WJEC 2014 Online Exam Review

GCSE Design and Technology Unit 1 4131-01

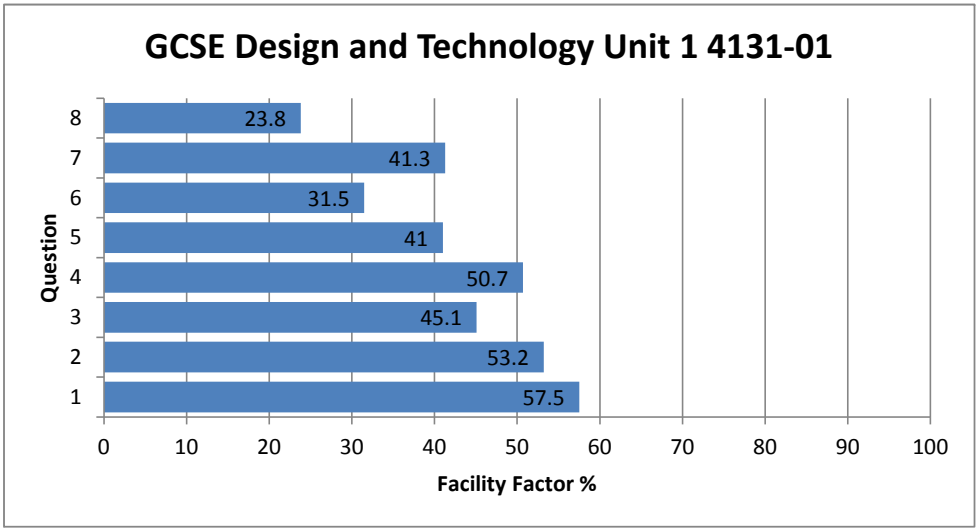
All Candidates' performance across questions

Question Title	N	Mean	S D	Max Mark	F F	Attempt %
1	1609	8.6	2.6	15	57.5	100
2	1608	5.3	1.9	10	53.2	99.9
3	1604	4.5	2.1	10	45.1	99.7
4	1609	12.7	3.5	25	50.7	100
5	1605	4.1	2	10	41	99.8
6	1607	4.7	2.5	15	31.5	99.9
7	1608	8.3	3.4	20	41.3	99.9
8	1597	3.6	2.2	15	23.8	99.3

5

6

8



Examiner only

Section B

Marked out of 60 *60 minutes*

5. This question is about Commercial Manufacturing Processes. It is worth a total of 10 marks.

(a) The picture below shows a length of material being made on an industrial machine. **Underline** the correct name for the machine. [1]

Knitting machine / Industrial loom

(b) (i) Complete the table below by adding a description of **each** of the production methods used in the textile industry.

Production method	***Description***
Mass production	.... [2]
Batch production	.... [2]

(ii) Describe **one** advantage of one-off production for the customer. [2]

.....

.....

Examiner only

(c) A manufacturing specification contains all the technical details needed to manufacture a product.

Describe **one** piece of information that would be found on a manufacturing specification and explain its importance to the manufacturer. [3]

.....

.....

.....

.....

.....

Turn over.

Examiner only

Section B

Marked out of 60 *60 minutes*

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Knitting machine / Industrial loom

(b) (i) Complete the table below by adding a description of **each** of the production methods used in the textile industry.

Production method	***Description***
Mass production	lots and lots of products made not a specific amount for example 'socks' as they make millions [2]
Batch production	a specific known amount of products produced as a group eg: 300 pairs of shorts [2]

(ii) Describe **one** advantage of one-off production for the customer. [2]

a one of wedding dress could be hand made an no other dress the same, made by hand by a designer.

Examiner only

(c) A manufacturing specification contains all the technical details needed to manufacture a product.

Describe **one** piece of information that would be found on a manufacturing specification and explain its importance to the manufacturer. [3]

A problem that we would need to be solve, or where something went wrong within the making of the product and where it would need to be changed for certain purposes.

Examiner only

Section B

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(b) (i) Complete the table below by adding a description of **each** of the production methods used in the textile industry.

Production method	***Description***
Mass production	Produces large amounts of products quickly. Used for simple items such as socks [2]
Batch production	Produces products to meet seasonal demand. Used for items such as swim wear [2]

(ii) Describe **one** advantage of one-off production for the customer. [2]

The product is of a higher quality because it was made by a very skilled worker

Examiner only

(c) A manufacturing specification contains all the technical details needed to manufacture a product.

Describe **one** piece of information that would be found on a manufacturing specification and explain its importance to the manufacturer. [3]

The size of each pattern piece. This is important as if one piece is the wrong size, it will mean that the product won't fit together properly.

Examiner only

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7

Examiner only

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Knitting machine / Industrial loom

(b) (i) Complete the table below by adding a description of **each** of the production methods used in the textile industry.

Production method	***Description***
Mass production	When a product is ~~continue~~ made forever as it ~~is~~ isn't a fashionable item e.g Curtains. [2]
Batch production	A certain number of the product is made and no more after that as it will go out of fashion. [2]

(ii) Describe **one** advantage of one-off production for the customer. [2]

They will be the only person with that item making it original.

Examiner only

(c) A manufacturing specification contains all the technical details needed to manufacture a product.

Describe **one** piece of information that would be found on a manufacturing specification and explain its importance to the manufacturer. [3]

It would state the seam allowance to be used because this could change the size of the product if changed.

Examiner only

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It would state the seam allowance to be used because this could change the size of the product if changed.

6

Examiner only

6. This question is about Materials and Components. It is worth a total of 15 marks.

(a) (i) Textile fibres are natural, synthetic or regenerated.
Place a **tick (✓)** in the table below to show the correct fibre source for **each** of the materials listed. [4]

	Natural	***Synthetic***	***Regenerated***
Acetate			
Polyester			
Jute			
Elastane			

(ii) Give **one** reason why fibres are blended when making yarns. [1]

.....

(iii) Name **one** fibre blend that uses both natural and synthetic fibres and is commonly used throughout textiles. [1]

.....

(b) The table below shows **two** textile products and the name of the material **each** is made from.
State a property of **each** material and give a reason why this property makes the material suitable for that product.

Product	***Explanation of named property***
(i) 	Material: Nylon Property: ..... [1] Reason: .... [1]
(ii) 	Material: Neoprene Property: ..... [1] Reason: .... [1]

Examiner only

(c) (i) Explain what is meant by the term 'geotextiles'. [2]

.....

.....

.....

(ii) Describe the benefits of micro-encapsulation when used in medical textiles. [3]

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Turn over.

Examiner only

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	Natural	***Synthetic***	***Regenerated***
Acetate			✓
Polyester		✓	
Jute			✓
Elastane		✓	

(ii) Give **one** reason why fibres are blended when making yarns. [1]

to make the material more stronger & thicker

(iii) Name **one** fibre blend that uses both natural and synthetic fibres and is commonly used throughout textiles. [1]

~~wool~~ ~~cotton~~ viscose

(b) The table below shows **two** textile products and the name of the material **each** is made from.
State a property of **each** material and give a reason why this property makes the material suitable for that product.

Product	***Explanation of named property***
(i) 	Material: Nylon light Property: waterproof, thin, creases easily [1] Reason: easy to fold away, protects you from the rain, light to carry [1]
(ii) 	Material: Neoprene Property: thick, padded, [1] Reason: good protection suitable to protect electrical devices. [1]

Examiner only

(c) (i) Explain what is meant by the term 'geotextiles'. [2]

textiles for outside for exampe roads the layout for making them.

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	Natural	***Synthetic***	***Regenerated***
Acetate			✓
Polyester		✓	
Jute			✓ ✗
Elastane		✓	

3

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~~[illegible]~~ Viscose

0

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Polyester		✓	
Jute	✓		
Elastane		✓	

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To enhance the propreties

(iii) Name **one** fibre blend that uses both natural and synthetic fibres and is commonly used throughout textiles. [1]

polycotton

(b) The table below shows **two** textile products and the name of the material **each** is made from.
State a property of **each** material and give a reason why this property makes the material suitable for that product.

Product	***Explanation of named property***
(i) 	Material: Nylon Property: waterproof ..... [1] Reason: rain won't get in the tent .... [1]
(ii) 	Material: Neoprene Property: ..... [1] Reason: .... [1]

Examiner only

(c) (i) Explain what is meant by the term 'geotextiles'. [2]

Used in civil engineering, geotextiles can be placed in soil so they under plants so ~~ng~~ weeds can grow but water can get in or out.

(ii) Describe the benefits of micro-encapsulation when used in medical textiles. [3]

Tiny particals of silver can be incorporated into a bandage which will kill any bacteria / ~~so~~ viruses / fungi present so it will prevent infection.

Examiner only

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To enhance the properties ✓

(iii) Name **one** fibre blend that uses both natural and synthetic fibres and is commonly used throughout textiles. [1]

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Examiner only

(c) (i) Explain what is meant by the term 'geotextiles'. [2]

2

Used in civil engineering, geotextiles can be placed in soil ~~so they~~ under plants so ~~ng~~ weeds can grow but water can get in or out.

(ii) Describe the benefits of micro-encapsulation when used in medical textiles. [3]

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11

Examiner only

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Acetate		✓	
Polyester		✓	
Jute	✓		
Elastane			✓

(ii) Give **one** reason why fibres are blended when making yarns. [1]

Tensile strength

(iii) Name **one** fibre blend that uses both natural and synthetic fibres and is commonly used throughout textiles. [1]

Cotton and elastane.

(b) The table below shows **two** textile products and the name of the material **each** is made from.
State a property of **each** material and give a reason why this property makes the material suitable for that product.

Product	***Explanation of named property***
(i) 	Material: Nylon Property: waterproof [1] Reason: Tents are often in the rain. [1]
(ii) 	Material: Neoprene Property: Heat proof [1] Reason: laptops often get hot [1]

Examiner only

(c) (i) Explain what is meant by the term 'geotextiles'. [2]

Geotextiles means environmentaly friendly materials and manufacture.

(ii) Describe the benefits of micro-encapsulation when used in medical textiles. [3]

Micro encapsulation enables materials to contain antiseptics and release them gradually so if the material is put over a wound it will keep it clean and prevent infections.

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Examiner only

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Geotextiles means environmentaly friendly materials and manufacture.

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1

✓(4)

Examiner only

8. This question is about ICT, CAD, CAM, Systems and Processes. It is worth a total of 15 marks.

(a) (i) State the full meaning of the following abbreviated terms. [2]

CAM: Computer A ..... M .....

CIM: Computer I ..... M .....

(ii) Information Communication Technology (ICT) can be used throughout the development of new ideas.
List **three** ways ICT can be used to model new ideas. [3]

I .....

II .....

III .....

(iii) Explain how the internet has made it easier for designers to research themes for new collections. [2]

.....

.....

.....

Examiner only

(b) Study the pictures below which have been produced using a specialist CAD package. Describe the advantages to designers of using specialist CAD software when presenting new ideas to clients. [3]

.....

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.....

(c) (i) Explain in detail the impact laser cutters have had when designing and making textile products. [3]

.....

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(ii) Describe the limitations associated with the use of a laser cutter when making textile products. [2]

.....

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END OF PAPER

Examiner only

8. This question is about ICT, CAD, CAM, Systems and Processes. It is worth a total of 15 marks.

(a) (i) State the full meaning of the following abbreviated terms. [2]

CAM: Computer Aided Manufacture

CIM: Computer Intergrated Manufacture

(ii) Information Communication Technology (ICT) can be used throughout the development of new ideas.
List **three** ways ICT can be used to model new ideas. [3]

I researching your ideas

II making presentations and diagrams of a product

III giving them ideas

(iii) Explain how the internet has made it easier for designers to research themes for new collections. [2]

they can look at mood boards and old products and compare them to their products to see what could be improved. They can also see what will be coming up next in the fashion industry.

Examiner only

(b) Study the pictures below which have been produced using a specialist CAD package. Describe the advantages to designers of using specialist CAD software when presenting new ideas to clients. [3]

easy to show detail, show colour and show how it fits the body. you can easily erase something you want to change and also add products very quick and easy.

(c) (i) Explain in detail the impact laser cutters have had when designing and making textile products. [3]

It is easy to cut patterns into products. It isn't time consuming. very quick and simple too.

(ii) Describe the limitations associated with the use of a laser cutter when making textile products. [2]

keep hands away, set up correctly, always accurate. and quick.

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(a) (i) State the full meaning of the following abbreviated terms. [2] 2

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0

Keep hands away, set up correctly, always accurate and quick.

END OF PAPER

7

Examiner only

8. This question is about ICT, CAD, CAM, Systems and Processes. It is worth a total of 15 marks.

(a) (i) State the full meaning of the following abbreviated terms. [2]

CAM: Computer A ided M anufacture

CIM: Computer I nformation M anufacture

(ii) Information Communication Technology (ICT) can be used throughout the development of new ideas.
List **three** ways ICT can be used to model new ideas. [3]

I research patterns

II .....

III .....

(iii) Explain how the internet has made it easier for designers to research themes for new collections. [2]

New websites such as Twitter and Facebook make it easier to communicate Google can be used to look up countries or styles which can influence the new collections

Examiner only

(b) Study the pictures below which have been produced using a specialist CAD package. Describe the advantages to designers of using specialist CAD software when presenting new ideas to clients. [3]

The original design can be duplicated and certain aspects can be changed such as the colour. Items can also be removed such as bags. The new design could be ~~dah~~ duplicated and certain aspects can be changed. Also items removed from the first design can be re added easily.

(c) (i) Explain in detail the impact laser cutters have had when designing and making textile products. [3]

They make it much easier to cut materials perfectly This means that less skilled ~~ess~~ workers are needed to manufacture certain things. however it may be difficult to use

(ii) Describe the limitations associated with the use of a laser cutter when making textile products. [2]

It may not be able to cut complex patterns.

END OF PAPER

Examiner only

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(a) (i) State the full meaning of the following abbreviated terms. [2]

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CIM: Computer I nformation M anufacture ✗

(ii) Information Communication Technology (ICT) can be used throughout the development of new ideas.
List **three** ways ICT can be used to model new ideas. [3]

I research patterns ✗

II ✗

III ✗

(iii) Explain how the internet has made it easier for designers to research themes for new collections. [2]

New websites such as the Twitter and Facebook make it easier to communicate. Google can be used to look up countries or styles which can influence the new collections ✓

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They make it much easier to cut materials perfectly. This means that less skilled ~~wo~~ workers are needed to manufacture certain things. however it may be difficult to use

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I They change the colar

II Size

III Shape

(iii) Explain how the internet has made it easier for designers to research themes for new collections. [2]

They can see what things are most poplar by what things have been bought most.

Examiner only

(b) Study the pictures below which have been produced using a specialist CAD package. Describe the advantages to designers of using specialist CAD software when presenting new ideas to clients. [3]

They can easily change the colors of things ~~or~~ or the style or shape of things to see what the client prefers.

(c) (i) Explain in detail the impact laser cutters have had when designing and making textile products. [3]

They help decrease the overall manufacture time by cutting ~~more item~~ multiple items at once which saves money.

(ii) Describe the limitations associated with the use of a laser cutter when making textile products. [2]

The machine costs alot of money and it limits what can be cut.

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2/5

END OF PAPER