}\text { Percentage faulty in batch of } 1250 \\
\frac{12}{100} \times \frac{9}{100} \\
\text { or } 0.12 \times 0.09 \\
\text { or } 1.08 \% \\
\text { and } 9 \%-1.08 \% \\
\text { or } 7.92(\%)\end{array} & 1 \text { mark } \\
\text { or } 100(\%)-12(\%)=88(\%) \\
\text { and } \frac{88}{100} \times \frac{9}{100} \\
\text { or } 0.88 \times 0.09 \\
\text { or } 7.92(\%)\end{array}
$$ \begin{array}{l}Number faulty in batch of 1250 <br>

\frac{88}{100} \times \frac{9}{100} \times 1250\end{array}\right]\)|  |
| :--- |


|  | or $\frac{7.92}{100} \times 1250$ | or $0.0792 \times 1250$ |
| :--- | :--- | :--- |
| 99 |  |  |


| 6 | Discuss how fabric choice can affect the wider issues surrounding <br> the care and disposal of fashion and textile products. <br> In your answer give examples of different fibre types, fabric <br> structures and applied finishes. | 12 marks | AO3 |
| :--- | :--- | :--- | :--- | :--- |


| $10-12$ |  |
| :--- | :--- |
| marks | Candidate shows excellent analysis and evaluation of <br> the wider issues related to the choice of fabrics for <br> fashion and textile products. A wide range of points <br> regarding care and disposal of fashion and textile <br> products are explained with reference to a detailed <br> range of specific associated wider issues. Information is <br> accurate and clearly related to the choice of fabric. At <br> the top end of mark band student will refer to examples <br> of different types of fibres, fabric structures and applied <br> finishes. |
| 7-9 <br> marksCandidate shows very good analysis and evaluation of <br> the wider issues related to the choice of fabrics for <br> fashion and textile products. A variety of points <br> regarding care and disposal of fashion and textile <br> products are explained with reference to some detail <br> associated with wider issues. Information is mainly <br> accurate and is related to the choice of fabric. Student <br> will refer to some examples of different types of fibres, <br> fabric structures or applied finishes. |  |
| $4-6$ | Candidate shows fairly good analysis and evaluation of <br> the wider issues related to the choice of fabrics for <br> fashion and textile products. A variety of points <br> regarding care and/or disposal of fashion and textile <br> products are explained with reference to a range of the <br> associated wider issues. Information will be fairly <br> accurate. Student may refer to one or more examples <br> of different types of fibres, fabric structures or applied <br> finishes but there may be little information. |
| marks | Candidate shows basic analysis and evaluation of the <br> wider issues related to the choice of fabrics for fashion <br> and textile products. Simple points regarding care <br> and/or disposal of fashion and textile products are <br> given. Reference to wider issues may be inaccurate, <br> confused or have little relevance to the choice of fabric. <br> There may be little or no reference to examples of <br> different types of fibres, fabric structures or applied <br> finishes. |
| $1-3$ | marks |
| No response worthy of credit. |  |

Indicative content:
Care:

- Easy care fabric made from a blend of polyester and cotton
reduces the absorption of water, shrinkage and creasing during fabric washing, compared to $100 \%$ cotton fabric. This means that these fashion and textile products retain their dimensions, and because they need less ironing and can be dried more quickly use less energy during laundering which makes them more sustainable.
- Woven fabrics are usually more stable than knitted fabric and will retain shape better during care - weft knits easily distort during washing and require more careful handling.
- Satin and open weave or open knit fabric may be easily damaged during washing as fibres or yarns may snag.
- Nano-technology fabrics can be self-cleaning and so require less washing or cleaning.
- Fabrics with low absorbency use less energy for drying as do fabrics that can be washed and ironed at low temperatures and so are more sustainable.
- Fabrics with a stain repellent finish reduce the need for cleaning and the use of detergents, water and energy to power washing and drying machines. However, some finishing chemicals give off poisonous chemicals when the fabric breaks down in landfill.
- Fabric which has a non-crease/non-iron finish or a shrink resistant resin finish for cellulosic and wool fibres, is simpler and less resource and time consuming to care for.
- Fabric made from Superwash wool with antifelting finish or Teflon® coating will be easier to care for than standard wool fabric.
- Fabric enhanced with embroidery or quilting requires extra care when cleaning.
- Fabric that is colourfast to washing will be easier to wash than fabric where the dye runs or fades.
- Chemicals used in dry cleaning may cause eutrophication if they are released into rivers and lakes. This is where algae growth forms a bloom over the water surface and as a result aquatic plants and animals are starved of oxygen.

Disposal:

- Fabrics that are more durable and can be repaired will last longer and so fashion and textile products made from durable fabric will not need to be replaced so frequently and there will be less need to dispose of them in landfill or to incinerate them. When such products are no longer wanted, they can be reused by others so selecting durable fabric will reduce the impact on the environment.
- During disposal of fashion and textile products, fabrics with blended fibres make recycling more complicated as fibres need to be separated out into type of fibre. Fabric from which it is simple to reclaim fibres is more sustainable as fibres can be reused in a closed loop of fibre use as 'cradle to cradle' clothing or textile products.
- Biodegradable fabrics have less impact on the environment when disposed of in landfill. Those made from synthetic fibres do not biodegrade easily whereas fabrics made from natural fibres will rot

|  | down in landfill. Fabric with fibres produced organically will also be <br> free of any toxic chemical traces. <br> - Fabrics made from synthetic fibres such as polyester can be <br> recycled and made into new polyester fabric with zero waste <br> rather than being disposed of into landfill or incinerated. <br> - Non-woven disposable fabrics which are not reused require no <br> after care; they may be biodegradable or recyclable which will <br> determine method of disposal. <br> - Some micro fibre fabrics may release tiny fibres into the water <br> system that end up polluting the oceans. This may influence <br> consumers to wash the item less frequently or recycle the garment <br> before it gets too worn. <br> Award any other valid responses. |  |  |
| :--- | :--- | :--- | :--- |

## Section B: Design and Making Principles


and slits that allowed more freedom of movement for women. This continued into the 1920s with Jazz music and short, straight dresses that had a flat chested silhouette with a dropped waistline worn by the young modern women known as 'flappers'. This was a more modern boyish, androgynous or adolescent look known as the 'garçonne' look.

- In the mid-1950s rock and roll music began to revolutionise pop music and the rock stars began to replace film stars as the new idols who influenced fashion trends. Elvis Presley, James Dean and Marlon Brando portrayed a macho type of young man and their style of dressing included leather motorbike jackets, T-shirts, blue jeans and boots.
- During the 1960s the Beatles influenced fashion trends. Slim fitting, high fastening collarless jackets, originally designed by Pierre Cardin for John Steed, a leading character in the British TV series The Avengers were worn with slim-fitting trousers and boots.
- In the 1970s Punk Rock music influenced a fashion trend for black or strong colours such as shocking pink with a torn distressed look enhanced with safety pins and chains. Loose T-shirts with slogans printed on them, trousers called 'bondage trousers', joined together at the back with loose dangling straps and high-laced leather or rubber combat boots.
- The Glam Rock and New Romantic image of pop stars such as David Bowie, Boy George and Adam Ant influenced more flamboyant fashion trends for men.
- Rap music and Hip-Hop styles became part of mainstream street fashion during the 1980s. Half-mast jeans, baseball caps and undone shoe laces and very baggy, casual layered oversized sportswear styles became popular. The fashion trend for wearing trainers or sneakers boomed in the 1980s; Converse, Nike and Adidas are key fashion brands with updated fashion trends often triggered by celebrity endorsement.

Examples of fashions influenced by film:

- During 1930s listening to radio and going to the cinema was very popular. Glamorous American film stars had a strong influence on fashion trends. Greta Garbo and Marlene Dietrich were two of the biggest superstars of the 1930s and set a trend for wearing trench coats with dark glasses.
- Breakfast at Tiffany's (1961) Audrey Hepburn's 'little black dress' and black evening gloves with tiara and pearls created a style incorporating black dresses or the 'LBD'.
- Pierre Cardin's 1968 collection was inspired by the exploration of space and films such as 2001: Space Odyssey which had just been released. This inspired a futuristic space age fashion trend featuring modern materials, bright block coloured tunics and leggings along with fabric helmets, and over-sized buttons, visible zips sunglasses.
- The film Dr Zhivago influenced a fashion trend for lower calf and ankle length fur trimmed 'Zhivago coats', usually worn over miniskirts and boots.

|  | - The film The Great Gatsby (1974 and 2013) inspired a fashion <br> trend for Jazz Age styles whilst Saturday Night Fever (1977) set a <br> fashion trend for wide lapels, double breasted white suits and vivid <br> coloured disco dresses. <br> - Fame (1980) and Flash-dance (1983) popularised off the shoulder <br> sweatshirts, leg warmers and dancewear as fashion. <br> Award any other valid responses. |  |  |
| :--- | :--- | :--- | :--- | :--- |



|  | - Dior's 'New Look' fashion was launched in 1947 after the Second <br> World War. <br> - Many people were still living in poverty and still suffering the food <br> and clothing shortages and rationing caused by the war and <br> wearing utilitarian clothing which required the minimum fabric. <br> - Other people in society were keen to move away from the <br> constrictions of the post war period and embrace a more <br> flamboyant style of fashion. <br> - Feminists wanted to keep women liberated from the restraints of <br> tight constricting clothing and corsets that limited both movement <br> and opportunity to take on the full range of roles within society. <br> Tight clothing that accentuated the female form perhaps <br> supported the idea that women should be back in the home and <br> some felt it to be a backwards step. <br> - Corsets and long styles had already been largely replaced with <br> fashionable less restricting styles in the 1920's and 1930's and <br> during the war clothing for women had been practical in line with <br> their new wartime work roles. <br> - The 'New Look' was a nostalgic extravagant style that was <br> radically feminine and some people thought looked back to better <br> times when women could be glamorous and wear clothes that <br> were not styled for the work place. <br> - The 'New Look' fashion silhouette featured a nipped in waist, <br> padded hips and a full long skirt to calf level; the shape was curvy <br> and very feminine. <br> Bras lifted and shaped the breasts, boned corselettes called <br> 'waspies' minimalised the waist. Fitted jackets accentuated the <br> female shape. Hip padding and full petticoats flared the skirt into <br> an A Line. <br> - Full circle skirts were popular in the 1950's influenced by the 'New <br> Look' fashion silhouette. <br> Award any other valid responses. |  |
| :--- | :--- | :--- | :--- |




|  | the product prototype and potential for further development. <br> - Focus groups are used to gather immediate feedback from the <br> target market by showing potential consumers initial concepts and <br> storyboards through to working prototypes and from observing the <br> final product in use. <br> - Focus groups provide the opportunity for the target market to try <br> out product prototypes to give feedback about usability and <br> product appeal. <br> - Consumer panels are used to get feedback at intervals throughout <br> the design, development and final product stages. They give <br> feedback concerning the faults, problems and further development <br> of the product. <br> - Interviews, focus groups and consumer panels help product <br> development teams find out how, when and under what conditions <br> the target market will use the product and the data collected will <br> inform development decisions. <br> - Product developers need to know if the design proposal is <br> desirable, useful, performs well and satisfies the customer and the <br> collected third party data will provide the evidence to support <br> design development decisions. <br> - Market research helps a business decide whether to continue to <br> develop an idea or product design before money has been spent <br> on the full development of the design or the manufacturing of the <br> product. <br> - If an existing product design is to be reused for next seasons <br> collection, online reviews from consumers may be used to inform <br> further product development. <br> Award any other valid responses. |  |
| :--- | :--- | :--- | :--- |


| 11 |  | In a survey, stu school bag. Ea <br> Complete the tab in a pie chart. <br> Show your wor | nts were aske student had <br> to show the <br> g. | about their pref vote only. <br> sults of the surv <br> Percentage of votes (\%) | nce for style of <br> for presentation <br> Pie chart angle ( ${ }^{\circ}$ ) | Total 3 marks | AO4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total number o <br> $72+45+33$ <br> or 150$\|$Fractions or pe <br> At least two fro <br> $\frac{72}{150}$ or 0.48 or <br> and $\frac{45}{150}$ or 0.3 <br> and $\frac{33}{150}$ or 0.22 <br> Pie chart angle <br> $0.48 \times 360=1$ <br> and $0.30 \times 360$ <br> and $0.22 \times 360$ <br> or 172.8 <br> 108 <br> 79.2 | tudents <br> ntage for each <br> \% <br> 30\% <br> or 22\% <br> $\left(^{\circ}\right)$ <br> $108\left({ }^{\circ}\right)$ <br> $79\left({ }^{\circ}\right)$ | ype of school |  | 1 mark <br> 1 mark <br> mark |  |


| 12 |  | A fancy dress costume includes a witch's hat made of felt. <br> - One piece of felt is used for the cone shape (excluding the base of the cone) <br> - Two rings of felt are used for the brim as it is a double thickness <br> Work out the amount of felt used for each hat, excluding the waste fabric. Give your answer to 2 significant figures. <br> Curved surface area of cone $=\pi r \sqrt{h^{2}+r^{2}}$ where $r$ is the radius of the cone base and $h$ is the vertical height of the cone. <br> Show your working. | Total 6 marks | AO4 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Curved surface area of cone $\pi \times 10 \times \sqrt{45^{2}+10^{2}}$ <br> or $\pi \times 10 \times \sqrt{2025+100}$ <br> or $\pi \times 10 \times \sqrt{2125}$ <br> [1447, 1449] ( $\left.\mathrm{cm}^{2}\right)$ <br> Area of hat brims $\pi \times 21^{2}-\pi \times 10^{2}$ <br> or $441 \pi-100 \pi$ <br> or $341 \pi$ <br> or [1070, 1072] $\left(\mathrm{cm}^{2}\right)$ <br> or $\left(\pi \times 21^{2}-\pi \times 10^{2}\right) \times 2$ <br> or $(441 \pi-100 \pi) \times 2$ <br> or $341 \pi \times 2$ | 1 mark <br> 1 mark <br> 1 mark |  |


| $[2140,2144]\left(\mathrm{cm}^{2}\right)$ | 1 mark |
| :--- | :--- | :--- |
| Total surface area <br> $[1447,1449]+[1070,1072] \times 2$ <br> or $[3587,3593]$ <br> Total surface area $3600 \mathrm{~cm}^{2}$ or $0.36 \mathrm{~m}^{2}$ 1 mark <br>  Additional guidance <br> Accept values for $\pi$ in the range $[3.14, ~ 3.142]$ |  |

