



HIGHER SCHOOL CERTIFICATE EXAMINATION

**1996**

**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 8 and 9 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**

Attempt ONE question.

**QUESTION 1. Fibre Structure**

*EITHER*

- (a) Choose ONE natural, ONE man-made regenerated, and ONE synthetic fibre.

For EACH of the fibres chosen, select an appropriate textile end-use. Explain how the molecular and morphological structure contribute to the stated end-use.

*OR*

- (b) Fibres are blended together to improve the performance properties of textiles.

Select TWO textile products that require different fibre blends. Each fibre can only be used once.

- (i) Name the textile products and fibre blends.
- (ii) Explain the process used for blending the selected fibres.
- (iii) Outline the molecular and morphological structure of the chosen fibres.
- (iv) Justify the chosen blends for the stated end-use.

**QUESTION 2. Colour***EITHER*

- (a) (i) Describe how a spectrophotometer measures the reflectance spectrum of a fabric.
- (ii) How is the reflectance spectrum in part (i) converted to a CIE colour specification?
- (iii) Sketch and label the CIE Chromaticity Diagram.
- (iv) What principle of colour mixing is employed in the CIE system?

*OR*

- (b) (i) Using examples, describe the principles of additive and subtractive colour mixing.
- (ii) For the fabric reflectance spectra given below, name the FOUR colours that would be perceived in daylight.
- (iii) Describe how the perceived colours might change when the four fabrics in part (ii) are viewed in incandescent light. Give reasons for your answers.

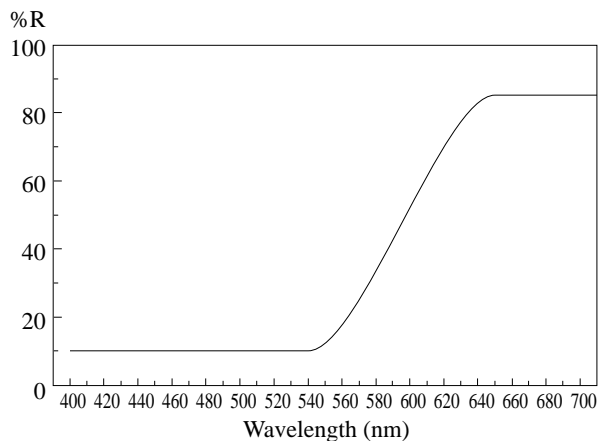


FIGURE A

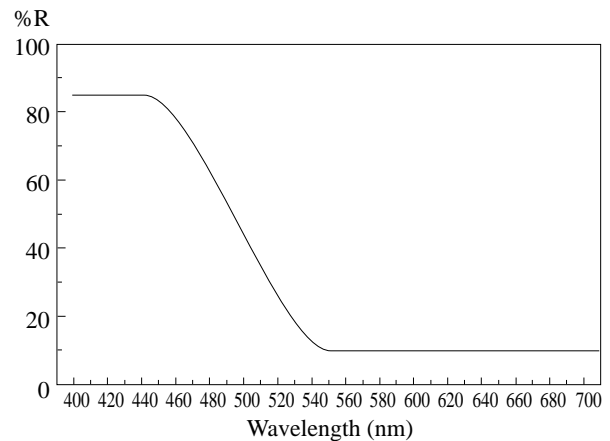


FIGURE B

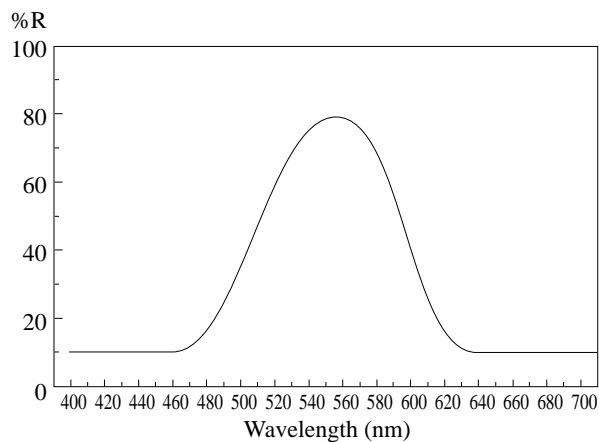


FIGURE C

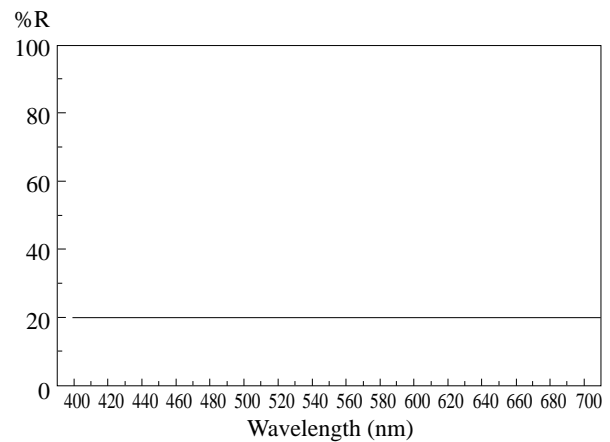


FIGURE D

**QUESTION 3. Technological Developments***EITHER*

- (a) In the latter half of the twentieth century, technological developments have led to advances in the textile industry.

With reference to specific examples of technological developments, discuss the following:

- the shortening of manufacturing processes;
- the production of alternative fibre types for particular applications;
- the broader use of fabrics for new applications.

*OR*

- (b) New fibres and new textile manufacturing techniques have changed the patterns of textile consumption.

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

- industrial textiles
- agricultural textiles
- medical textiles
- geotextiles.

**SECTION II—DESIGN**

Attempt ONE question.

**QUESTION 4. History of Clothing Design**

*EITHER*

- (a) Fashion design evolves from one season to another.

With this statement in mind:

- (i) name ONE well-known international designer, and briefly outline the history of this designer;
- (ii) sketch a typical outfit created by your chosen designer;
- (iii) sketch an adaptation of the outfit in part (ii) for a summer 1996 day-wear outfit. Justify your adaptation;
- (iv) further develop your summer 1996 outfit to create a winter 1997 evening-wear outfit.

*OR*

- (b) Clothing reflects social status and differing lifestyles.

Discuss this statement with reference to TWO contrasting cultures.

**QUESTION 5. Theatrical Design***EITHER*

- (a) The Government has commissioned a group of local actors to travel to primary schools to convey the message '*recycle, reuse, renew*' using household items.
- (i) Design and sketch TWO outfits to be worn by the main character (front and back view for each outfit).
  - (ii) Explain how the TWO outfits reflect the message.
  - (iii) Outline the functional requirements of the outfits.
  - (iv) List the construction steps for ONE of the outfits.
  - (v) Suggest THREE props that could be used to emphasise the message. Justify your answer.

*OR*

- (b) You have been requested to design the costumes and set for a production based on '*The Jungle Zoo*'.

**THE JUNGLE ZOO**

Feather, fur and hair,  
 Slithery, sliding, jumping, crawling,  
 Stripe, spot, exotic riot  
 Damp, dank, dark, fungi on fallen tree  
 Winged insect,  
 Cackling, calling, grunting, snuffling,  
 Scale and bristle,  
 Jungle noises, insect hum, sun shadowed plains  
 Lion and zebra and monkey  
 Are but three  
 In the Zoo.

D. GREEN

- (i) Design the costumes for TWO leading characters.
- (ii) Label the design features that depict the physical qualities of the leading characters.
- (iii) Design a costume for ONE of the chorus performers.
- (iv) Design an appropriate stage set.
- (v) Explain how lighting may be used to enhance the performance.

**QUESTION 6. Fabric Design***EITHER*

- (a) Clean Up Australia Day is to be promoted. There will be a public launch of the slogan 'Clean Up Your Backyard'. You have been commissioned to design a fabric for an exclusive shirt to be worn at the public launch of the slogan.

Your design is to be:

*Either*

- applied to the fabric surface;

*Or*

- introduced as the fabric is being produced.

- (i) Sketch a suitable fabric design for the shirt.
- (ii) Sketch and fully label your design as it would appear on the shirt.
- (iii) Describe the process(es) you could use to convert the design to fabric.
- (iv) Show how you could modify your design for use on mass produced T-shirts and sun hats. Indicate the process(es) that could be used for their manufacture.

*OR*

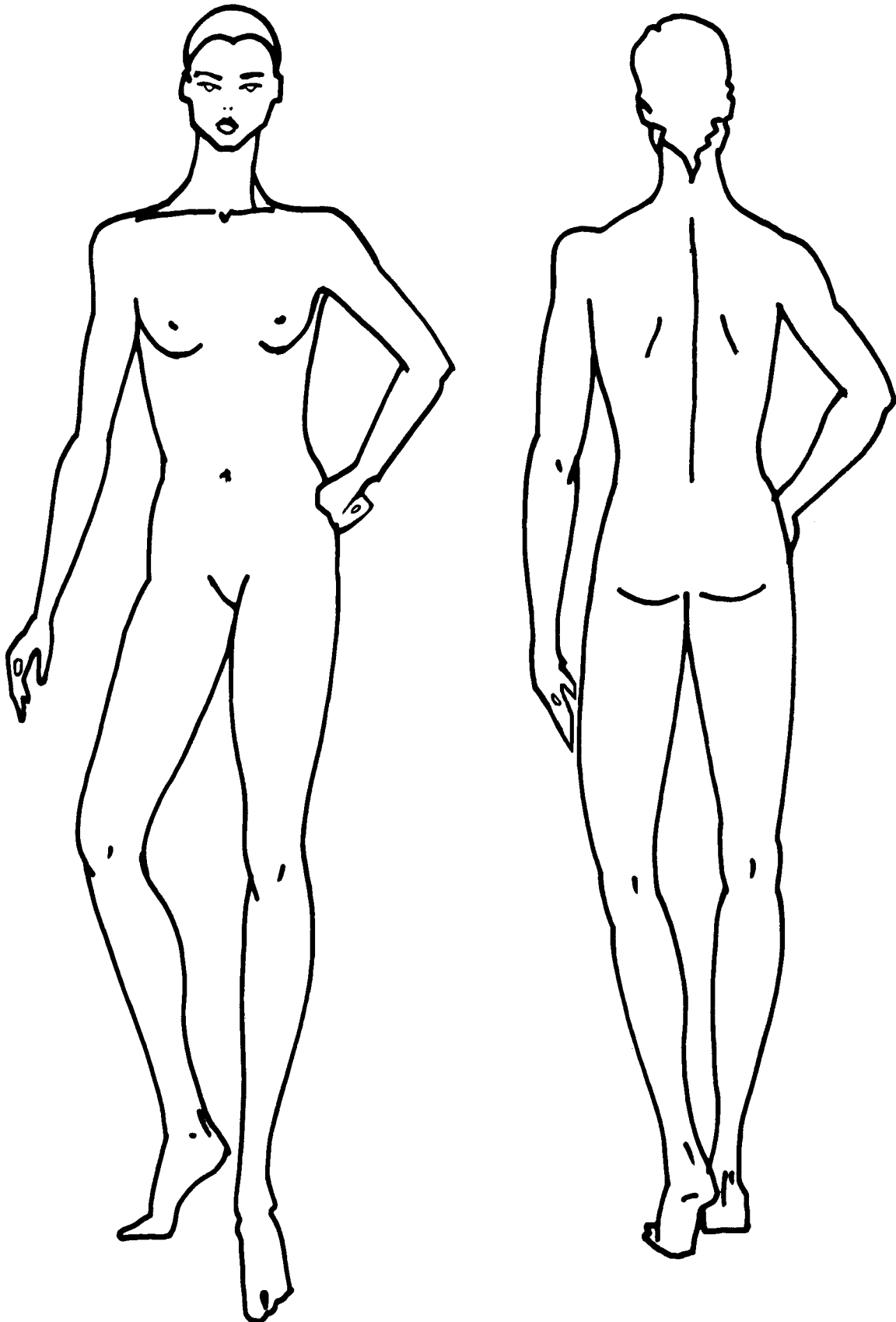
- (b) The Australian landscape forms an important part of Australia's artistic tradition: the red centre, the lush rainforest, the rolling farmlands, and the bush.

You have been commissioned to design a textile item (wall-hanging, sculpture, mobile, etc.) to be used as the focal point in an Australian Embassy foyer.

- (i) Sketch your interpretations of the Australian landscape that could be suitable for the textile item.
- (ii) From your interpretations, design the textile item, showing scale, colour(s), and fabric(s).
- (iii) Sketch a detailed section of the textile item, and indicate the techniques to be used.
- (iv) Describe in detail TWO techniques named in part (iii).

These outlines may be used for guidance when answering questions requiring clothing designs.

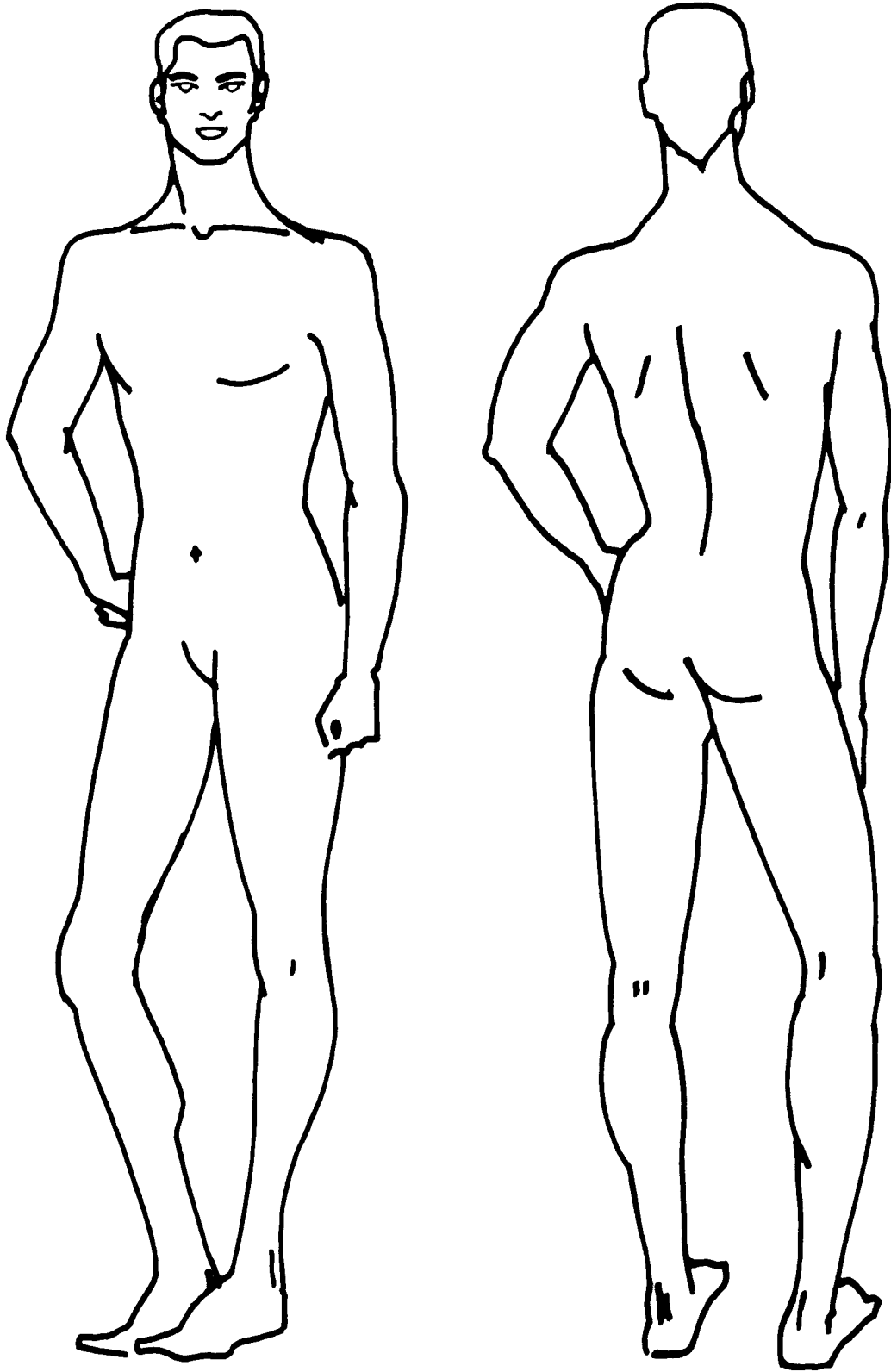
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