



**B O A R D O F S T U D I E S**  
NEW SOUTH WALES

## **2010 HSC Textiles and Design Sample Answers**

This document contains ‘sample answers’, or, in the case of some questions, ‘answers could include’. These are developed by the examination committee for two purposes. The committee does this:

- (a) as part of the development of the examination paper to ensure the questions will effectively assess students’ knowledge and skills, and
- (b) in order to provide some advice to the Supervisor of Marking about the nature and scope of the responses expected of students.

The ‘sample answers’ or similar advice are not intended to be exemplary or even complete answers or responses. As they are part of the examination committee’s ‘working document’, they may contain typographical errors, omissions, or only some of the possible correct answers.

## Section II

### Question 11 (a)

*Sample answer:*

Manufacturers use SPF rated fabrics and utilise design style modifications, such as high neck lines and long sleeves which provide more cover for the body.

### Question 11 (b)

*Answers could include:*

Use and management of resources (cradle to grave), water processing laws, recycling of dye wash off, contaminated water not to be added to storm water, recycle cardboard to reduce landfill, and minimisation of pollutants.

Examples of legislation could include:

*Waste Avoidance and Resource Recovery Act 2001*

Protection of the Environment Operations (Clean Air) Regulation 2002

### Question 12 (a)

*Sample answer:*

Rosemary Armstrong of “Tea Rose” finds inspiration from day-to-day observations for fabric print ideas, for example observing combi vans with peeling blue and orange paint and incorporating these colours into her designs. Her main sources of inspiration are derived from the women she comes into contact with.

### Question 12 (b)

*Sample answer:*

The colour and print designs chosen by Rosemary Armstrong have influenced current trends in society. While many designers were still using minimalist design in black, Rosemary was using soft pastels and romantic prints on apparel items. This has attracted clients who liked to be more individual in their clothing choice. Her fashion no longer reflected one particular style per season.

### Question 12 (c)

*Sample answer:*

India – Block printing of textiles in Rajasthan in India was traditionally influenced by the vegetable dyes available in the region and may vary greatly from other regions in India. In some areas of India, the block print is produced with dyes on wooden blocks. In other geographical locations the prints are created as resist prints with wax on heated metal designs. Once the wax is applied to the fabric, it is dyed producing a mono-colour print.

**Question 13 (a)*****Sample answer:***

Digital printing technology consists of printing designs on to specially treated fabrics directly from a computer.

**Question 13 (b)*****Sample answer:***

## Advantages

Digital printing allows the direct application of a multi-coloured print in one application to fabrics of different fibre composition and fabric construction. Different inks are used in digital textile printers, for example acid dyes for wool and silk and reactive dyes for cellulosic fibres.

## Disadvantages

Limited to the width of the fabric.

Expensive to produce because of the high cost of purchasing the machinery, dyes and fabric.

**Question 13 (c)*****Sample answer:***

Washable webs are non-woven fabrics that maintain their integrity through repeated washes. Their stability when washed makes them suitable for use as interfacings in apparel. They do not fray, which makes them suitable for use as cleaning cloths. They are cheap to produce and easy to sew, making them suitable for the construction of enviro shopping bags. They are crease resistant, making them suitable for use in shoulder pads and padding for bras.

## Section III

### Question 14 (a)

#### *Answers could include:*

##### *Apparel*

Swimwear – change in selection of fibres, yarn and fabrics. Originally constructed from cotton and/or wool plain weave or weft knit to contemporary innovative alternatives such as ‘fastskins’ nylon/lycra (elastomeric), core spun, weft knit fabrics.

##### *Non-apparel*

Backpacks/tents – change from natural cotton fibres to synthetics (nylon) rip-stop weave.

##### *Costume*

Change from natural to synthetic fabrics using technology, advanced closures or fasteners for quick change such as Velcro.

##### *Textile arts*

Introduction of technologically advanced techniques and fabrics such as solvy, Angelina, fibres, digital printing, fusible web, machine embroidery.

##### *Furnishings*

Change from natural fibres and basic weaves to laminates, fusible linings. Recycling PET bottles manufactured into rugs/carpeting.

### Question 14 (b)

#### *Answers could include:*

##### *Apparel*

Swimwear: the transition from swimwear originally made from cotton or wool (which was heavy when wet, dragged through water, absorbent and slow drying) to the demand for lightweight, quick drying swimsuits has led to the use of alternatives such as Lycra and fast skins. Society’s demand for changes in design have included cut-away backs, high-cut legs and form-fitting designs because of the requirement of speed and comfort and aesthetic purposes.

##### *Non-apparel*

Tents: society has demanded lightweight, durable tents that resist biological attack and have quick-drying properties. Traditional designs have changed from the use of heavy canvas and wooden pegs and ropes, to nylon tents with aluminium frames and strong nylon cords.

##### *Costume*

Closures: society’s demand for changes have included the following examples: closures of Velcro and zippers are used instead of buttons and lacing to allow for quick changes for performers. This has allowed for the production of multi-sized costumes by the use of elastomeric and stretch fabrics. Synthetic fabrics have allowed for easy care laundering for costumes that are worn excessively.

### *Textile arts*

Society's revival of traditional textile arts such as patchwork and embroidery has led to the introduction of fusible webbings, soluble fabrics and a wide range of novelty yarns becoming readily available.

### *Furnishings*

Society's demand for durable easy care, sun protection fabrics has led to the development of a greater range of fabrics suitable for interior and outdoor furnishings.

## **Question 15 (a)**

### ***Sample answer:***

#### *Wool*

If the wool fibre is combed and spun with high twist it will produce a worsted yarn resulting in a firm, smooth yarn. If manufactured as a woven fabric, a durable, smooth and lightweight fabric will result, which is appropriate for use as suiting. If manufactured as a weft knit, it may produce a fabric which has a good drape and elasticity, making it appropriate for the use in form-fitting women's apparel.

If the wool fibre is carded and spun with low twist, it will produce a woollen yarn resulting in a high bulk, soft handle yarn. Fabrics produced from these yarns have good insulating properties and are crease resistant. If woven as a plain weave it may be suitable for an overcoat, or it may be knitted to produce a bulky winter jumper.

## **Question 15 (b)**

### ***Answers could include:***

*Soil-resistant finishes* – stain repellent liquid can be applied to fabrics or garments to produce the following performance properties: stain repellent, easy release of ground-in stains, durability of finish which lasts the life of the garment. This finish creates a fabric surface which repels liquids and allows stains to be released during normal washing. This makes it suitable for the end uses such as work clothing and uniforms.

*Fire-retardant finishes* – the application of a chemical treatment at the finishing stage of cotton and cotton-blend textile manufacture. It does not affect the fabric's natural and physical properties, and can be applied to both woven and knitted fabrics. When exposed to flame, treated fabrics form a char layer limiting the risk of residue adhering to the skin of the wearer. It will not smoulder, has no afterglow and the flame will not spread. This makes it suitable for children's nightwear, protective clothing and furnishings such as theatre curtains.