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**EXAMINATION
REPORT**

**Textiles and
Design**

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**1997 HIGHER SCHOOL CERTIFICATE
EXAMINATION REPORT
TEXTILES AND DESIGN**

In 1997, 781 candidates presented for the examination in Textiles and Design and, of these, 539 presented for the 2 Unit examination and 242 for the 3 Unit.

2/3 UNIT (COMMON)

Section I Science and Technology

Question 1 Dyeing and Printing

General Comments

This question provided a range of responses, many candidates interpreted the questions accurately; showing a good knowledge of dyeing and printing and successfully explaining problems associated with dyeing.

Suggested Response

State the steps of the basic dyeing process that is required to dye natural fibres. Some of the problems that are common to the dyeing of natural fibre occur when the dye is too soluble in water or is too attractive to the fibre being dyed; explain why these two problems are undesirable when dyeing natural fibres.

Show understanding of the advantages and disadvantages of stock-dyeing, piece-dyeing and transfer-printing. Give an example of a suitable end-use for each method.

The following is an example of an excellent response:

- (a)
- Dissolve dye stuff in water
 - Immerse fibre in the water
 - Allow sufficient time for molecules to diffuse into the amorphous regions of the fibre
 - Wash excess dye from fibre.

- (b) If the dye is too soluble in water

- it is difficult for dye to stay in the fibre during washing,
- it has poor wash fastness.

If the dye is too attractive to fibre

- it absorbs too quickly into the fibre,
- it causes streaky, unlevel dyeing.

- (d) Stock dyeing (dyed in fibre stage)

Advantages:

- good dye penetration
- special (fancy) colour effects
- even colour-mixing in later process stages.

Disadvantages:

- slow response to fashion
- fibre loss in processing affects blend ratio/composition
- coloured fibre waste.

Suggested end-use:

- tartan skirts, brocade bedspreads.

Piece dyeing (dyed at fabric stage)

Advantages:

- quick response to fashion
- easier process control.

Disadvantages:

- simple colour pattern
- even dyeing may be difficult for blends of different fibre types.

End-use:

- fashion wear.

Transfer printing

Advantages:

- quick response to fashion
- little pollution problem
- great scope for design
- small floor space required
- lower production costs — except for some transfer paper.

Disadvantages:

- some transfer paper is costly
- colour fastness may be a problem for non-thermoplastic fibres.

End-use:

- fashion-wear requiring a very clear print, especially if a large design motif is required.

The following is an example of a poor response:

Little or no understanding of the basic process common to the dyeing of natural fibres.

Failure to identify undesirable conditions when dyeing.

In these responses there was little understanding of stock dyeing, piece dyeing and transfer printing, so candidates were unable to list the advantages, disadvantages and end-uses of these methods of colouring fabric.

Question 2 Finishing

General Comments

This was a popular question to which many candidates gave excellent responses. Some failed to show an understanding of finishes in general and could not relate their knowledge to the requirements of the question.

Suggested Response

Make a selection of an appropriate finish or finishing process for each item in the travel wardrobe of a company executive, explaining why it is an appropriate finish for that article.

Give a detailed description of how each finish is applied, well labelled diagrams can be used.

For each finish give a testing procedure, using a control in order to validate results.

The following is an example of an excellent response:

- (a) (i) Choose a specific finish that not only meets the needs of the article but is also appropriate to both its fibre types and fabric structure. Give reasons showing why the finish is appropriate, particularly in relation to improved versatility and/or durability.
- (ii) Clearly explain the correct application for each finish identified.
- (b) Choose two finishes and assess the effectiveness of each finish or finishing process for the textile article in the travel wardrobe.

The following is an example of a poor response:

Finishes chosen were not appropriate for the type of fibre/fabric and for the article's use, candidates could not give reasons for their choices. The same finish was used more than once.

Failure to give suitable tests to assess the effectiveness of the finish.

Question 3 Properties and Performance of Textiles

General Comments

This question was very popular and good candidates answered it well. Poorer responses did not have the depth of knowledge necessary to answer what was required of the question.

Suggested Response

Make a list of functional properties required for each item included in the promotional pack designed for tourists visiting Sydney beaches.

Choose suitable fibres and fabrics for each item and justify such choices.

Choose two items with different fabric structure and explain how each fabric is made.

The following is an example of an excellent response:

- (a) Properties relevant to each item included in the promotional pack designed for tourists visiting Sydney's beaches were identified. Here candidates were able to separate functional properties from aesthetic properties.
- (b) Fibres or fibre blends suitable for the item which met the desired properties of each item were chosen. The choice of the fibres was justified by showing, in terms of the required properties, why they were suitable for the items.
- (c) Specific fabric structure, eg plain weave or pile weave, for each item were named. Reasons were given showing why these structures were suitable in terms of properties required.
- (d) Two items with different fabric structures were chosen and a clear understanding given of the manufacturing process required for each.

The following is an example of a poor response:

- (a) Failure to understand the difference between functional properties and aesthetic properties, often describing physical characteristics rather than functional properties. Properties given were too general and did not relate to the specific item.
- (b) Choice of unsuitable fibres or fibre blends, as well as failure to relate fibre choice to the properties of each item.
- (c) Identification of only a general fabric structure plus failure to justify the choice.
- (d) Failure both to explain the manufacturing process of fabric structures and, often, to choose different structures.

No reference was made to the promotional tourist pack or its purpose.

Question 4 Properties and Performance of Textiles

General Comments

Although the candidature for this question was small, it was generally well answered.

Suggested Response

This question required an understanding of multi-filament yarns and the way(s) in which they can be modified to imitate yarns made from natural fibres. Advantages and disadvantages of garments made from smooth polyester multi-filament should be listed. Candidates should have explained how the properties of polyester multi-filament yarns are improved by the texturing process, identifying two methods of texturing and explaining each process.

A suitable method, other than texturing, that can be used to change the properties of the polyester multi-filament yarn should be both named and described.

The following is an example of an excellent response:

- (a) Advantages (eg strong, lustrous) and disadvantages (eg poor comfort, develops static) of smooth polyester multi-filament yarns were listed.
- (b) Explanation of how properties can be improved by texturing, eg texture, bulk, improved absorbency.
- (c) Identification of two methods of texturing and full description of the process, including diagrams. Methods given could have included: false twisting, edge crimping, air-jet, stuffer box.
- (d) Identification of methods other than texturing; these include twisting, delustring, anti-stat. A description of the chosen method could be given.

The following is an example of a poor response:

- (a) Either few or incorrect examples were given. Fibre properties rather than properties of garments made from multi-filament yarns were described.
- (b) Failure to give a clear explanation of how the texturing process alters yarn properties. Frequent repetition of unrelated facts.
- (c) Inability to identify or describe methods clearly, very poor diagrams.
- (d) Poor interpretation of the question. Discussion of blends rather than polyester yarns. Some candidates wrongly chose another texturing process.

Section II Textiles and Society

Question 5 Culture and Textiles

EITHER

(a) General Comments

Although this question was reasonably popular, there were few excellent answers. Students must realise that the stem of the question must be considered when answering any question. Many responses referred to cultures of other countries, instead of identifying two differing subcultures from contemporary Australia, as required by the question.

Suggested Response

Identification of two differing subcultures in contemporary Australia and sketches of a specific textile item for each.

Discussion of how each of the sketched items have been influenced by four of the factors listed in the question.

The following is an example of an excellent response:

- (i) One group — Australian Fijian Indians, people of Fijian Indian descent integrated into contemporary Australian culture — wearing the choli, a garment worn as a top with a sari as the skirt.

Second group — a sarong type skirt worn by young adolescent women.

- (ii) Both items were discussed in relation to four of the factors listed. The following is a sample answer.

Sarong

Fashion

In Australia sarongs are fashionable almost every year as they adapt into the lifestyle of the country so well.

They are produced in a variety of colours that are appropriate for the season and can be made from a repeat textile design or from a dyed yarn cloth.

Methods of Decoration

Traditional Batik is a wax resistant method of creating images on the cloth; it also employs methods of dyeing and many colours can be used. The other traditional method of decoration, Ekat, is also one of production. This is produced by yarn-dyeing in sections of the warp and/or the weft yarn and then weaving it to produce an intricate pattern that has a pulled appearance.

Care Techniques

The traditional sarong is dyed with vegetable dyes and sometimes is not dye-fast; these items have to be washed separately, by hand. Contemporary sarongs are dyed with synthetic dye stuffs which are usually fast. These can be machine-washed along with other items of clothing.

Production Methods

The sarong is woven with a traditional pick and pick weave. As mentioned above, Ekat is one of the methods used to create a distinct design that results from the method used to produce the yarn. The yarn is tied onto a frame that is a specified size depending on the size and pattern that is desired. This is then tie-dyed, by wrapping sections of the yarn in patterns and painting the dye onto the exposed areas. Sections of the wrapping are selectively and methodically removed and, at each stage, a different colour is applied, eventually creating a pattern. When woven, this results in the pattern on the finished piece of cloth.

The following is an example of a poor response:

- (i) Poor responses failed to identify two subcultures correctly or to provide an adequate sketch of the textile items chosen.
- (ii) Poor responses gave a very limited range of facts relating to each of the four categories. Many of the facts given were often either unrelated to the chosen items, or their influence on such items was ignored.

OR

(b) General Comments

This question was one of the more popular questions on the paper. The better candidates were well informed and the majority answered in greater depth than required. Poorer candidates knew enough information of one culture but were unable to give any information about a contrasting culture in order to answer the question adequately.

Suggested Response

Identify two contrasting cultures which should differ in the following areas: geographical locations, social organisations, resources available, religion and degree of technological development.

Discuss the influence of these areas on textile production, ie, manufacture of fibres, yarns, fabric and/or garments and textile art forms, eg embroidery, dyeing and printing etc.

The following is an example of an excellent response:

Geographical location

- influence of climate and landforms on types of crops for fibre production
- location in relation to other cultures/countries in terms of trade and sharing of ideas

Social organisation

- class distinction
- status of women
- traditional employment of workers in the textile industry
- representation of social class in textile designs
- mode of living — urban, rural
- education level of people

Resources available

- fibres grown, produced, imported
- sources of natural dye, colours
- skills of textile workers
- government assistance to textile industry
- development/sale of textile crafts for tourism

Religion

- importance of religion
- clothes worn for religious ceremonies
- values, fashions and beliefs of culture as reflected in textile art
- designs and clothing
- attitudes to modesty
- clothing for religious festivals

Technological development

- modern methods of producing and decorating fabrics and clothes
- adaptation of traditional textile crafts for mass production to accommodate modern lifestyle and/or tourism
- communication and association with crafts/clothing
- amount of industrialisation and mechanisation in production of textiles and clothing

The following is an example of a poor response:

Poor responses could not give two contrasting cultures and failed to relate their answers to either textile production or textile arts. In some instances candidates had very limited knowledge of two cultures and could not discuss textile production and textile arts or provide relevant examples of either.

Question 6 History of the Textile Industry

EITHER

(a) General Comments

Few candidates attempted this question. Good responses gave concise and logical discussions and enhanced their discussions of the technological developments from the 20th Century with the use of diagrams. Poorer responses were very general, lacked detail and failed to relate their knowledge to the question asked.

Suggested Response

State four textile technological developments from the 20th Century. Describe each development (written and/or drawing) and say how each has improved quality and availability of textiles.

Discuss each technology and state how it has contributed to changes in the working conditions in the textile industry.

The following is an example of an excellent response:

Four textile technological developments from the 20th Century were named with detailed explanations given of each and their impact on the availability of textiles. An understanding of the relationship between the process and the improved quality and availability of textiles was clearly shown, while developments such as open-end spinning, self-twist, Sulzer looms, and waterjet looms were outlined.

The contribution of each development to the working conditions, multi-skilling and legislation in the textile industry was discussed in detail and a very clear understanding of the relationship between them was apparent.

The following is an example of a poor response:

Failure to distinguish between historical developments and those of the 20th century. Only an outline of the chronological development of technology in the textile industry since the Industrial Revolution was given.

Failure to discuss the connection between improved quality or availability of textiles and technological developments typified such responses.

In them, candidates could list changes which have taken place in the textile industry in the 20th Century, but were unable to link these to specific technological developments, or to discuss them.

OR

(b) General Comments

This question had a reasonable candidature, with good responses giving clear well detailed answers. Although the poorer responses dealt with the requirements of the question, they lacked detail.

Suggested Response

- (i) Full discussion of developments in two technologies related to textile production from the time of cottage industry through the Industrial Revolution to the mechanised processing in today's factories.

Give an accurate account of how such developments have increased textile consumption.

The following is an example of an excellent response:

- (i) The three time periods of cottage industry, Industrial Revolution and the present day were periods of great change and development in the textile industry. Candidates chose significant technologies and traced their developments through each period. The technological developments were named and described, their inventors identified and their contribution to the industry indicated.
- (ii) The relationship between the technological developments and the consumption of textiles was discussed, emphasising the increase in the consumption of such textiles.

The following is an example of a poor response:

Little understanding was shown of textile technologies and little information was given about the period of the cottage industry. Failure to explain how developments in technologies contributed to an increase in the consumption of textiles typified these answers.

Question 7 The Australian Textile Industry

EITHER

(a) General Comments

Few candidates answered this question and most responses were not good.

Suggested Response

- (i) Discussion of the labour-intensive apparel manufacturing industry in contrast to the capital-intensive textile manufacturing industry within Australia and the implications that this has on our total textile industry.

Explanation of the recent actions taken by the Australian Government to make the apparel and textiles industries in this country more internationally competitive.

Identification and justification of two initiatives that could be suggested to the Australian Government to make these industries more internationally competitive.

The following is an example of an excellent response:

- (i) A clear understanding was shown of both the apparel and textile industries in Australia and, here, candidates were able to put forward good discussions about the workings and problems of both industries, emphasising both their labour and their capital intensive nature.
- (ii) The recent actions of the Australian Government were understood and discussed.
- (iii) Good suggestions for initiatives that could be undertaken by the Australian Government were made and supported by sound reasoning.

The following is an example of a poor response:

Little awareness was shown of differences between the apparel and the textile industries or whether they are labour-intensive or capital-intensive.

The actions taken by the Australian Government, although listed, were not recent and in some cases no longer applied.

The examples given were of initiatives already instituted by the Australian Government.

OR

(b) General Comments

A small number of candidates answered this question and responses were generally good.

Suggested Response

Identification one sector of the Australian Textile Industry and explanation of how it has developed, with reference to the increased use of technology within the industry, changes in lifestyle, pressures from environmentalists and growth of the industry.

The following is an example of an excellent response:

The cotton, wool, garment manufacture industries etc could have been chosen and the increased use of technology within the specific industry discussed, eg, modern methods of automation in the industry such as CAD, Gerber cutters, developments initiated by the CSIRO in wool technology, finishing techniques, harvesting of cotton etc, as well as the many types of *new* methods used in chosen sector.

Changes in lifestyles:

- women in the workforce
- teenagers and their influence on the fashion industry
- increased disposable income
- leisure time and the specific clothing required eg, gym, sportswear
- multicultural population.

The pressure from environmentalists:

- pollution of air, land, water from industrial/domestic residues, finishes, scouring — the effects and solutions
- new pest control/organic pesticides
- natural fibre usage
- natural colours
- recycling

The growth of the industry:

- the state of the Australian industry
- Government support
- Government changes
- centralisation/integration

The following is an example of a poor response:

Little understanding was shown of the specific Australian industry, while many candidates were unable to choose a sector of the Australian industry.

Although the development of one of the required areas was discussed, only irrelevant information was given.

Examples of increased technology were either not given or out-dated.

The lifestyle of only one section of the Australian community was discussed. Little was known of the effects of that specific sector on the environment.

Section III Design

Question 8

General Comments

This was the most popular question and some responses reached a high standard.

A number of candidates tended not to read and follow the stem of the question, viz, *using 100% cotton fabrics*, thus failing to answer the question as asked.

Suggested Response

Design a portion of a range of children's wear including two outfits using 100% cotton fabrics and giving well labelled sketches. State functional and aesthetic features of the designs sketched. Name the 100% cotton fabrics chosen and justify these choices. Explain two techniques suitable for the garment construction, list the information required for a care label and design a swing tag.

The following is an example of an excellent response:

- (a) Sketch two outfits, front and back, labelling all design features including closures, trims, colours.

- (b) Functional features:
- buttoned for ease of dressing
 - pockets
 - easy care fabrics.
- Aesthetic features:
- bright colours
 - fabric designs suited to specific ages.
- (c) Fabrics from 100% cotton such as denim, corduroy, calico. Clothing requires strength, durability, ease of care.
- (d) Construction techniques such as buttonholes, hems, zippers, set-in sleeves, elastic casings.
- (e) Care label — fibre content, care instructions and country of manufacture.
Swing tag — logo, size, cost, company name.

The following is an example of a poor response:

- (a) Only one outfit or part of outfit sketched, poor labelling.
- (b) Poor understanding of the functional and aesthetic features of the outfit.
- (c) Failure to consider the requirement for use of 100% cotton fabrics.
- (d) Poor construction explanations.
- (e) Confusing information on care labels and swing tags.

Question 9

General Comments

This was a popular question and was generally answered well. Care must be taken, however, to ensure that the choice of design brief is suitable to the question being asked.

Suggested Response

Choose and describe a design brief and specify the consumer group targeted. Sketch and label fully, showing fabrics, colours and techniques used.

State how this design was evaluated; indicate the criteria set.

Specify a consumer group different from the first design brief and show how the original design could be adapted. Sketch the new design and fully label.

The following is an example of an excellent response:

- (a) State the design brief for a specific group of consumers, eg an outfit for a young fashionable sports star.
- (b) Sketch the front and back designs, clearly label, including relevant details such as design lines and features, fabric/fibre type, colours used and techniques involved, eg neckline treatments, sleeves, openings etc.

- (c) State both the functional and aesthetic criteria required to evaluate the design, eg visual judgements, abrasion resistance etc. Tests must be relevant to the design and consumer group.
- (d) Choose an alternate group of consumers, eg children, leisure wear for older people and indicate how the original design could be altered for this group.
- (e) Sketch new design and label.

The following is an example of a poor response:

Failure to specify group of consumers.

Poorly labelled designs that did not satisfy the requirements of the question. No understanding of the requirements of the question, consequently criteria for the design could not be given.

Little variation was given and the alternative consumer group was seldom mentioned.

Question 10

General Comments

This was a very popular question and was generally well answered. Sketches need to be large and clear and examination time should not be wasted in colouring in the entire sketch.

Suggested Response

The functional qualities for the headwear, apron and neckerchief must be listed separately.

Separate sketches provided for each accessory, labelling the applied surface decoration, the colour used and the name of the fabric. The surface decoration and selection of colours should reflect the *Country Living* theme.

The decoration design must be justified and the accessories should indicate how the motif and the colours reflect the theme.

Description of two relevant tests to be carried out to assess the function of the apron; the expected outcomes of the tests must be indicated.

Discussion of the factors that need to be considered for mass production of the apron and accessories.

The following is an example of an excellent response:

- (a) At least two functional qualities for each accessory were named and their relevance to the preparation and serving of food was clearly explained.
- (b) Sketches clearly showed features which were easily distinguishable, while relevant decorative features, colours and fabrics were named and labelled. Application of decorative features for each accessory was outlined.
- (c) Justification of the accessories' relevance to *Country Theme* was clearly presented and a variety of examples given. Details given showed the relationship between the design, colour or motif of each item and how it was used to portray the theme.

- (d) Two tests were given, each being presented separately and in detail. The problem was outlined, the test named, the method of testing described and followed by expected results or a conclusion. Diagrams were used to show experimental procedures. Experimental results were linked to the functional aspects of the apron and test outcomes were used to indicate its suitability.
- (e) A list of four considerations for mass production including a brief explanation was given.

The following is an example of a poor response:

Failure to recognise the difference between functional and aesthetic design, with incorrect functional qualities being mentioned; generally no more than one functional quality was mentioned; failure to differentiate between each accessory was common.

Sketches were not clear and included unnecessary extras. Some sketches were too small and lacked detail. Not all accessories were drawn and labelling was incomplete.

Sketches did not relate to the *Country Living* theme and the feature used had no link with the theme given.

Testing was only named, no description was included of methods, results or conclusion, while details given in instructions and results of tests were insufficient. The outcome of the testing results was not linked back to the functional aspects of the apron.

Many students were unable to list considerations from the manufacturer's point of view. Irrelevant points, relating to marketing and promotion, were given here.

Question 11

General Comments

This was a reasonably popular question which was generally well answered.

Suggested Response

Two images should be sketched that could be used in the design brief for a new centre at Uluru, with particular reference to the indigenous culture and the geographical significance of the area.

Development of one of these images for the upholstery, indicating appropriate colours for the design.

This design should be further developed for a repeat pattern for the carpet, with a scaled drawing being used to indicate the placement of the design on the carpet. Justification of the design, incorporating the elements and principles of design.

The following is an example of an excellent response:

Sketch of clear drawings which reflect the indigenous culture and geographical significance of Uluru, eg cave paintings of animals, weapons, the Rock etc.

Choice of one image as well as development and refinement of this image to meet the needs of upholstery and the requirements of the situation. Indication of suitable colours to be used.

In part (b) further development of a design suitable for a repeat pattern and indication of its placement on the carpet.

Justification of the design in relation to the elements and principles of design.

The following is an example of a poor response:

Sketches failed to recognise one or both elements of the question to be considered. The development of the original design for both the upholstery and the carpet was merely a copy or was quite different. No scale drawing was included.

The elements and principles were listed with no relation to the design, some being confused with techniques of construction.

3 UNIT (ADDITIONAL)

Section I Science and Technology

Question 1 Dyeing and Printing

EITHER

(a) **General Comments**

Although this question was one of the least popular in this section, the good answers were generally of excellent standard.

Suggested Response

The question required understanding of the morphological and molecular structure of each fibre named, relating this structure specifically to the statement given in the question.

The following is an example of an excellent response:

- (i) Relation of absorbency to the amount of amorphous and crystalline groups in the fibre – polyester has poor absorbency because of the high *crystalline* areas within the fibre, whereas cotton has a high percentage of *amorphous* groups within the fibre.

Good understanding of the chemical groupings was apparent — ie, the polar groups within the fibres and the way in which these groups attract moisture, thus improving their absorbency. Cotton fibre is superior in this area.

- (ii) Relation of smoothness of fibre surface, fibre length and cross-sectional shape to the lustre of silk and viscose rayon. Silk achieves a high lustre because of these properties, whereas viscose rayon, being a man-made fibre, can be controlled, to a certain extent, in the manufacture of the fibre.

- (iii) Relation in the wool structure of helical crimp (which acts as a spring), the helical arrangement of keratin molecules in the crystalline regions and the cystine disulfide links in the amorphous regions give wool excellent resilience. Acrylic structure allows less resilience because of lack of covalent intermolecular bonds, the presence of easily broken weak Van der Waals bonds between molecules and the slippage of the polymer molecules so that such a structure can be easily stretched.

The following is an example of a poor response:

- (i) Although most candidates possessed a basic understanding of the polymer systems, they had difficulty in relating this to absorbency.

Little detail regarding the molecular structure was given and no reference to absorbency.

- (ii) There was no understanding of how the fibre surface influences lustre and only a poor understanding of how light is reflected from the surface to give lustre.

OR

(b) General Comments

This question was answered by more students than 1(a) and, again, the good answers were of an excellent standard.

Suggested Response

- (i) The molecular and morphological structure of each fibre needed to be stated, showing how this structure of the specific fibre affects the properties and performance of that fibre.
- (ii) Two different end-uses for each fibre should be given as well as specific justification for each choice.

The following is an example of an excellent response:

- (i) Identification of a correct fibre as well as its molecular and morphological structure, relating each of these structures to their fibres properties and performance (diagrams as well as descriptions were given). Examples such as the following were given.

- *The cotton fibre has many OH groups within the cellulosic structure, creating many bonds attracting water molecules and thus creating a very absorbent fibre. Also contributing to this is the amorphous structure of the cotton fibre.*
- *The high crystalline regions of the nylon fibre creates bonding between the molecules giving nylon high strength, abrasion resistance and a hydrophobic nature.*
- *The polynosic (high wet modulus) rayon has a high proportion of crystalline regions in its structure, therefore it is strong, but it is also stiff and non-absorbent.*

- (ii) The end-uses and justification given were specific and related to particular items, eg cotton:
- (i) a T-shirt and the justification was that it is a comfortable fibre to wear, absorbent, easily dyed, cool to wear; or (ii) bed-sheeting: easily washed, comfortable but crushes.

The following is an example of a poor response:

- (i) Structure was discussed but no mention was made of the properties and performance of the fibres chosen. Discussion was generally limited to the molecular structure, with little reference to morphological structure.
- (ii) Similar end-uses were given, with little justification for the choice of examples. A broad grouping of end-uses of clothing which could have been constructed from a range of fibres was often given.

Question 2 Colour

EITHER

(a) **General Comments**

Candidates generally found this question format easy to answer and there were some excellent, well detailed responses.

Suggested Response

This question specified the *role* that colour plays in the choice and use of textiles in interior design, the focus being on textiles **not** the painting of the walls or non-textile furniture surfaces. Candidates were required to consider the illuminants, ie, the light sources, the surface textures and thus the reflection and distortion of light from such surfaces, the relationship of colours used, ie, how colours seen are affected visually by the surrounding colours and the specification of colours when ordering textiles, ie, how colour can be expressed so that the exact colour is achieved. Specific examples for each should be given.

The following is an example of an excellent response:

Here candidates stated the various illuminants — incandescent (tungsten), fluorescent and sunlight, direct and indirect light. These terms were explained (with the help of diagrams and graphs), with examples of how the interior decorator would need to take into account the effects of these illuminants, including metamerism. When giving examples, consideration of factors such as the higher range of red in sunlight will affect the way in which an interior colour is seen, while colours matched under one illuminant can be different under another.

Surface textures were explained including the factors of fibre/yarn types and fabric construction that affects the texture of the finished fabric. This was discussed with relation to shine, lustre, reaction to diffused reflection and absorption of light waves, that affect the visual perception of colour from surface texture. Some examples given implied that rough textures dull the colour seen.

Relationships of colours used were discussed in relation to the positioning of one colour near another, indicating how the perception of colour can be changed because of this, as well as the psychological effects of colour in relation to interior design, providing examples and using the correct terms for colour schemes, eg, analogous, complementary etc. Other examples given implied that small areas of light colours surrounded by areas of dark colours make the light colour area look much smaller.

Discussion of the specification of colours when ordering textiles required detailed explanation of both the Munsell and CIE systems to indicate the need for the interior decorator to understand the advantages and disadvantages of both systems. Examples were provided of how colours are indicated by using each system and again the need for metamerism was emphasised.

The following in an example of a poor response

Discussion of colours for wall paints, with little reference being made to textiles used in interiors.

Failure to name or describe a range of illuminants with few, if any, examples being given.

A brief discussion of the impact that a rough or smooth surface texture could have on the colour seen, with no other surface influence being stated and few examples being given.

Lengthy discussion of the psychological influences of colour but no provision of either examples of colour schemes or details of how the schemes could affect interior design.

Discussion of only one method of colour–matching, with little understanding being shown of the *relationship of colours used*.

OR

(b) General Comments

Generally this popular question was answered well.

Suggested Response

- (i) Identification of a range of relevant factors that would affect the choice of colour(s) for camouflage uniforms for the Army; reinforcement of this information with specific examples.
- (ii) Identification of the most accurate colour measurement system, with a full description of the system and specification of the equipment required by the manufacturer to ensure that the fabric is coloured exactly as specified.

The following is an example of an excellent response:

- (i) Relevant factors giving justification for each point:
 - camouflage required for a range of conditions, eg, jungle, desert, snow and other factors that affect colour choice for camouflage uniforms;
 - weather conditions — army clothing has to give the greatest protection possible in all types of weather;
 - lighting conditions (not metamerism) from bright sunlight to very dull conditions; fabric colour must give the maximum protection possible;
 - psychological effects of colour.
- (ii) Identification of the fact that the CIE system is the most accurate system of colour identification, as well as explanation of the benefits of this method:
 - additive colour and primaries of this method
 - full equations and explanations of chromacity
 - full chromacity diagram with three dimension representative diagram
 - full explanation of the spectrophotometer
 - use of computerisation throughout the system.

The following is an example of a poor response:

Little knowledge of the requirements of the question, giving general knowledge of colour rather than relating to specific examples as the question required.

Inability to identify the correct colour system which then prevented students from knowing and understanding the workings of and the equipment required for this system.

Question 3 Technological Developments

EITHER

(a) **General Comments**

Very few candidates answered this question and those who did so generally failed to satisfy the requirements of the question.

Suggested Response

During this century the cost of producing cotton has been reduced by approximately 80%. This has been due to the technological developments in areas listed in the question, each of which should be related to the 20th Century technology that has increased the cost savings of the production of cotton.

The following is an example of an excellent response:

Cotton growing and harvesting

- improved irrigation systems
- genetic engineering for high yield varieties and weed control
- machine pickers replacing human pickers
- better transport.

Cotton yarn production

- open–end rotor–spinning has led to productivity increase and reduction of labour cost
- high degree of automation in spinning (rotor–spinning in particular)
- computerisation.

Cotton fabric production

- the shuttleless looms
- looms allow complex fabric structure and patterns
- computerisation.

Synthetic fibre/yarn production

- cheap synthetic fibres
- development of filaments and texturing
- development of microfibres.

Alternative cotton end–use

- multifilament fibres/cotton blends for easy care, crease resistance
- extraction of oil from cotton seed, other by–products.

The following is an example of a poor response:

Little knowledge shown of advances in the production of cotton in this century.

Very few facts given to justify statements.

OR

(b) General Comments

There were very few responses to this question and the answers were generally poor.

Suggested Response

There have been many developments in the textile industry in the latter part of the 20th Century. Specific examples of textile technology should be chosen and related to increased productivity, eg, fibre modification and different textile end-uses.

The following is an example of an excellent response:

Increased productivity:

- growing and harvesting techniques
- open-end weaving
- shuttleless weaving
- warp knitting
- improvements in weft kitting
- transfer printing
- Gurber pattern-maker and cutter
- advances in non-woven fabrics.

Such technology has increased speed and accuracy, gives better/clearer results as well as better working conditions, while computerisation has been introduced to every area of production.

Fabric modification:

- changing the shape of cross section has resulted in improved properties
- introduction of new fibres and modified fibres for new and old uses.

Different end-uses:

- geotextiles
- medical uses
- engineering uses
- space travel.

The following is an example of a poor response:

Lacking in depth: the majority gave general statements with no specific examples as justification. Little knowledge of the requirements of the question was shown.

Section II — Design

Question 4 History of Clothing Design

EITHER

(a) General Comments

Only a small number of candidates attempted this question.

Suggested Response

Identification of a variety of world events and of the clothing fashions that were typical of the periods chosen (use drawings and description). Focus on the social and economic reasons for the development of such clothing styles.

The following is an example of an excellent response

World War II

- Men generally wore uniforms, but two-piece suits were still fashionable; waistcoats were discarded as being excessive since there were shortages of fabric and labour, thus requiring restriction on the amount of fabrics used — clothing coupons were introduced.
- Women — military style suits with hard-wearing clothes (both fabric and styles). Women began working in factories, in the armed forces, in farm work, and, consequently, slacks became popular. Decorative details were limited, skirts became knee-length to save fabric.
- Silk stockings were unobtainable, since pure silk was required for parachutes.
- Women's magazines featured ways of converting clothing not considered appropriate for war-time into children's clothing.
- Clothing styles of 1939 continued throughout the war.

The Depression

- Little money was available for clothing, most of which was recycled in some way, eg passed down, trimmings were minimal.
- Couture fashion houses that had not featured ready-to-wear clothing began to produce ranges for this market. Expensive salons cut their prices by half.
- Evening-wear designs were less elaborate, following the fashion but being made of cotton instead of silk.
- Revival of Victorian Age values in clothing resulted in austere, high necklines, uncluttered clothing. It was considered bad taste to look wealthy or prosperous.
- Much clothing was home-made.

Space Travel

- Short hem lines, simple lines, shifts for women, stove-pipe pants for men.
- New fabrics, due to increased technology, with synthetic fabric becoming popular.

- Silver, plastic and chrome in a range from utility items to stockings and shoes became popular.
- Small plastic pieces linked together were introduced into fabric for skirts and shifts.
- Futuristic Space Age type fashions.
- Nudity became more commonly accepted — transparent clothing — different social morals and resultant values in clothing.

The following is an example of a poor response:

Here candidates had little understanding of what the question required. Many referred to one or two cultures instead of specific world events and described the clothing of those culture(s).

OR

(b) General Comments

Very few students responded to this question, and, consequently, there were very few good answers.

Suggested Response

Identification of three decades from the past 60 years illustrated with accurate, well labelled sketches of clothing items relevant to chosen era. Indication of how each clothing item reflects the chosen period. Development of a design of a two-piece contemporary outfit using aspects from the three items described in part (i) and justification of the way in which this new design reflects contemporary fashion.

The following is an example of an excellent response:

(i) Examples of three decades.

- Post-World War II, the 40s: fitted waist, set in sleeves, peplum, pleated skirt, the *New Look*.. Colours: cream, soft colours.
- 1960s: Baby Doll dress, gathered from yoke, Peter Pan collar, checks, full skirts, socks, Orlon cardigans in pink, white and pale blue, flared denim jeans.
- 1980s: tight denim jeans, turtle necked sweaters, skinny rib top. Colours: brown, purple, stripes.

(ii) Post World War II

- Women wanted to return to a more feminine look, wearing or copying the designs of Dior, tiny waists and fuller hips. There was a reaction to the rationing of the War years, more fabric was used in much fuller skirts.

1960s

- There was a youth take-over in the setting of fashion ideas and this was reflected in the child-like styles of clothing. Knitwear became popular, as did denim in country styles.

1970s

- Denim was now compulsory in every wardrobe. Clothing had become more close fitting and the ribbed top was very popular. The Beatles were a great influence and flared pants/slacks were fashionable.

- (iii) Sketched designs for a two-piece contemporary outfit generally included a waisted top with half peplum in striped fabric, set-in sleeve, worn over denim jeans.
- (iv) Waist size and peplum from 40s. Sleeves from the 60s only slightly shorter to fit in with contemporary fashion. Jeans from 80s featured straight legs to fit with contemporary fashion.

The following is an example of a poor response:

Here the requirements of the question were met but very little detail was given. These responses lacked a good knowledge of the history of clothing design, so they failed to choose correct fashions from the periods chosen.

Question 5 Theatrical Design

EITHER

(a) General Comments

This was a reasonably popular question and was generally well answered. The best responses were excellent and dealt with all aspects of the question with imagination.

Suggested Response

The requirements for the video clip needed to be established as well as the type of performance to be given and the venue at which the clip was to be shot.

The atmosphere and background should also have been decided.

Detailed sketches of the lead singer and one of the dancers should have been provided and fully labelled. The theme, dress and accessories should have been indicated and the functional aspects of the costume and its design discussed.

The following is an example of an excellent response:

- (i) The theme and *story* for the video clip should be given, eg bush theme, space theme and the type of music given, eg Country and Western, techno, futuristic.
- (ii) Detailed sketches with labelling showing colours, fabrics and design lines and features of the lead singer should be supplied.
- (iii) As above for the other performers (if any), back and front views.
- (iv) Justification of the choice of colours, fabrics, design, eg the bush theme using Akubras, *Hard Yakka* type clothing, riding boots, all depicting the bush. Performers' outfits should also be justified, emphasising the fact that they complemented those of the lead singer.
- (v) Functional aspects discussed in detail:
 - cotton chosen for comfort and easy care
 - Akubra for sun protection if performing outside
 - full skirts and correct footwear for dancers
- (vi) Location — justification of the place where the video is to be shot; details of lighting, atmosphere, background, indication of whether an audience is required.

The following is an example of a poor response:

- Simple statement of the performance, giving little information about the theme and background.
- Main person — singer and dancer — sketched, but in little detail and with poor labelling, failing to give a clear picture of ideas.
- Justification of choices made and functional aspects listed but in little detail, only one or two points given.
- The venue indicated but no details being given.

OR

(b) General Comments

This question was the most popular question on the paper, with excellent answers, giving a great deal of detail, being submitted.

Suggested Response

Naming of the fairytale and explanation of the story in order to set the scene. The two main characters identified and an outfit for each designed using fully labelled views for each character. An explanation of the costumes given, justifying them by indicating specific functional and aesthetic factors. Specific examples of lighting, music and stage settings provided.

The following is an example of an excellent response:

- (i) Fairytale named and a brief summary of the story given.
- (ii) The costumes of two characters were clearly drawn and fully labelled with fabrics, colours, techniques of construction, design features, suitability, back and front views being indicated.
- (iii) All functional and aesthetic features were fully explained and related to the fairytale, eg red satin cape creates an image of power and attraction.
- (iv) Specific examples of lighting were given, eg profile spots with blue filters to create a *ghostly atmosphere* emphasising the requirements of the fairytale; examples given of music, thus setting the moods of the production; examples given of stage lighting, showing how such sets are an integral part of the performance.

The following is an example of a poor response:

Sketches lacked design lines and were poorly labelled, giving a poor idea of the costume.

Few functional and aesthetic features were given. Lighting was generally mentioned, but no effort was made to show how it would enhance the production. Little attention was given to stage setting and music.

Question 6 Fabric Design

EITHER

(a) General Comments

The few responses to this question were generally good.

Suggested Response

Development of two designs, one depicting the historical and one depicting the contemporary aspects of Sydney that could be used by the Museum of Sydney for souvenir scarf designs. Since each scarf design is to be produced by using a different method, each method is described, showing how the design is to be applied to or incorporated into the fabric. Using features of the two designs a logo is to be developed for the museum and ways in which such a logo could be used on two non-apparel items for the museum must also be indicated.

The following is an example of an excellent response:

- (i) A design was developed showing an understanding of the historical and contemporary aspects of Sydney which would be suitable for a scarf and indicating the shape the scarf would take. The sketches showed colours, design description, fabrics used, method of incorporating or applying the design and any construction techniques required, eg hem — rolled or flat.
- (ii) Two appropriate techniques were chosen and described, examples given including silk screen printing, silk painting, machine embroidery, roller printing and weaving variation.
- (iii) Features of both designs were used and a logo suitable for the museum developed, with relevant colours being shown and design features described.
- (iv) The logo was shown on scaled diagrams of two non-apparel items.

The following is an example of a poor response:

- (i) The design did not accurately depict historical or contemporary themes, drawing a *picture* rather than a *design*, while labelling was very poor.
- (ii) Techniques such as quilting, appliqué were used. These would be unsuitable for scarfs and souvenirs.
- (iii) Design of logo had little relationship to the two scarf designs or to the museum; a picture was drawn rather than an appropriate design for the logo.
- (iv) There was no indication of where the logo would be placed on the non-apparel items.

OR

(b) General Comments

Although only a small number of candidates responded to this question, there were some very imaginative answers. Part (iii) was generally poorly done since, although the method was mentioned, the description for the method was not as detailed as might be expected from a 3 Unit candidate.

Suggested Response

Three images suitable for hospital gowns to be worn by children to be designed, the images to be incorporated into one design in a striped pattern. The design should be sketched showing placement on the fabric and labelled fully, indicating fabric structure, colours, design features.

Identification of a suitable method of applying/incorporating the design to the fabric and explanation of the method.

Modification of designs to create an abstract design for a range of bed linen; these designs must be fully sketched and labelled.

The following is an example of an excellent response:

- (i) Images suitable for children were chosen, eg animals — bears, elephants, giraffes, kangaroos etc; toys — trains, cars, dolls etc.
- (ii) These images were developed into a striped pattern and sketched, showing the placements on the length of fabric. Designs were fully labelled, showing design features, colours, fabrics and included diagonal strips depicting elephants, giraffes and echidnas, both full face and side profiles.
- (iii) Examples of methods of application: roller printing, transfer printing etc, with full description of the method chosen.
- (iv) Designs were modified to include elephants' feet and trunks, giraffes' spots, echidnas' snouts and spikes.

The following is an example of a poor response:

- (i) Images were very basic, of poor quality or were not designed for children.
- (ii) Sketches did not show dimensions nor did they have appropriate labelling. Some merely consisted of line stripes.
- (iii) Methods of applying the design were not suitable for the article or were too complicated for the technique stated. Many candidates knew neither the equipment required nor the process involved.
- (iv) Modified images were not abstract.