AS Level
DESIGN AND TECHNOLOGY (FASHION \& TEXTILES)

Mark scheme

Version 1.0

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.

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

## SECTION A - TECHNICAL PRINCIPLES

| 1 | Correct answer D Ramie | 1 mark | AO4 |
| :--- | :--- | :--- | :--- | :--- |


| 2 | 1 mark for each correct answer, up to a maximum of 3 marks. |  | $\begin{gathered} 3 \\ \text { marks } \end{gathered}$ | AO4 |
| :---: | :---: | :---: | :---: | :---: |
|  | Commercial name | Classification of fibre or fabric |  |  |
|  | Tactel® | Nylon/Polyamide |  |  |
|  | Modal® | Regenerated cellulose (accept Lyocell) |  |  |
|  | Tencel® | Regenerated cellulose/Lyocell |  |  |


| 3 | Recognise that two groups of socks do not contain synthetic fibres <br> (wool / cotton/viscose) (1 mark) <br> $26000+34000 / 200,000 \times 100$ <br> $=6 / 20 \times 100$ <br> $=30 \%(1$ mark $)$ | 2 <br> marks | A04 |
| :--- | :--- | :--- | :--- |


| 4 | Correct answer = B Denim | 1 mark | AO4 |
| :--- | :--- | :--- | :--- | :--- |



|  | effectively controlled. <br> Students may make valid points about other chemicals involved in <br> dyeing e.g. mordants. <br> Award any other valid response. |  |  |
| :--- | :--- | :--- | :--- |


| 6 |  | $5-6$ marks <br>  <br> $3-4$ marks <br>  <br> $1-2$ marks <br> 0 marks <br> Indicative <br> - 3-D <br> - Fabric <br> sur <br> - Co <br> - Drap <br> into <br> - Back <br> - Can <br> Award any | Demonstrates excellent knowledge and understanding of a wide variety of points. Explains in detail how computers can replace the need for fabric prototypes/samples and is likely to refer to virtual modelling and give a commercial context in their answer. At the top end of mark band student will refer to aspects of both developing and presenting ideas. Demonstrates good knowledge and understanding of a variety of points and provides some detail in their explanation. May refer to only developing or presenting ideas but in this case, includes more points than just those relating to colour and pattern. <br> Demonstrates basic knowledge and understanding with little or no explanation. May only mention the most obvious points concerning colour and pattern. Nothing worthy of credit <br> ontent: <br> Virtual modelling to show idea from every point of view ic samples can be scanned and used in modelling to show ce colour, texture and pattern. <br> urways and styling details can be tested <br> ean be simulated as movement and can be incorporated presentation to imitate product in use. <br> ground contexts can be included to promote the product be presented or emailed to client for feedback during lopment of idea <br> other valid response. | 6 marks | AO4 |
| :---: | :---: | :---: | :---: | :---: | :---: |



| 8 | 1 | One point for any of the following to a max of 3 <br> - The repeat needs to be taken into consideration when laying out pattern pieces so that the pattern is centralised <br> - The repeat needs to be matched across sections of the garment for aesthetic appearance <br> - The pattern repeat will determine the length of fabric required for a textile product; a large repeat will need more fabric and it will create more waste when matching the pattern at every seam. <br> - Matching the pattern repeat will make a high quality garment. <br> - The layout has to ensure that all pattern template pieces face the same way to avoid upside down designs or different directional shading. <br> - The nap may cause the garment to feel different according to the | $3$ <br> marks | AO4 |
| :---: | :---: | :---: | :---: | :---: |


|  | direction in which the pattern pieces are laid e.g. velvet. |  |
| :--- | :--- | :--- | :--- |
| Points relating to cost should not be awarded credit as students have <br> been given this information in the question. <br> Award any other valid response. |  |  |


| 8 | 2 | Fabric 1: <br> Number of pattern repeats in 4 metres is $400 / 75=5.333$. <br> Therefore 6 pattern repeats are needed for each dress. <br> Amount of fabric required per dress is $6 \times 75 \mathrm{~cm}=4.50$ metres. <br> (1 mark) <br> 4.5 metres of fabric at $£ 12$ per metre is $£ 54$. <br> Fabric for 5000 dresses is $£ 54 \times 5000=£ 270,000$. ( 1 mark) <br> Fabric 2: <br> Number of pattern repeats in 4 metres is $400 / 60=6.666$. <br> Therefore 7 pattern repeats are needed for two dresses (1 mark) <br> 2 dresses cut side by side will require 7 pattern repeats Amount of fabric required for 2 dresses is $7 \times 60 \mathrm{~cm}=4.20$ metres. <br> Or 1 dress is equivalent to 3.5 pattern repeats so amount of fabric required for 1 dress is $3.5 \times 60 \mathrm{~cm}=2.10$ metres <br> (1 mark) <br> 4.2 metres of fabric at $£ 31.95$ per metre is $£ 134.19$ <br> Fabric for 5000 dresses is $\frac{£ 134.19 \times 5000}{2}=£ 335,475$ <br> Or 2.1 metres of fabric at $£ 31.95$ per metre is $£ 67.10$ ( $£ 67.095$ ) Fabric for 5000 dresses is $£ 67.10 \times 5000=£ 335,500$ <br> (1 mark) <br> Difference in price for 5000 dresses between Fabric 1 and Fabric 2 is $£ 335,475-£ 270,000=£ 65,475$. <br> Or $£ 335,500-£ 270,00=£ 65,500$ <br> (1 mark) | $\begin{gathered} 6 \\ \text { marks } \end{gathered}$ | AO4 |
| :---: | :---: | :---: | :---: | :---: |


children, the elderly or those with disabilities.
Award any other valid response.

| 10 |  | Length of frill: - <br> Accept $\cos 45$ or $\sin 45$ in the following methods: - <br> $h$ is the short distance across the base to the corner of the frill $\begin{align*} & \cos 45=\frac{h}{5} \\ & h=5 \cos 45 \\ & h=3.5 \text { (1 d.p.) } \\ & \text { Length of base of large triangle }=140-3.5 \\ & =136.5 \mathrm{~cm} \\ & \cos 45=136.5 / X Y \\ & X Y=\frac{136.5}{\cos 45} \\ & X Y=193 \mathrm{~cm}(1 \text { d.p. }) \end{align*}$ $\sin 45=\frac{h}{5}$ (1 mark) $5 \sin 45$ <br> Note: There are alternative methods for finding the length XY and each valid method should be accepted. One such alternative is as follows: <br> Alternative method <br> $d$ is the diagonal length in the small triangle $\tan 45=\frac{d}{2.5}$ <br> (1 mark) <br> $d=2.5 \tan 45$ <br> $d=2.5$ (can also be seen from symmetry) <br> Diagonal of big square $=\mathrm{D}$ $D^{2}=140^{2}+140^{2}$ <br> $D^{2}=39200$ <br> $D=\sqrt{39200}$ <br> $D=198 \mathrm{~cm}$ <br> So XY = D - 2.5-2.5 <br> $X Y=198-2.5-2.5$ <br> $X Y=193 \mathrm{~cm}$ (1 d.p.) <br> (1 mark) | $\begin{gathered} 3 \\ \text { marks } \end{gathered}$ | AO4 |
| :---: | :---: | :---: | :---: | :---: |

## SECTION B - DESIGNING AND MAKING PRINCIPLES


\(\left.$$
\begin{array}{|l|l|l|l|l|}\hline 12 & \begin{array}{l}\text { Width of fabric }=50+70+10+x \\
=130+x(1 \text { mark })\end{array}
$$ \& \begin{array}{c}4 <br>
x=80 \times tan 10^{\circ}(1 mark) <br>
=14.106(1 mark) <br>
Width=130+14.106 <br>
=144.106 <br>

=145 \mathrm{~cm}(1 mark)\end{array} \& \mathrm{AO}\end{array}\right]\)|  |
| :--- |



- Collections such as: -
- 'It's a Jungle Out There' - animal skins, crocodile heads, horns. Theme of battle between life and death, predators.
- 'Eshu' - Hair with glass beads, leather. Theme of time passing and ageing.
- 'The Horn of Plenty' - Black/white duck feathers, Theme of freedom and captivity.
- 'Plato's Atlantis'- snake skins, jelly fish. Theme of metamorphosis, subterranean.

Award any other valid responses.

| 13 | 2 |  |  | $\begin{gathered} 9 \\ \text { marks } \end{gathered}$ | AO3/4 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 7-9 marks | Candidate understands that digital printing involves computer technology to print from computer screen to fabric. Excellent knowledge and understanding with detailed analysis and evaluation of advantages of digital printing compared to traditional methods of printing. Candidate knows what is meant by digital printing and applies understanding to the fine quality of print seen in the dress in Figure 7. A wide range of points to justify digital printing are explained with a reasoned argument as to the advantages of using digital printing. |  |  |
|  |  | 4-6 marks | Good knowledge and understanding of digital printing with good analysis and evaluation of a variety of advantages of digital printing. Candidate understands what is meant by this method and makes reference to the complexity of the print design in Figure 7. Some conclusion is given as to the reasons for using digital printing. |  |  |
|  |  | 1-3 marks | There may be some confusion about digital printing and knowledge and understanding is limited to only a few points. Basic analysis and evaluation of the digital print design in Figure 7. A few advantages of digital printing will be given but may be lacking in detail. May be little or no conclusion of the reasons for using digital printing. |  |  |
|  |  | 0 marks | Nothing worthy of credit. |  |  |
|  |  | Indicative <br> This is a sultab <br> - Poss repro <br> - Tona com <br> - Com | ontent: <br> able technique due to: - <br> ible to print very fine detail due to photographic quality of duction. <br> variation can be printed in a full range of colours to give lex and subtle effects. <br> puter aided design can be linked directly to manufacture. |  |  |

- Print sampling can be rapid and edited efficiently to respond to customer requirements.
- Traditional methods of time consuming and expensive sampling are eliminated.
- The speed of the technology enables businesses to respond rapidly to changing markets.
- Cost effective for niche markets.
- Print designs are computer generated and can be emailed to customer for approval.
- Prints can be customised for individual bespoke orders.
- Individual customers can upload their own designs to make fabric prints.
- Sampling can be kept to the minimum as designs can be viewed on screen.
- Wide range of fabrics can be printed on including both natural and synthetic fabrics.
- Prints can be made on demand so no requirement to hold stock.
- Cost effective to print small quantities.

Digital printing is a technique that makes very fine detail possible, it is quick and cost effective to alter and sample designs, can be used to respond quickly to changes in the market and the need to individualise orders.

Award any other valid responses.

| 13 | 3 | 1 mark for any appropriate answer up to a maximum of 3 marks. <br> Indicative content: <br> - dress can be made to exact requirements to fit client <br> - a customised garment is made to client's choice of detail <br> - finishing detail can be completed by hand to ensure a high <br> quality product <br> - client will benefit from owning a unique garment <br> to ensure customer satisfaction as new methods of <br> manufacturing clothing using CAM can customise designs to fit <br> individual customer requirements | 3 <br> marks | AO3 |
| :--- | :--- | :--- | :--- | :--- |
| Award any other valid responses. |  |  |  |  |


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9 February 2017

