



2013 HSC Textiles and Design Marking Guidelines

Section I

Multiple-choice Answer Key

Question	Answer
1	A
2	A
3	C
4	B
5	D
6	D
7	B
8	C
9	B
10	D

Section II

Question 11 (a)

Criteria	Marks
• Clearly distinguishes between niche and mass-produced textile products	2
• Provides some information relevant to the concept of niche or mass-production	1

Sample answer:

‘Niche textile products’ refers to individual, exclusive, textile products, such as one-off designer gowns by Akira Isogawa, whereas ‘mass-produced textile products’ refers to those produced in large quantities of the same product.

Question 11 (b)

Criteria	Marks
• Demonstrates a detailed understanding of the effects of online shopping for textile products on consumers	3
• Outlines the effects of online shopping for textile products on consumers	2
• Provides some relevant information about online shopping for textile products	1

Sample answer:

Online shopping has provided consumers with greater access to a wide variety of textile products, the convenience of 24 hour shopping without geographical limitations and the ability to compare costs of similar products more easily. Not being able to handle the product for size fit and quality may result in more returns.

Question 12 (a)

Criteria	Marks
• Clearly identifies the characteristics and process of appliqué	2
• Provides limited information relevant to appliqué	1

Sample answer:

Appliqué is a method of fabric decoration where a piece of a contrasting fabric is attached to a base fabric using adhesives and/or stitching.

Question 12 (b)

Criteria	Marks
• Demonstrates a thorough understanding of the influence of society on the historical design development of textiles • Uses relevant examples	4
• Demonstrates some understanding of the link between the influence of society and the historical design development of textiles • Uses appropriate example(s)	3
• Identifies some social influences and the historical design development of textiles • Uses adequate example(s)	2
• Provides limited relevant information about historical design development of textiles	1

Sample answer:

Focus Area: Apparel/Swimwear

The concept of modesty was a major factor in the evolution of the silhouette of swimwear design eg woollen bloomers in the 1900s to bikinis in the 1950s, to full body coverage for some cultural groups.

Society's desire for success in competitive racing has lead to the development of innovations in fabrics and styles, eg body hugging nylon/elastomeric blend, shark skin fabric, neck-to-knee one piece swimwear reduce drag in the water.

Answers could include:

An increase in consumer awareness of the damage caused by the sun has resulted in a greater demand for swimwear that offers sun protection, such as rash shirts, which provide full cover for arms and body.

Question 12 (c)

Criteria	Marks
• Provides a thorough explanation of how a designer expresses their inspirations in their designs	4
• Provides a sound explanation of how a designer expresses their inspirations in their designs	3
• Provides information on the inspiration(s) of a designer and/or their design(s)	2
• Provides limited relevant information about a designer	1

Sample answer:

Collette Dinnigan's sources of inspiration include:

- the female-shaped figure, as seen in her form-fitting evening wear
- French lace, as seen in her lingerie
- fine wools, linen, cotton and pure silks, as seen in all her ranges.

Answers could include:

- the availability of modern technological resources such as laser cutters, recently seen in her resort wear
- the influence of other designers such as Yves Saint Laurent and Christian Dior, as seen in her formal wear
- exotic travel locations, eg India for detailed embroidery work and intricate beading, and the USA for California beach style, as seen in her recent swimwear collection.

Question 13 (a)

Criteria	Marks
• Clearly identifies the characteristics of washable webs	2
• Provides some information relevant to washable webs	1

Sample answer:

Washable webs are fabrics that are made directly from fibres that have been entangled using either heat, chemicals or mechanical means. They are durable enough to withstand repeated washing or dry-cleaning. Their uses include interfacings, wash cloths, disposable nappies and enviro-shopping bags.

Question 13 (b)

Criteria	Marks
• Demonstrates a detailed understanding of how the properties of microfibres can enhance the performance of textile items • Uses a relevant example	4
• Demonstrates some understanding of how the properties of microfibres can enhance the performance of textile items • Uses a relevant example OR • Demonstrates a detailed understanding of how the properties of microfibres can enhance the performance of textile items, with no example provided	3
• Lists the properties and/or performance features of microfibres	2
• Provides some relevant information about microfibres	1

Sample answer:

Microfibres are ultra fine filaments extruded to a diameter of less than 1 denier. Because they are so fine, many fibres can be packed together tightly to make a yarn. These fibres can slide freely and produce soft, silk-like fabrics that are comfortable, light weight, resilient, drape well and resist pilling, making them suitable for suiting and formal wear.

OR

When used for outer wear, such as ski wear, hiking gear and spray jackets, the close packing of the ultra fine microfibres provides resistance to both wind and water droplets, making these garments water and wind resistant. Fabrics made from microfibres are also porous enough to allow moisture vapour to wick away from the body. Thus the wearer feels less clammy in warm weather or during exercise.

Question 13 (c)

Criteria	Marks
• Provides a thorough explanation of how the introduction of computer-aided manufacture has affected the construction of textile items	4
• Provides a sound explanation of computer-aided manufacture and its effect on the construction of textile item(s)	3
• Provides basic details of how computer-aided manufacture is used in the construction of textile item(s)	2
• Provides some relevant information related to computer-aided manufacture	1

Sample answer:

Seamless weft knit circular knitting machines transform yarn quickly into form-fitting garments, thus minimising the traditional time and labour-intensive steps of cutting and sewing. This means that garments can be constructed in a much shorter time-frame at a lower cost to the manufacturer. This technology can be used for apparel wear, sportswear and underwear. There are no construction seams required, which is not only aesthetically pleasing and comfortable to wear, but also there are no chances of seam failures, hence less faulty goods. The machines can be pre-programmed to include a variety of stitches and patterns, and specific design features such as company logos.

Answers could include:

- Computer linked sewing machine
- Seamless technology
- CAD pattern making and grading for pattern making and sizing
- Computer-fed laser plotter and cutter
- Computerised fell-seamer for trouser seams
- Computerised button and buttonholes – for shirts, jackets and trousers
- Blind hemming machine

Section III

Question 14 (a)

Criteria	Marks
Provides a thorough explanation of ONE principle of dyeing and how this principle can be demonstrated through experimentation, including a relevant experiment	5
Provides a sound explanation of ONE principle of dyeing and how this principle can be demonstrated through experimentation, including a relevant experiment	4
- Demonstrates a basic understanding of textile dyeing, including a relevant experiment OR - Provides a relevant experiment that demonstrates an understanding of a principle of dyeing	3
- Outlines an experiment related to textile dyeing OR - Demonstrates a basic understanding of textile dyeing	2
Provides some information relevant to textile dyeing	1

A student's response may be written using either a procedure, experiment, or prose format. Dyeing principles may include: the addition of salt, agitation, mordant, temperature, wetting out on fibre, yarn or fabric.

Sample answer:

One of the key principles of dyeing is wetting-out to ensure good dye penetration, level dyeing and maximum dye up-take.

Aim

To determine the effect of wetting out on the dyeing of fibre, yarn or fabric.

Equipment

Two samples of the same textile medium (fibre, yarn or fabric), dye liquor, dye vessel, stirring wand.

Method

- Step 1: Prepare dye bath according to manufacturer's specifications.
 Step 2: Label sample A as the Control Sample, and do not wet-out.
 Step 3: Wet-out sample B fabric. Place both samples in dye liquor for a specified time.
 Step 4: Agitate samples with stirring wand.
 Step 5: Rinse thoroughly and dry. Use heat to fix the dye.

Result

Results written up to indicate level of colour penetration in each sample.

Conclusion

Wetting-out is important as it allows for the dye molecules to penetrate the fibre, yarn or fabric more evenly and attach to the fibre at a molecular level. The un-wetted control sample appeared patchy, indicating uneven penetration and lack of colour depth – the result of poor migration of the dye molecules.

Question 14 (b)

Criteria	Marks
• Demonstrates a thorough understanding of textile production and textile art forms for the specified culture • Provides a detailed relationship between the textiles of the culture and their use as a medium of self-expression and communication • Uses relevant examples to clearly support the response	9–10
• Demonstrates a detailed understanding of textile production and textile art forms for the specified culture • Provides a clear relationship between the textiles of the culture and their use as a medium of self-expression and communication • Uses appropriate examples to support the response	7–8
• Demonstrates a sound understanding of textile production and/or textile art forms for the specified culture • Identifies a link between the textiles of the culture and their use as a medium of self-expression and/or communication • Uses adequate example(s) to support the response	5–6
• Outlines the textile production and/or textile art forms for the specified culture AND/OR • Identifies how the textiles of the culture are used as a medium of self-expression and/or communication AND • Uses example(s) with limited understanding or links to the response	3–4
• Provides some relevant information about the textiles of the specified culture	1–2

Sample answer:

Culture: Japan

Throughout history, the Japanese people have used textiles as a form of self-expression portraying their likes, dislikes, beliefs, emotions and values. As a means of communication traditional Japanese textiles have been used to communicate age, rank, gender, religious practices, social status and the people's close connections to nature. These have taken the form of clothing, banners and hangings.

Textiles are used to communicate religious beliefs. In Japan the Shinto and Buddhist religions predominate. The practice of Shinto is based on a love of living things and a belief that harmony can only be achieved with nature. This is evident in the extensive use of images of flowers, birds, and animals on textile items. These are applied using a variety of techniques including shibori, which involves intricate binding, stitching, folding, twisting or compressing and then dyeing of the fabric; yuzen, a resist technique that uses rice paste to develop intricate motifs of flowers, birds etc; sashiko, an embroidery technique that uses simple running stitch for Buddhist symbols such as birds, butterflies and clouds.

The Kimono is the most recognised traditional dress of Japan. Though it is seldom worn today except for special, traditional ceremonies, such as coming-of-age, at weddings and funerals, it still plays a significant role in the identity of the Japanese people. It is a symbol of cultural uniqueness, and communicates things such as the person's age, social status and marital status. The various symbols used mean different things, eg, colourful ornate patterns on a kimono and floor length sleeves are worn by unmarried women, whereas single muted colours and shorter sleeves are worn by married women. The Obi and the way it is tied also identifies a woman's marital status; a married woman has a flat knot tied across the back, whereas a young person wears hers tied in an ornate style such as a butterfly. Traditional symbols of the crane and turtle symbolise long life and good luck, and these feature widely on wedding kimono.

As a form of self-expression, colour is also of great importance. The white embroidered kimono is used for weddings as a symbol of purity, and black kimono are worn for funerals. Bright colours are reserved for children, and colours and patterns always follow the seasons, again expressing their Shinto religious beliefs.

The use of textiles as a means of self-expression is also evident in contemporary Japanese style. Harajuku Fashion is one such example where young people wear an extreme mix of traditional Japanese style alongside other influences such as Gothic, Lolita, punk and dressing as manga characters. This demonstrates their strong attachment to their traditional culture juxtaposed with their desire to engage with the modern world, while communicating their social connections.

Question 15 (a)

Criteria	Marks
Provides a comprehensive description of the effect that the use of digital printing has on the manufacturer and the environment	5
Provides a sound description of the effect that the use of digital printing has on the manufacturer and the environment	4
- Provides a limited description of the effect that the use of digital printing has on the manufacturer AND the environment OR - Provides a sound description of the effect that the use of digital printing has on the manufacturer OR the environment	3
Outlines the effect that the use of digital printing has on the manufacturer and/or the environment	2
Provides some information relevant to digital printing	1

Sample answer:

Digital printing refers to the process of printing a customised design or complex, high-resolution image directly onto a fabric surface in a wide range of colour options, using ink-jet printer technology and innovative CAD systems and programs.

The increased use of digital printing has had an effect on the manufacturer and the environment both positively and negatively.

Manufacturer

- Positive effects may include: no limit to print runs, reliable, enables rapid prototyping of design work, photographic quality image, fast, accurate, customised designs, no screen making costs, direct from the computer onto the fabric, accurate colour matching therefore no wastage, no need for colour separation, no stock pile up as designs can be printed on demand, jobs completed in a short timeframe, unlimited design flexibility, production lead time is reduced, high quality prints on both woven and knit fabrics and suitable for most fibre types.
- Negative effects may include: all fabrics must be pre-treated and then washed to set dyes, speed of the process is not fast enough to make it economically viable for long runs of fabric prints, ink-jet dyes are expensive and design is limited to the size of the printer. Initial set-up cost and purchase of equipment can be high, with training of staff required.

Environment

- Positive effects may include: prototyping of design work ensures less wastage of fabrics and ink. Customised designs, short runs and designs printed only on demand similarly contribute to less wastage. Cleaner and more environmentally friendly than other decorative methods such as screen printing, as water is not needed for clean-up.
- Negative effects may include: operation of machinery emits noise and uses electricity, the production of which contributes to the greenhouse effect, air pollution and global warming. Disposal of ink cartridges can be detrimental to ecosystems. Print is not biodegradable, so can contribute to pollution when disposed of. With any emerging technology and associated machinery, in time the equipment used will become obsolete, thereby contributing to landfill.

Question 15 (b)

Criteria	Marks
- Clearly justifies the suitability of the fibre, yarn, fabric structure and fabric finish for the selected fabric - Provides a thorough argument to support the performance and safety requirements of the selected fabric	9–10
- Provides some justification of the suitability of the fibre, yarn, fabric structure and fabric finish for the selected fabric - Provides a detailed argument to support the performance and/or safety requirements of the selected fabric	7–8
- Describes some characteristics of a suitable fibre and/or yarn, and/or fabric structure and fabric finish for theatre seat fabric - Provides a sound argument to support the performance and/or safety requirements of the selected fabric	5–6
- Outlines some characteristics of a suitable fibre and/or yarn and/or fabric structure and/or fabric finish for theatre seat fabric - Identifies the performance and/or safety requirements of theatre seats	3–4
Provides some information relevant to theatre seat fabric	1–2

Sample answer:

A suitable combination could be 100% cotton fibre, high or medium twist staple spun yarn, tightly woven plain or twill weave, with Proban finish applied to the fabric surface

- Fibre type – Cotton fibre is highly absorbent, strong, resistant to abrasion, anti-static and retains its shape well. The absorbent qualities and anti-static nature of cotton provide greater comfort for the theatre patron. Its high strength and excellent dimensional stability provide durability and long wear. Cotton's high absorbency allows for greater comfort, however it also absorbs spills, which may be considered a disadvantage. Cotton is susceptible to mildew and mould attack, so this may also be a disadvantage if the theatre has poor ventilation.
- Yarn type – Yarn spun from staple fibre, which is carded and combed, provides a smooth and durable yarn. A high twist yarn provides for a smoother, stronger, firmer, elastic and quick drying fabric, whereas a medium twist yarn contributes to a more comfortable fabric to sit on, however it can reduce strength, abrasion resistance, resilience and durability or longevity.
- Fabric structure – A tightly woven plain or twill weave provides excellent durability, a smooth hard handle, improved comfort and good abrasion resistance. Both weaves have good structural strength, providing protection from cuts and tears, thereby contributing to improved longevity.
- Fabric finish – As cotton is highly flammable it can ignite and burn readily, leading to possible severe life-threatening burns. By impregnating cotton fabric with a Proban finish, cotton will not burn. Proban is a chemical finish applied to the surface of cotton fabrics to form an insoluble flame retardant polymer. Theatre seats finished with Proban therefore protect patrons at the theatre against burn injuries, as the finish produces a flame-extinguishing gas. Proban-treated fabrics do not melt away to form a hole through which the flame can penetrate, nor do they form hot sticky residues which can adhere to the skin. The disadvantage of Proban is its harsh feel, thus decreasing the comfort of theatre seats.

Answers could include:

<i>Fibre</i>	<i>Yarn</i>	<i>Fabric</i>	<i>Finish</i>
Cotton	High twist staple spun	Plain/twill weave	Proban
Nylon	Filament high twist	Plain/twill weave	Nomex/Kevlar
Polyester	Filament high twist	Plain/twill weave	Trevira CS

Textiles and Design

2013 HSC Examination Mapping Grid

Section I

Question	Marks	Content	Syllabus outcomes
1	1	Marketplace – product life cycle	H5.1
2	1	Cultural factors – effect on contemporary society	H6.1
3	1	Fabric decoration – embroidery	H1.3
4	1	Current issues – sun protection clothing	H5.2
5	1	Marketplace – promotion strategies	H5.1
6	1	Innovations in yarn – bicomponent	H3.2
7	1	Contemporary designers – trends in society	H6.1
8	1	End-use applications – selection of end-use	H3.1
9	1	Environmental sustainability – government legislation	H5.2
10	1	End-use applications – contributing properties	H4.1

Section II

Question	Marks	Content	Syllabus outcomes
11 (a)	2	Current issues – manufacturing strategies	H5.2
11 (b)	3	Marketplace – place and distribution channels	H5.1
12 (a)	2	Fabric decoration – appliqué	H1.3
12 (b)	4	Historical design development – influence of society on design development	H6.1
12 (c)	4	Contemporary designers – sources of inspiration	H6.1
13 (a)	2	Innovations and emerging textile technologies– fabric – washable webs	H3.2
13 (b)	4	Innovations and emerging textile technologies – fibre – microfibre	H3.2
13 (c)	4	Innovations and emerging textile technologies – machinery — CAM	H3.2

Section III

Question	Marks	Content	Syllabus outcomes
14 (a)	5	Fabric colouration and decoration – principles of dyeing	H1.3
14 (b)	10	Cultural factors that influence design and designers — textiles as a medium for self expression and communication between people	H6.1
15 (a)	5	Innovations and emerging textile technologies – decorative techniques to enhance design – digital printing	H3.2
15 (b)	10	End-use applications – influence of properties and finishes on end-use	H4.1