

BOARD OF STUDIES
NEW SOUTH WALES

HIGHER SCHOOL CERTIFICATE EXAMINATION

1998

TEXTILES AND DESIGN

3 UNIT (ADDITIONAL)

*Time allowed—One hour and a half
(Plus 5 minutes reading time)*

DIRECTIONS TO CANDIDATES

- Attempt TWO questions, ONE from each Section.
- All questions are of equal value.
- Answer each question in a SEPARATE Writing Booklet.
- Pages 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.

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SECTION I—SCIENCE AND TECHNOLOGY

Attempt ONE question.

QUESTION 1. Fibre Structure

EITHER

- (a) The study of the molecular and morphological structures of fibres provides an understanding of their various physical, mechanical and chemical properties.
- (i) Define the terms 'molecular structure' and 'morphological structure'.
- (ii) With reference to their morphological structure and molecular structure, compare ONE natural and ONE man-made fibre with respect to the following properties:
- strength and elongation
 - thermal stability
 - moisture absorbency
 - elasticity/resilience
 - lustre
 - flammability.
- (iii) Suggest TWO different end-uses, one apparel and one non-apparel, for each selected fibre.

OR

- (b) (i) Discuss how fibre properties are influenced by the following molecular structures:
- linear and cross-linked polymer chains;
 - interchain attraction;
 - crystalline and amorphous arrangement of chains.
- (ii) Compare the morphological structure of cotton and wool.
- (iii) Briefly describe the principles of ONE method used to investigate the morphological structure of fibres.

QUESTION 2. Colour

EITHER

- (a) As a textile manufacturer you are given a choice of using the Munsell system or the CIE system in the specification of colour.
- (i) Describe the TWO systems of colour specification stated above.
 - (ii) Why is colour specification desirable?
 - (iii) List the advantages and disadvantages of both methods of colour specification explained in part (i).
 - (iv) State which system of colour specification would be most appropriate to identify the specific colour for:
 - a textile manufacturer, when ordering fabric for the NSW police uniforms;
 - a company buyer, when purchasing and coordinating manchester.

OR

- (b)
- (i) State the relationship between colour measurement and the way humans view colour.
 - (ii) Describe the method of using the spectrophotometer in colour matching.
 - (iii) Explain how the use of the spectrophotometer has been an advantage to commercial dyers and consumers of textiles.
 - (iv) Explain how the textile dyer can produce dye recipes to minimise metamerism.

QUESTION 3. Technological Developments

EITHER

- (a) New fibres and new or improved textile manufacturing techniques have broadened the range of applications for textile products.

Discuss this statement with particular reference to THREE of the following:

- agricultural textiles
- medical textiles
- geotextiles
- transportation textiles
- aerospace textiles
- architectural textiles.

OR

- (b) Current projections indicate that by the year 2020 fibre consumption worldwide will increase by 70% whereas the population will increase by only 43%.

Discuss this statement with reference to the following:

- the changing pattern of fibre consumption;
- production of new fibre types;
- techniques of fabric manufacture;
- techniques of commercial garment production;
- development of non-apparel textile products.

SECTION II—DESIGN

Attempt ONE question.

QUESTION 4. History of Clothing Design

EITHER

- (a) Discuss how fashion in the twentieth century reflects trends in modesty, technology, cultural integration, resource availability and ideals of beauty.

OR

- (b) You have been asked to design textile costumes for a fashion parade that will celebrate the multicultural nature of Australia. The parade will show how traditional clothing has evolved into fashionable pieces in the twentieth century.
- (i) Select a culture.
 - (ii) Sketch and fully label a traditional textile costume from that culture.
 - (iii) Design, sketch and fully label a contemporary version of the textile costume illustrated in part (ii).
 - (iv) The compere of the parade will give a detailed speech about the traditional and contemporary costumes. Write background notes for the compere for BOTH your costumes using the points below:
 - availability of resources
 - customs and traditions
 - religious beliefs
 - ideals of beauty and modesty.

QUESTION 5. Theatrical Design

EITHER

- (a) For a book you have read that is to be dramatised as a live theatre production:
- (i) name the title and briefly describe the main character;
 - (ii) design, sketch and label TWO costumes for the main character, showing front and back views;
 - (iii) explain how the functional and aesthetic properties of the costumes meet the needs of the main character in the production;
 - (iv) explain how the use of lighting techniques and colour can be used to alter the mood throughout the performance.

OR

- (b) You have been asked to design and make costumes for the closing ceremony of a school presentation night. The theme for the night is '1998—International Year of the Ocean'.
- (i) Design, sketch and label coordinating costumes for:
 - one choir member
 - one dance troupe member
 - the master of ceremonies.
 - (ii) Justify your choice of colour(s), texture(s) and fabric(s).
 - (iii) Describe the necessary construction details for ONE of the costumes you have designed.
 - (iv) Describe lighting and music that reflect the theme of the ceremony.

QUESTION 6. Fabric Design

EITHER

- (a) For a range of casual outerwear, you are required to design a length of fabric featuring a combination of two decorative techniques.
- (i) Identify the TWO decorative techniques you will use for your design.
 - (ii) Sketch and label a design incorporating the two decorative techniques and evaluate the suitability of the combination of these two decorative techniques.
 - (iii) Show the placement of your design on a length of fabric.
 - (iv) Explain how your design will be incorporated into or applied onto the fabric.
 - (v) Sketch an item of casual outerwear that emphasises the design features of your fabric.

OR

- (b) You have been commissioned to design a major textile decorative piece for a new shopping complex.

Using the photographic plate(s) on page 9 as the main source of your inspiration:

- (i) sketch your design for the major textile decoration, labelling all design details including fabric(s), colour(s) and texture(s);
- (ii) explain how you used the plate(s) as inspirational material to achieve your design;
- (iii) give details of the construction and decorative techniques you would use to produce the textile decoration;
- (iv) adapt all or part of the design to produce a motif that could be used on a calico shopping bag that is given to customers as part of the opening promotion.

QUESTION 6. (Continued)



PLATE 1



PLATE 2



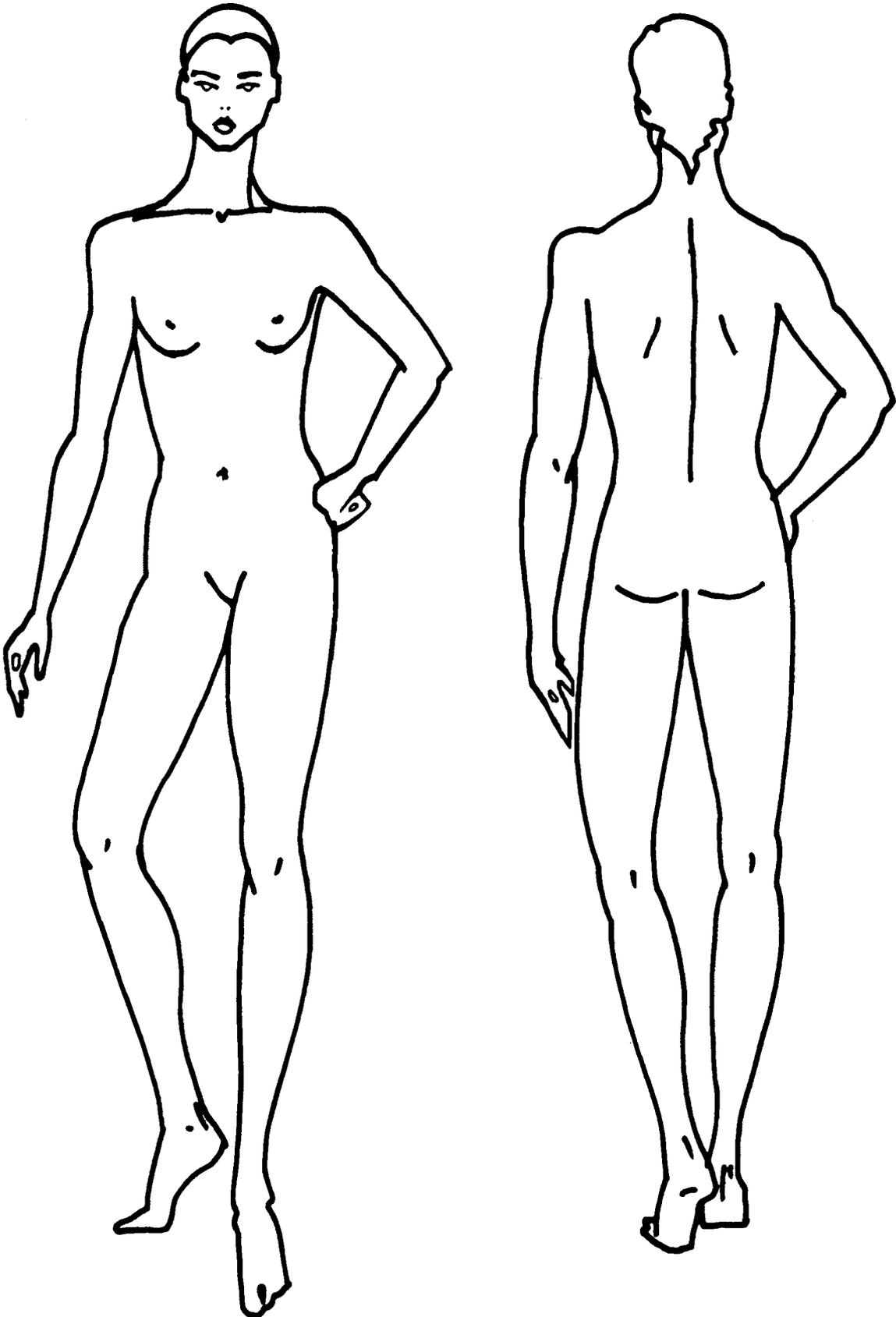
PLATE 3



PLATE 4

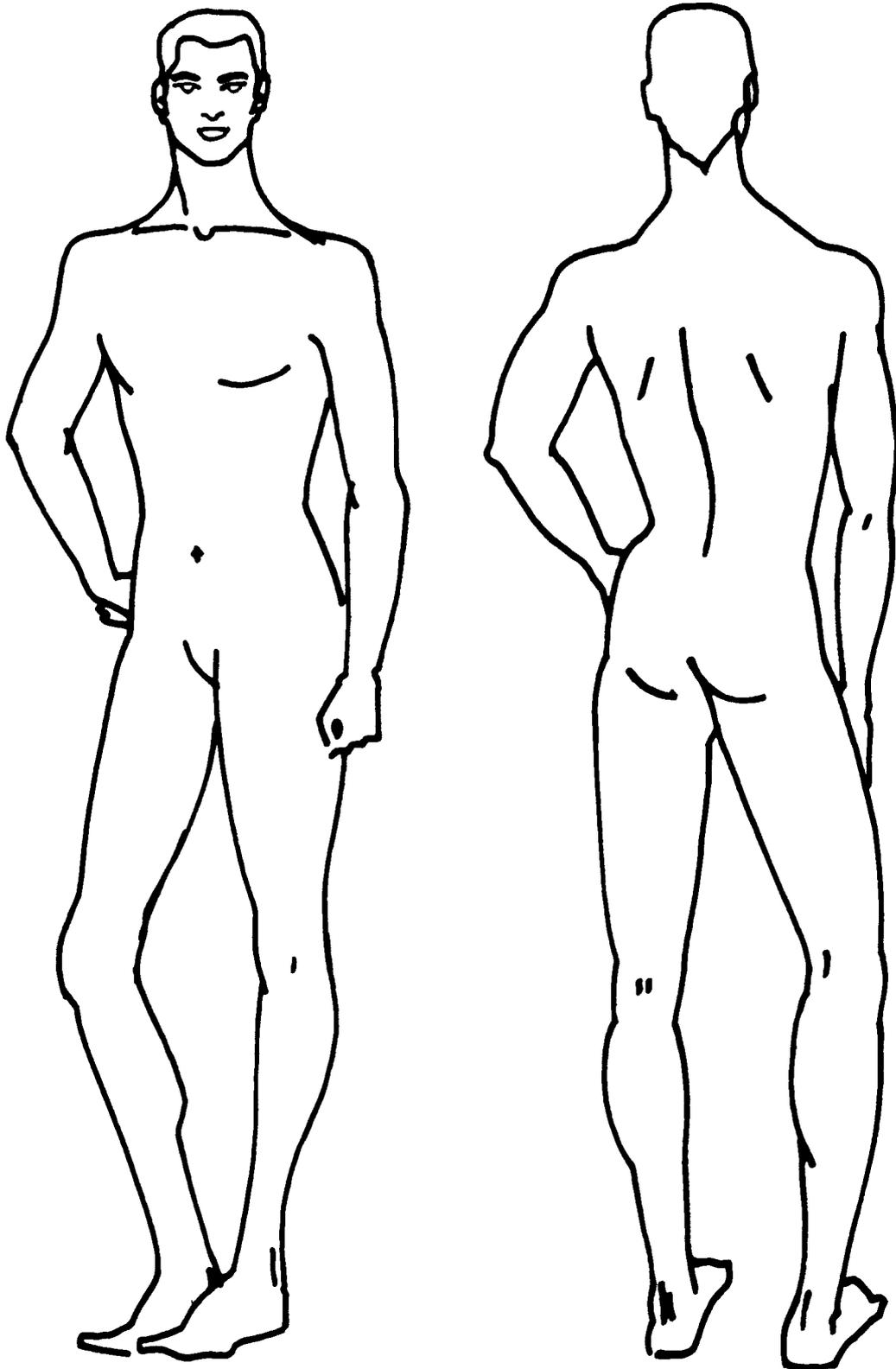
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Use for tracing only. Do NOT sketch on this sheet. Do NOT hand it in with Writing Booklets.



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