



GCE AS MARKING SCHEME

SUMMER 2022

**AS
DESIGN AND TECHNOLOGY - FASHION & TEXTILES
2602U10-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2022 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

GCE AS DESIGN AND TECHNOLOGY
SUMMER 2022 MARK SCHEME
UNIT 1 - FASHION AND TEXTILES

Question 1				
	A designer will analyse existing products as part of the iterative design process. A disassembly/reverse engineering task is one of the ways in which a product can be analysed.	AO3	AO4	Mark
(a)	Define the term 'reverse engineering/disassembly'.		/	1
	Answers that demonstrate an understanding of disassembly/reverse engineering and how it relates to the design process should be awarded up to 1 mark based on: Disassembly/reverse engineering involves taking a product apart in order to see how the product is constructed. Guidance to markers No answer or an incorrect answer. 0 marks Disassembly/reverse engineering involves taking a product apart in order to see how the product is constructed. 1 mark Accept any other appropriate responses. The candidate is not expected to give reasoning.			

(b)	Describe the benefits of reverse engineering/disassembly to the designer.		/	3
	Answers that demonstrate an understanding of the benefits of reverse engineering/disassembly to the designer should be awarded up to 3 marks based on: Designers and manufacturers use disassembly/reverse engineering to analyse a product in detail. By disassembling a product, the designer can view details such as the quality of the fibres, fabrics, and manufacturing used. Accept any other appropriate responses. Guidance to markers No answer or an incorrect answer. 0 marks A basic response for example: The benefit of disassembly is so that the designer can analyse the product in detail, such as, seam allowances. 1 mark A more developed response for example: The benefit of disassembly is so that the designer can analyse the product in detail, such as, seam allowances and the construction methods used. 2 marks A developed response for example: The benefit of disassembly is so that the designer can analyse the product in detail, such as, seam allowances and the construction methods used. This will enable the designer to produce an improved product and select the correct seam type. 3 marks The candidate must include the words ‘improve’ or ‘develop’ to achieve the full 3 marks.			

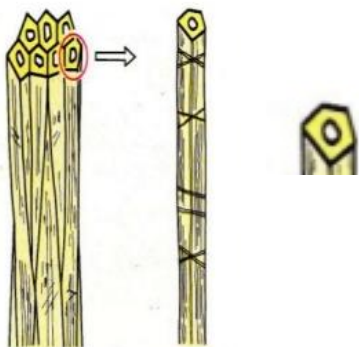
(c)	Reverse engineering/disassembly is a research task. Describe in detail two other forms of research which the designer may carry out.		/	4
	Answers that demonstrate an understanding of research tasks, should be awarded up to 4 marks based on: Research tasks include: Trend forecasts, sales and company reports, government publications, interviews with the user/client, magazines and newspapers, internet research (for example, product reviews) industry and trade publications. Accept any other appropriate responses. The candidate must give detail in the description. Guidance to markers The candidate must have named/described two research tasks to gain the full marks. No answer or an incorrect answer. 0 marks A basic response: Interview the client. 1 mark A detailed response: Interview the client to find their specific needs and requirements. 2 marks Award two marks for two different tasks without an explanation.			

Question 2

	A design specification will include measurable performance criteria to ensure a successful product.	AO3	AO4	Mark
(a)	Explain what is meant by the term 'measurable performance criteria'. Answers that demonstrate an understanding of measurable performance criteria in relation to a specification should be awarded up to 2 marks based on: Measurable performance criteria in a design specification are objectives which can be assessed against specific performance measures: The material must weigh no more than? The material used must be light enough to? Related to material hardness, malleability, ductility? The objectives below are more subjective and are therefore not measurable – no marks to be awarded for this. The material must be aesthetically pleasing... Material used must be recyclable... The material must be bright... Accept any other appropriate responses. Guidance to markers No answer or an incorrect answer. 0 marks Basic response such as: Measurable performance criteria are objectives/points in a specification that can be tested. 1 mark A developed response such as: Measurable performance criteria are objectives/points in a specification that can be tested against specific performance criteria such as strength. 2 marks		/	2

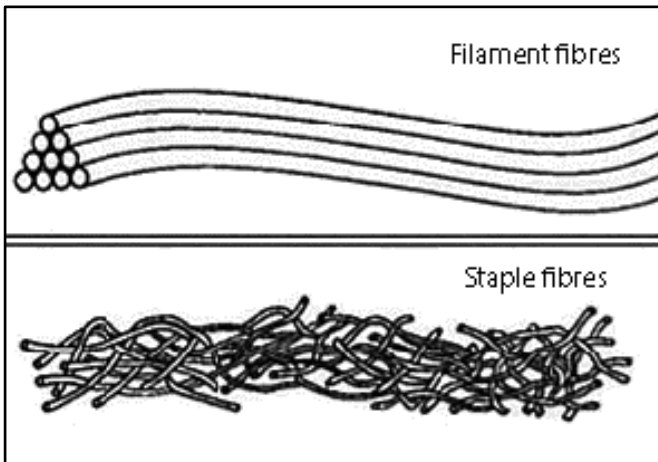
(b)	Give one example of measurable performance criteria that would be included in a specification for the following products and fully justify the importance of each example.			6
	A firefighters uniform Examples could include: The uniform must be able to withstand heat up to X Degrees Celsius, the uniform must be fire retardant, the uniform must not weigh more than X, the material must be light enough to? A rucksack for a camping expedition Examples could include: The rucksack must be strong enough to hold X amount of weight, must be waterproof, must be X by X in size, must be x in weight. No answer or an incorrect answer. 0 marks A basic response such as: It must be the correct size. 1 mark A more developed response such as: It must be a certain size to hold everything needed for camping. 2 marks A developed response to include reasoning, such as: The rucksack must be X by X in size so that it is big enough to hold all the things that would be needed for a camping expedition such as food, cooking equipment etc. 3 marks			

Question 3

	Linen textile fibre is extracted from the stem of the flax plant which is shown below.	AO3	AO4	Mark
(a)	An important property of linen is absorbency. Use a simple annotated sketch to explain how the linen fibre is able to absorb moisture. Answers that demonstrate an understanding of why flax fibre is able to absorb water should be awarded up to 3 marks based on: Flax fibre cross section – sketch which resembles this in any way will be accepted.  Like cotton, moisture can penetrate the outer layer of the linen fibre and is then stored in the hollow cavity in the centre of the fibre. The structure of the fibre gives it the ability to absorb moisture. Accept any other appropriate response. Guidance to markers Full marks should not be awarded if there is no simple sketch. No answer or an incorrect answer. 0 marks A basic sketch with limited understanding of how flax fibre is able to absorb moisture. 1 mark A developed response with a basic sketch with some annotation which shows good understanding of how the flax fibre is able to absorb moisture. 2 marks A detailed response with a sketch which shows very good understanding of how the flax fibre is able to absorb moisture. 3 marks		/	3

(b)	Discuss how the other properties of linen make it suitable for a wide range of products. Give examples in your answer.		/	5
	Answers that demonstrate an understanding of linen and it's uses should be awarded up to 5 marks based on: Linen fibre is: • non-static as it contains some moisture • stiffer/harder than cotton and less supple • strong due to the length of the fibres • relatively resistant to abrasion, is durable and hardwearing • washable – can be boiled and bleached • dries quickly, iron when damp for best results; can be dry-cleaned and tumble dried • conducts heat away from the body therefore it is naturally breathable • the smooth surface of the linen fibre prevents air being trapped so it is a poor insulator. • linen fabrics feel cool to wear so ideal for summer clothing • eco-friendly, biodegradable • natural antimicrobial properties. Uses of linen Shirts, skirts, suits, dresses, summer clothing, trousers. Household linen – table cloths, curtains, tea towels. Geotextiles, ropes, sewing thread. Guidance to markers No answer or an incorrect answer. 0 marks Basic understanding of linen fibre. 1-2 marks A few suggestions on the uses of linen and shows a basic understanding of linen fibre. 3-4 marks Clear and relevant understanding of linen fibre and its uses. 5 marks Do not award more than 3 marks unless examples are given. Accept any other appropriate responses.			

Question 4

	Textile fabrics reflect the characteristics of the fibres and yarns they are spun into.	AO3	AO4	Mark
	Discuss the use of staple and filament fibres/yarns when used in fabrics:	/		8
	Answers that demonstrate an understanding of staple and filament fibres should be awarded up to 4+4 marks based on: Staple fibres/yarns: Staple yarns are hairy, which make them good at trapping air between the fibres. This means that they are good insulators and will make fabrics that are warm. The hairy yarns can also trap moisture between the fibres. Hairy yarns have more texture than smooth yarns and are duller in appearance. Synthetic fibres are continuous fibres but can be cut into staple fibres. All natural fibres apart from silk are staple fibres.  Filament fibres/yarns: Filament yarns are smooth and therefore do not trap air between the fibres. They are not good at insulating. Filament yarns are more lustrous than staple yarns. Synthetic fibres are man-made, usually from chemical sources. They are continuous filament fibres, which means the fibres are long and do not always have to be spun into yarn. Example staple material: Wool is made from staple fibres. It can be hairy in texture and is a good insulator of heat due to the staple fibre used. Example filament material: Acrylic fabric is made from filament yarns. Acrylic is a smooth fabric which has a shine. It drapes and flows well due to the filament fibres/yarns. Accept any other appropriate responses.			

	Guidance to markers No answer/incorrect answer. 0 marks Basic understanding with little detail in the response: brief knowledge of staple/filament yarns. 1 mark Basic understanding with some detail in the response: some knowledge of staple and filament yarns evident; some knowledge about the characteristics of the different yarns. 2 marks More detailed understanding, with clear and detailed evidence of knowledge and understanding in the response: knowledge of the characteristics relating to staple and filament fibres. Almost all important points considered. 3 marks Full and detailed understanding, with clear and detailed evidence of knowledge and understanding in the response: clear knowledge of the characteristics relating to staple and filament yarns and their uses. All important points considered. 4 marks			
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Question 5

	The iterative design and make process is essential when developing new products.	AO3	AO4	Mark
	Describe the iterative processes a designer might make when developing a new fashion product. <i>Marks will be awarded for the content of the answer and the quality of written communication.</i>		/	8
	Answers that demonstrate an understanding of how a designer would use the iterative process when developing a new product should be awarded up to 8 marks based on: Iterative design is the process of continual improvement of a concept, prototype, design or product. It is a cyclic approach to the development of a product, where a design is improved by frequent testing, client feedback, focus groups, materials testing, prototype testing, design development and evaluation, until a final refined / developed design is reached. When developing a fashion product, the designer might make a paper pattern and then make a toile from the paper pattern, the toile is then tested for size, fit etc. The toile is then evaluated, and changes will be made to the paper pattern where necessary. A developed toile will be made, tested and evaluated until the shape, fit and style is correct. Accept any other appropriate responses Guidance to markers Answers must describe how the designer would use the iterative process when developing a new product. All parts of the question must be answered for full marks. No answer or incorrect, no evidence of understanding. 0 marks Level 1 1-2 marks • Candidate has a simplistic knowledge of the issues associated with the question. • Limited use of terminology and technical language. • The candidate has limited knowledge in relation to the question. • The candidate has expressed basic ideas clearly, if not always fluently. Answers may deviate from the question or not be relevant. • Grammar, punctuation and spelling may be weak impacting on effective communication.			

	Level 2 3-4 marks • The candidate has a basic understanding of the issues associated with the question. • Satisfactory use of terminology and technical language. • The candidate has some general knowledge of the question. • The candidate has expressed straightforward ideas clearly, if not always fluently. • Answers may deviate from the question or be weakly presented. • There may be some errors of grammar, punctuation and spelling but is still able to communicate the issues. Level 3 5-6 marks • The candidate demonstrates a clear understanding of the issues associated with the question. • Good use of terminology and technical language. • The candidate has demonstrated knowledge of the question. • The candidate has express moderately complex ideas clearly and fluently, through well linked sentences and paragraphs. Answers are generally relevant and structured. • There may be occasional errors of grammar, punctuation and spelling. Level 4 7-8 marks • The candidate demonstrates a specific ability to analyse the question, considers a wide range of factors and has a clear understanding of the issues associated with the question. • Very good use of terminology and technical language. • The candidate has developed a detailed knowledge of the question. • The candidate has express complex ideas extremely fluently. Sentences and paragraphs will follow on from each other smoothly and logically. Answers are consistently relevant and structured. • There will be few, if any, errors of grammar, punctuation and spelling.			
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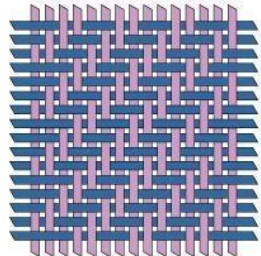
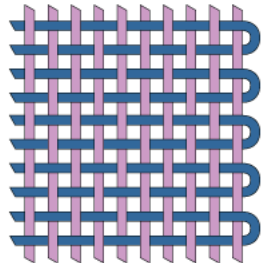
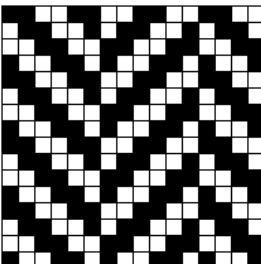
Question 6

	The Chanel suit shown below, is considered an iconic design. The style of the suit has changed overtime to meet the needs wants and values of consumers.	AO3	AO4	Mark
(a)	Analyse how and why iconic designs in fashion have developed over time. <i>Include examples in your answer.</i>	/		8
	Answers that demonstrate an understanding of how iconic designs in fashion have developed over time should be awarded up to 8 marks based on: Iconic design is usually timeless and doesn't date unlike other designs. It is often 'ground-breaking' of its time by its use of new materials or techniques or by revolutionising the use of materials. That design often inspires the work of other designers. • Ideas and styles are prompted by social and cultural changes for example changes to women's roles in society with the development of work wear for women. • New technological advances in machinery and materials for example the development of synthetic materials offering new fabrics with more aesthetic appeal and better performance. • Economic and political developments for example both the 1960's and the 1920's have experienced economic and industrial expansion and people had disposable income to spend on fashion. Iconic Designs in fashion include: Burberry - trench coat; Coco Chanel – little black dress; Chanel 2.55 handbag; Louboutin-red sole shoes; Hermes Birkin handbag; YSL smoking jacket; DVF – classic wrap dress; The Chanel Suit; Calvin Klein – little slip dress; Dior – ballet skirt. <i>Do not award a mark for Chanel suit within the answer.</i>			

	Guidance to markers No answer or an incorrect answer. 0 marks Brief description of how iconic products have developed over time. 1-2 marks More detailed description of how iconic products have developed over time. 3-4 marks Clear and detailed description of how iconic products have developed over time and is able to give relevant examples. 5-6 marks Detailed evaluation and understanding of how iconic products have developed over time and is able to give relevant examples. 7-8 marks Accept any other appropriate response			
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(b)	Study the mood board below and use it as inspiration to design a creative and original 2-piece matching suit for a fashionable young adult. Sketch the front and back views of your design in the space provided. Your design must: • Be suitable for a fashionable young adult • Be inspired by the mood board • Be creative and original • Be a 2-piece matching suit Guidance to markers Marks will be awarded for:		/	16
(i)	a presentation drawing of the front and back views of the 2-piece matching suit <i>Simple line drawing of the front or back view – 1 mark</i> <i>Front and back views shown in a simplistic way – 2 marks</i> <i>Front and back view drawn to a good quality and shows detail – 3 marks</i> <i>Front and back views drawn to a high standard and shows all details – 4 marks</i>			
(ii)	The creativity and originality of your idea based on the mood board <i>The design shows some originality – 1 mark</i> <i>The design shows some creativity – 2 marks</i> <i>The design shows some creativity and originality – 3 marks</i> <i>The design is both creative and original – 4 marks</i>			
(iii)	Detailed notes and sketches that show style details <i>Notes and sketches that show style detail – Award 1 mark per annotation/sketch</i>			
(iv)	The quality of communication <i>Annotation/communication of how the product will be suitable for a young adult – Award 1 mark per annotation.</i>			

(c)	The Chanel suit is traditionally made from wool tweed.			
(i)	Explain how wool tweed in terms of its properties is a suitable fabric for the Chanel suit.			4
	The candidate must demonstrate their knowledge of wool tweed in relation to its properties. • Hangs well and has good structure. • It has the ability to look smart and at the same time can be dressed down for a more casual look. • It's good for keeping you warm, especially when layered up. • Wool's' natural water repellence makes it ideal in all weathers. • Wool does not burn well so it has natural fire-resistant properties. • It's easy to care for, breathable and sustainable. • Tweed is a rough, woollen fabric, of a soft, open, flexible texture. • Naturally anti-microbial. This prevents mould and mildew from destroying the wool • Wool is an entirely sustainable resource that requires no harm to animal or plant life. • It is usually woven with a plain weave, twill or herringbone structure. Colour effects in the yarn may be obtained by mixing dyed wool before it is spun. • Tweed is suitable for a suit as it is a durable, hard wearing fabric Accept any other appropriate responses. Guidance to markers No answer or an incorrect answer. 0 marks The candidate has showed understanding of wool tweed and have given a property. 1-2 marks The candidate has showed good understanding of wool tweed and has given examples of properties which are suitable for the suit. 3-4 marks			

(ii)	Tweed can be woven with a plain or twill weave. Explain how the named weaves determine the design and characteristics of the fabric.		/	4
	The candidate must demonstrate their knowledge of different weaves in relation to the design and characteristics of the fabric.  Twill-weave fabric the crossings of weft and warp are offset to give a diagonal pattern on the fabric surface. It's strong and drapes well. The twill weave gives a diagonal pattern as you find on a pair of denim jeans. The colour of the warp and weft thread could contrast for a more distinct pattern.  In plain-weave fabric the warp and weft are aligned so that they form a simple criss-cross pattern. This is the most common weave. Plain-weave is strong and hardwearing, so it's used for fashion and furnishing fabrics. This is the least patterned and textured weave.  Herringbone weave (a variation on the twill weave) describes a distinctive V-shaped weaving pattern. It is distinguished from a plain chevron by the break at reversal, which makes it resemble a broken zigzag. The pattern is called herringbone because it resembles the skeleton of a herring fish. The fabric may appear thicker as the weave is more complex. Please accept a diagram of the different weaves with an explanation. Accept any other appropriate responses. Guidance to markers No answer or incorrect, no evidence of understanding. 0 marks The candidate has a simplistic knowledge of different weaves in relation to the design and characteristics of the fabric. 1-2 marks The candidate shows that they have a detailed knowledge of different weaves in relation to the design and characteristics of the fabric. 3-4 marks			

(d)	The lining of the tweed jacket is made from viscose. Evaluate why the tweed jacket needs a lining and the suitability of viscose as the lining material.		/	8
	Answers that demonstrate knowledge and understanding of why a jacket would need to be lined and the suitability of viscose as a lining material should be awarded up to 8 marks based on: Use of viscose Viscose has the advantage of being slippery, breathing well, good wicking properties (absorbent), soft to touch, not as hot or as expensive as silk and is durable. Silk also has a reputation of not lasting as long as a lining. It is lightweight so will not make the jacket heavy, it will resist stains as it is non-absorbent and will dry quickly. It is affordable. Viscose is often used in many blends such as nylon to reduce costs. Reasons to line a jacket A lining allows a coat or jacket to slip on over other clothing easily. Linings add warmth to cold-weather wear and hides raw edges. A lined garment is usually more expensive than a non-lined garment as more time and fabric are used. Some linings are printed and can add style detail to an item of clothing. Viscose would be a good fabric to use for digital printing. <i>Accept any other appropriate responses</i> Guidance to markers No answer/incorrect answer. 0 marks Basic description with little detail in the response: brief knowledge of viscose/lining. Basic understanding. 1-2 marks Basic description with some detail in the response: some knowledge of viscose evident; some knowledge of why a lining might be inserted into a jacket. Some evidence of knowledge and understanding. 3-4 marks More detailed description, with clear and detailed evidence of knowledge and understanding in the response: knowledge of the properties relating to viscose and its suitability as a lining material; reasoning of why a lining might be inserted in a jacket. Almost all important points considered. 5-6 marks Full and detailed description, with clear and detailed evidence of knowledge and understanding in the response: clear knowledge of the properties relating to viscose and its suitability as a lining material; full reasoning of why a lining might be inserted in a jacket. All important points considered. 7-8 marks <i>The candidate must have answered all parts of the question to gain the 8 marks. If only one part of the question is answered, then only 4 marks can be awarded.</i>			