



HIGHER SCHOOL CERTIFICATE EXAMINATION

1997

TEXTILES AND DESIGN

2/3 UNIT (COMMON)

*Time allowed—Three hours
(Plus 5 minutes reading time)*

DIRECTIONS TO CANDIDATES

- This paper is divided into THREE Sections.
- Attempt FOUR questions, AT LEAST ONE question from each Section. The FOURTH question may be chosen from ANY Section.
- All questions are of equal value.
- Answer each question in a *separate* Writing Booklet.
- Pages 9, 10, and 11 contain outlines which may be used as a guide when answering questions. Do NOT hand in these sheets with the Writing Booklets.
- You may ask for extra Writing Booklets if you need them.

SECTION I—SCIENCE AND TECHNOLOGY**QUESTION 1. Dyeing and Printing**

- (a) Briefly describe the basic process that is common to the dyeing of natural fibres.
- (b) Explain why it is undesirable if a dye is:
- (i) too soluble in water?
 - (ii) too attractive to the fibre being dyed?
- (c) List the advantages and disadvantages of stock dyeing, piece dyeing, and transfer printing, and include a suitable end-use for each.

QUESTION 2. Finishing

Finishes are widely used to improve versatility and/or durability of fibres and fabrics.

A travel wardrobe for a company executive includes:

- a light-weight worsted suit
- a gaberdine trench coat
- a cotton top
- a flannelette night shirt
- a nylon track suit.

- (a) For EACH textile article above:
- (i) Name ONE finish or finishing process suitable for the article, and state why it is appropriate. (Each finish or finishing process can only be used once.)
 - (ii) Explain how the finish or finishing process stated in part (i) is applied.
- (b) Describe how you would assess the effectiveness of any TWO finishes or finishing processes you have named.

QUESTION 3. Properties and Performance of Textiles

As part of the preparations for the 2000 Olympics, a promotional pack has been designed for tourists visiting Sydney's beaches.

The pack is to include the following items:

- a towel
- a shade tent
- a beach bag
- a T-shirt.

- (a) Identify the functional properties required for EACH of the items.
- (b) Justify the choice of fibre(s) that could be used for EACH of the items listed.
- (c) Name a specific fabric structure that could be used for EACH of the items, and justify your choices.
- (d) Select from the pack TWO items with different fabric structures, and explain how each fabric is manufactured.

QUESTION 4. Properties and Performance of Textiles

Multi-filament yarns are often modified to imitate yarns made from natural fibres.

- (a) List the advantages and disadvantages of garments made from smooth polyester multi-filaments.
- (b) Explain how the texturing process improves the properties of polyester multi-filament yarns.
- (c) Identify TWO different methods of texturing, and explain each process.
- (d) Describe ONE method, other than texturing, that is used to change the properties of polyester multi-filament yarns.

SECTION II—TEXTILES AND SOCIETY**QUESTION 5. Culture and Textiles***EITHER*

- (a) Specific textiles are used by differing subcultures in contemporary Australia.
- (i) Identify TWO differing subcultures. For EACH subculture, sketch a specific textile item.
 - (ii) Discuss how your chosen textile items have been influenced by FOUR of the following factors:
 - customs
 - cultural integration
 - fashion trends
 - methods of decoration
 - production methods
 - care techniques.

OR

- (b) Textile production and textile art forms are influenced by geographic location, social organisation, resources available, religion, and degree of technological development.

Discuss this statement with reference to TWO contrasting cultures.

QUESTION 6. History of the Textile Industry*EITHER*

- (a) (i) With reference to FOUR textile technological developments from the 20th century, discuss how they have led to improved quality and availability of textiles.
- (ii) In general terms, discuss how these developments have contributed to changes in the working environment in the textile industry.

OR

- (b) Textile production has developed from hand processing in a cottage industry, through the industrial revolution, to mechanised processing in present-day factories.

- (i) Choose TWO of the following technologies:

- dyeing
- printing
- knitting
- weaving
- spinning
- garment manufacture,

and discuss the developments in textile production from the cottage industry to the present day.

- (ii) Explain how the technological developments chosen in part (i) have contributed to the increased consumption of textiles.

QUESTION 7. The Australian Textile Industry*EITHER*

- (a) In Australia, apparel manufacturing is labour intensive and textile manufacturing is capital intensive.
- (i) Discuss the above statement.
 - (ii) Discuss the actions the Australian Government has recently taken to make the Australian apparel and textile industry more internationally competitive.
 - (iii) Suggest TWO initiatives that you could put forward to the Australian Government to make the apparel and textile industry more internationally competitive. Give reasons to support your answer.

OR

- (b) Choose ONE sector of the Australian textile industry, and discuss its development with reference to the following:
- the increased use of technology within the industry;
 - changes in lifestyle;
 - the pressures from environmentalists;
 - the growth of the industry.

SECTION III—DESIGN

QUESTION 8

You are required to design a range of children's wear using 100% cotton fabrics.

- (a) Sketch and fully label TWO outfits for your range. (Front and back view)
- (b) Outline the functional and aesthetic features of your designs.
- (c) Name fabric(s) suitable for your designs, and justify your choice(s).
- (d) Describe TWO suitable construction techniques for the outfits.
- (e) List the information required for your care label(s) and design a suitable swing tag.

QUESTION 9

- (a) Suggest a 'design brief' suitable for students studying Textiles and Design in Year 12, targeting a specific group of consumers.
- (b) Sketch and fully label a design that satisfies this brief, including fabric(s), colour(s), and technique(s).
- (c) Identify a set of criteria you would use to evaluate the design.
- (d) Select an alternative group of consumers for your design, and indicate how you would adapt your original idea for this group.
- (e) Sketch and fully label your new design, including fabric(s), colour(s), and technique(s).

QUESTION 10

You have been commissioned to submit a series of designs for accessories to be worn by BOTH male and female staff who are going to prepare and serve food for customers at the Sydney Royal Easter Show.

The accessories should reflect the theme of 'Country living' and consist of:

- headwear
 - apron
 - neckerchief.
- (a) Outline the functional qualities for each of the accessories.
- (b) Sketch and fully label each design, including decorative features, colours, and fabrics that reflect the theme of 'Country living'.
- (c) Justify how your designs reflect the theme.
- (d) Describe TWO tests that could be carried out to assess the functional aspects of your apron.
- (e) List FOUR considerations for mass production of the apron.

QUESTION 11

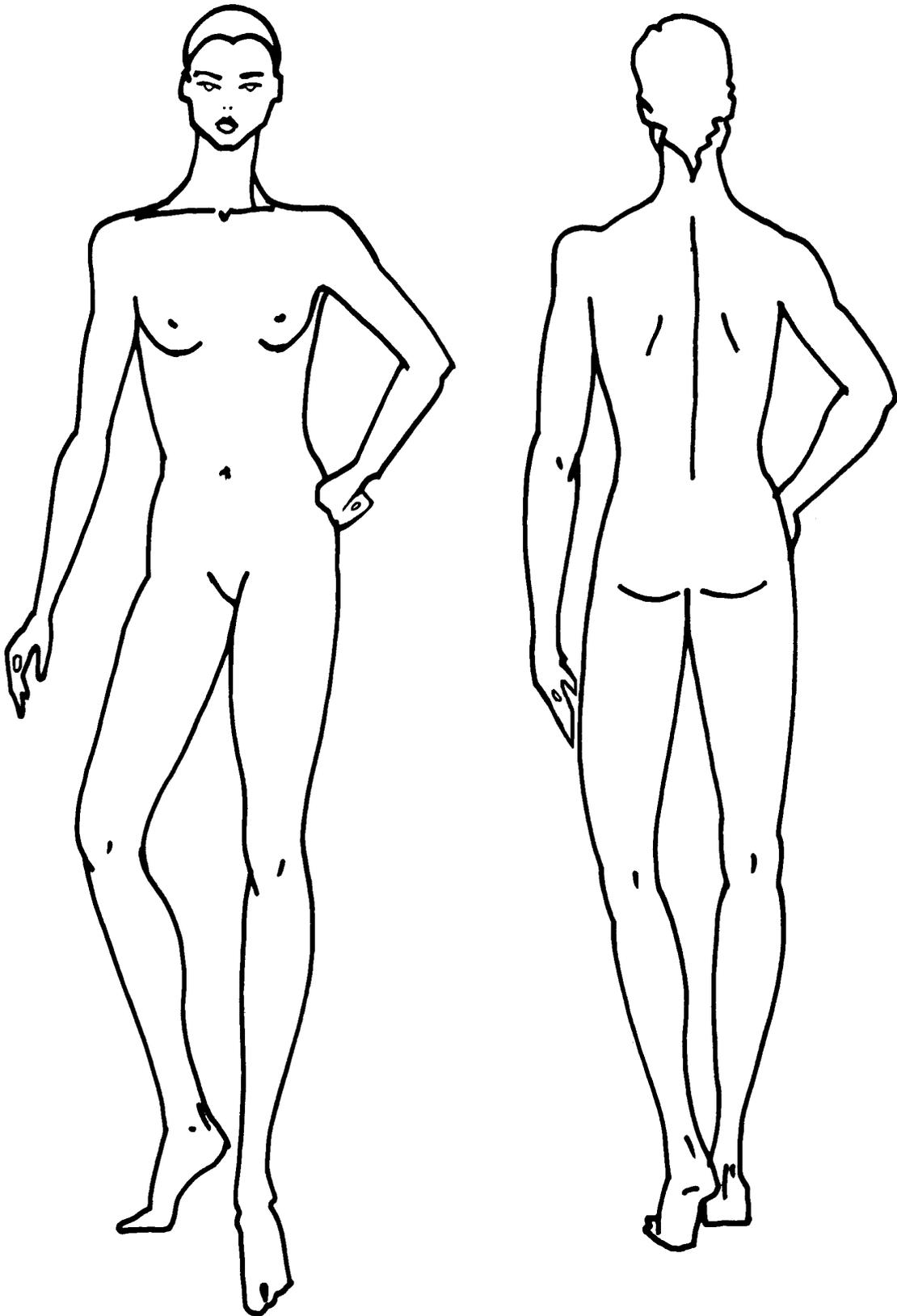
The Australian Tourist Authority is opening a new centre at Uluru (Ayers Rock).

You have been commissioned to design the wall-to-wall carpet and the upholstery fabric for the seats in the waiting areas.

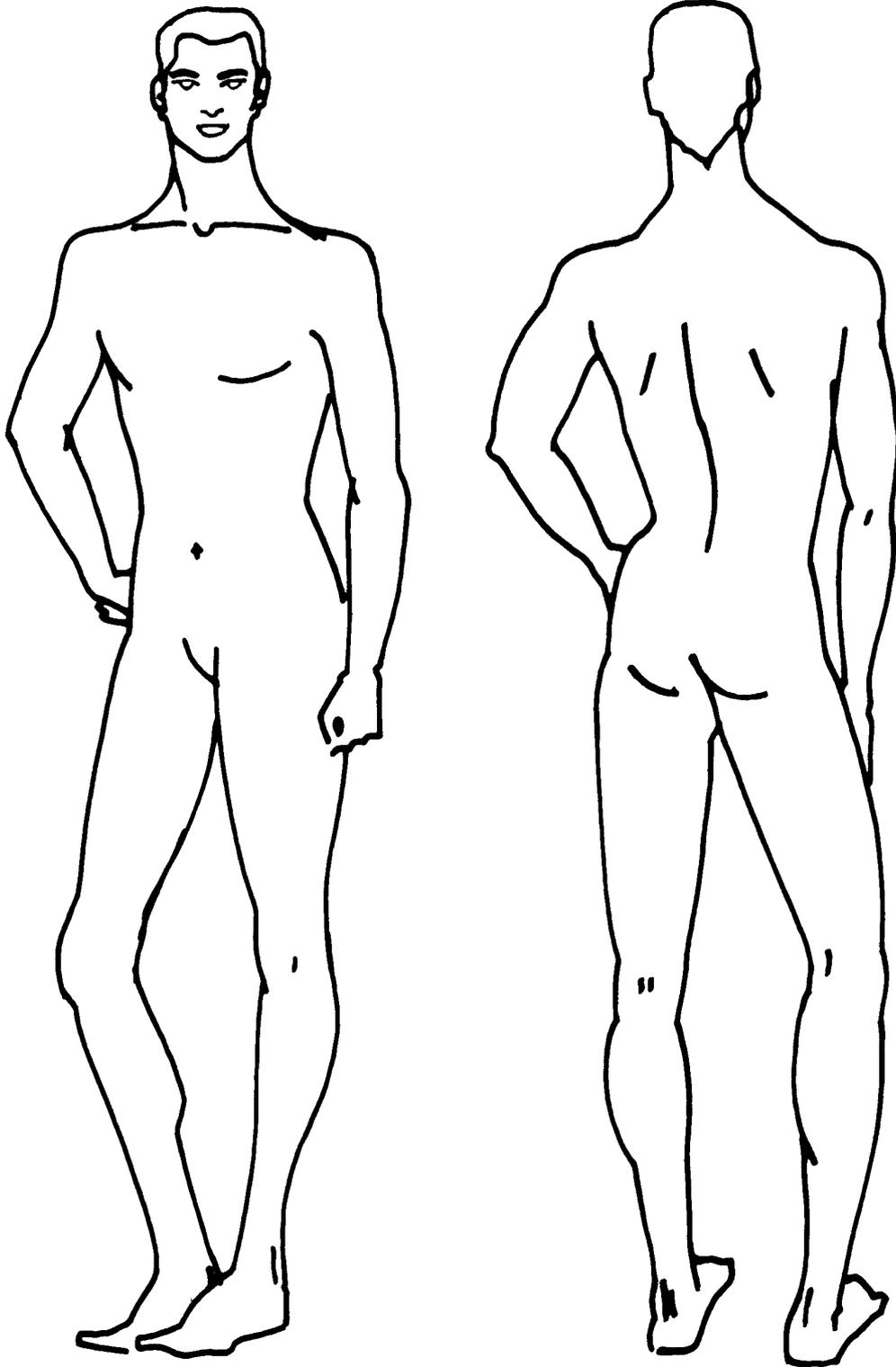
Considering the indigenous culture and the geographical significance of the area, answer the following:

- (a) Sketch TWO images that could be used for these designs.
- (b) Develop ONE of your images for the upholstery fabric, and indicate appropriate colours for your design.
- (c) Further develop your upholstery fabric design to be used in a suitable repeat pattern for your carpet. Use a scale drawing to indicate the placement of your design on the carpet.
- (d) Justify your designs in relation to the elements and principles of design.

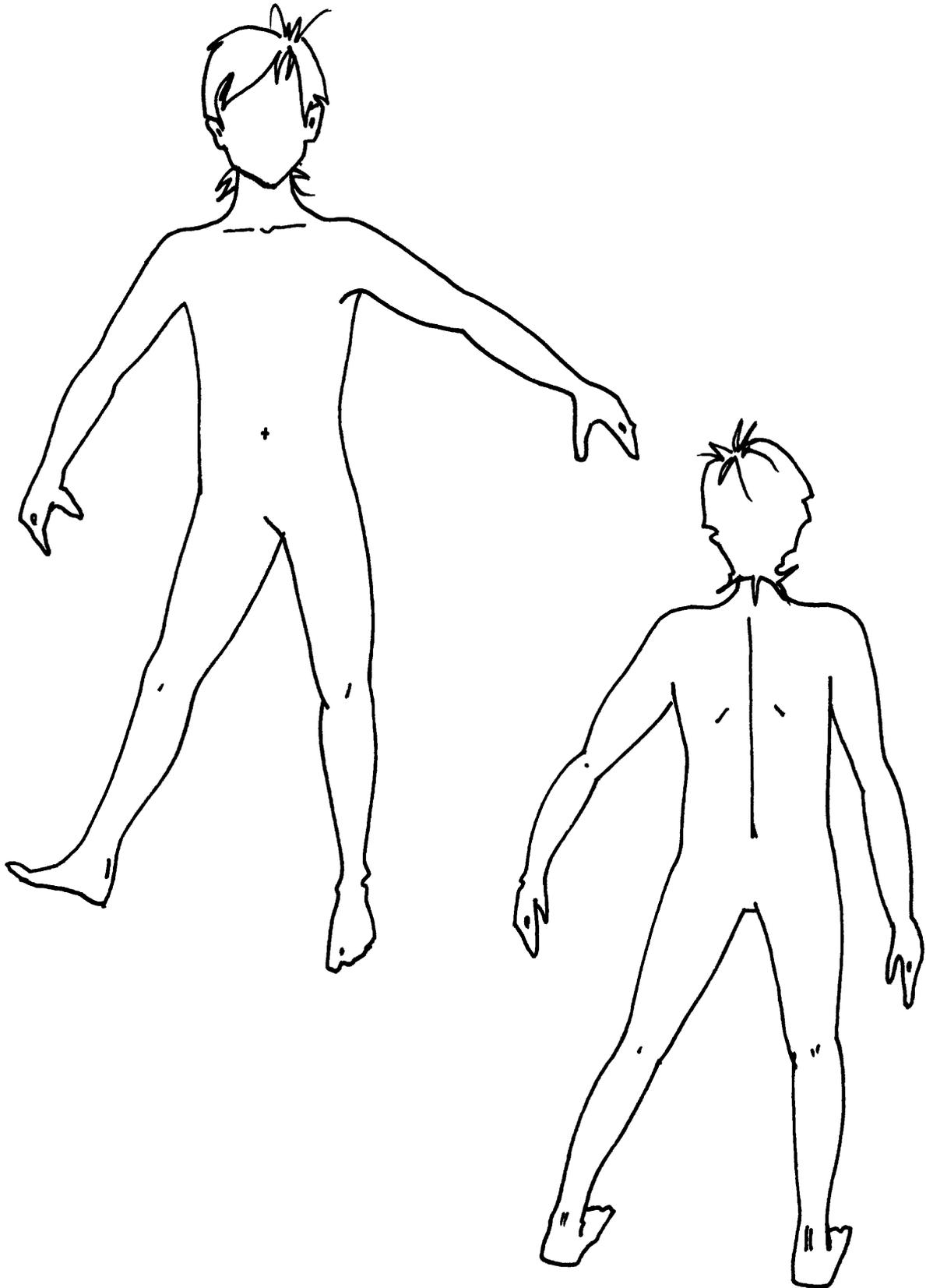
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