



**Methodist Ladies' College
ATAR course examination, Semester 2, 2019**

Question/Answer Booklet

**MATERIALS
DESIGN AND
TECHNOLOGY
ATAR Year 12
Section Three**

Student Name: _____

Teacher Name: _____

Time recommended for these sections

Suggested working time for these sections: ninety minutes

Materials required/recommended for this paper

To be provided by the supervisor

This Question/Answer Booklet

Please place a tick (✓)
in one of the following
boxes to indicate your
specialised context

Wood

Metal

Textiles

To be provided by the candidate

Standard items: pens (blue/black preferred), pencils
(including coloured), sharpener,
correction fluid/tape, eraser, ruler, highlighters

Special items: non-programmable calculators approved for use in this examination

Number of additional
answer booklets used
(if applicable):

Important note to candidates

No other items may be taken into the examination room. It is **your** responsibility to ensure that you do not have any unauthorised material. If you have any unauthorised material with you, hand it to the supervisor **before** reading any further.

Structure of the examination

The Materials Design and Technology ATAR course examination consists of a written component and a practical (portfolio) component.

Structure of this paper

| Section | Number of questions available | Number of questions to be answered | Suggested working time (minutes) | Marks available | Percentage of written examination | Your mark |
|--|-------------------------------|------------------------------------|----------------------------------|-----------------|-----------------------------------|-----------|
| Section One Short answer | 3 | 3 | 20 mins | 14 | 14% | |
| Section Two Extended answer | 3 | 3 | 40 mins | 26 | 26% | |
| Section Three Candidates to choose one of the following contexts: Wood Metal Textiles | 6 | 6 | 90 mins | 75 | 60% | |
| Total | | | | | 100 | |

Instructions to candidates

- The rules for the conduct of ATAR course examinations are detailed in the *Year 12 Information Handbook 2019*. Sitting this examination implies that you agree to abide by these rules.
- Write your answers in this Question/Answer Booklet.
- Answer the questions according to the following instructions.

Section Three: Answer all of the questions within your specialised field: Wood, Metal or Textiles.
- You must be careful to confine your responses to the specific questions asked and to follow any instructions that are specific to a particular question.
- Supplementary pages for the use of planning/continuing your answer to a question have been provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued i.e. give the page number.

Textiles Context

This section contains **SIX (6) questions**. Attempt **ALL** questions from this section.

Suggested working time: 90 minutes

Question 7

33 marks

Refer to VOGUE pants pattern **V9361 View A** below for all parts of Question 7.

You have been asked to make a set of pant samples for **Winter 2020** by a local garment warehouse in Perth. The wholesaler has asked for **one sample in each size from 6 to 22**, using View A from this Vogue pattern.



View A

See next page

Question 7 continued.

FABRICS: Unsuitable for obvious diagonals.

*With Nap. **Without Nap. Suitable fabric types: Gabardine, Crepe, Denim.

Note: Fabric requirement allows for nap, one-way design or shading. Extra fabric may be needed to match design or for shrinkage.

NOTIONS: **A, B:** Three 1" (2.5 cm) Buttons. **C:** Three Pairs of Hook & Eyes.

Size Combinations: **A5(6-8-10-12-14) E5(14-16-18-20-22)**

| Fabric widths given in centimeters. | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
| SIZES | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | |
| View A | | | | | | | | | | |
| 115 cm*/** | 2.1 | 2.1 | 2.1 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | m |
| 152 cm*/** | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | m |
| FUSIBLE INTERFACING A - 46, 51 cm - 0.8 m | | | | | | | | | | |
| LINING A - 115 cm - 0.3 m | | | | | | | | | | |
| View B | | | | | | | | | | |
| 115 cm*/** | 2.6 | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | m |
| 152 cm*/** | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | m |
| FUSIBLE INTERFACING B - 46, 51 cm - 0.7 m | | | | | | | | | | |
| LINING B - 115 cm - 0.5 m | | | | | | | | | | |
| View C | | | | | | | | | | |
| 115 cm*/** | 2.6 | 2.6 | 2.6 | 2.6 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | m |
| 152 cm*/** | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | m |
| FUSIBLE INTERFACING C - 46, 51 cm - 0.8 m | | | | | | | | | | |

- (a) Using textiles specific terminology, describe the **styling** used in this pant design. (2 marks)

- (b) What is the name given to the **shaping** technique used to shape the pant to fit the waistline? (1 mark)

- (c) Suggest the most appropriate type of **joining and finishing** technique to use when sewing the centre front and back seam of the pant. Justify your answer. (3 marks)

Name of **joining** technique: _____

Name of **finishing** technique: _____

Justification of techniques:

Question 7 continued

- (d) Use the materials data table below. Suggest a **suitable fabric and fibre content** for the sample pants. This fabric and fibre content would be used for the final collection of pants. **Justify** the reason/s for your choice of fabric and fibre for the pants. (5 marks)

| Information about materials – fabrics and fibres | | | |
|--|---|------------------------------|--|
| | <i>Fabric/fibre type</i> | <i>Cost per metre / unit</i> | <i>Care instructions</i> |
| A | Gabardine 80% Cotton / 20% Polyester blend | \$16 | <ul style="list-style-type: none"> • Machine washable • Line or tumble dry • Moderate iron • Do not bleach • Dry cleanable |
| B | Medium weight Crepe 60%Wool / 30% Nylon / 10% Lycra blend | \$20 | <ul style="list-style-type: none"> • Machine or handwash in a laundry bag • Warm water – wool detergent only • Dry flat on a towel - do not tumble dry • Moderate steam iron • Do not bleach • Dry clean recommended |
| C | Medium weight Denim 90% Cotton / 10% Lycra | \$15 | <ul style="list-style-type: none"> • Machine washable • Moderate to hot steam iron • Wash in moderately warm to hot water • Line or tumble dry • Do not bleach • Do not wash with whites |
| D | Bemsilk lining 100% polyester | \$5 | <ul style="list-style-type: none"> • Machine washable • Line or tumble dry • Do not bleach • Moderate iron • Drycleanable |
| E | Interfacing | \$5 | <ul style="list-style-type: none"> • Machine washable • Wash in warm water • Drycleanable • Line or tumble dry on low • Medium iron |
| F | Zipper | \$2 | |
| G | Thread | \$4.20 | |
| H | Buttons – 2.5cms width | 10 cents | |

Fabric name: _____

Fibre Content: _____

Explanation:

(e) Use the data tables provided above to calculate the cost of the sample collection of pants.

(7 marks)

| Size | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | Quantity Required | \$ cost per Unit | Total \$ Cost |
|-------------|---|---|----|----|----|----|----|----|----|-------------------|--------------------------------------|---------------|
| Fabric | | | | | | | | | | | | |
| Lining | | | | | | | | | | | | |
| Interfacing | | | | | | | | | | | | |
| Thread | | | | | | | | | | | | |
| Zipper | | | | | | | | | | | | |
| Buttons | | | | | | | | | | | | |
| | | | | | | | | | | | Total \$ Cost for Collection Samples | |

Total \$ Cost for Collection Samples: _____

See next page

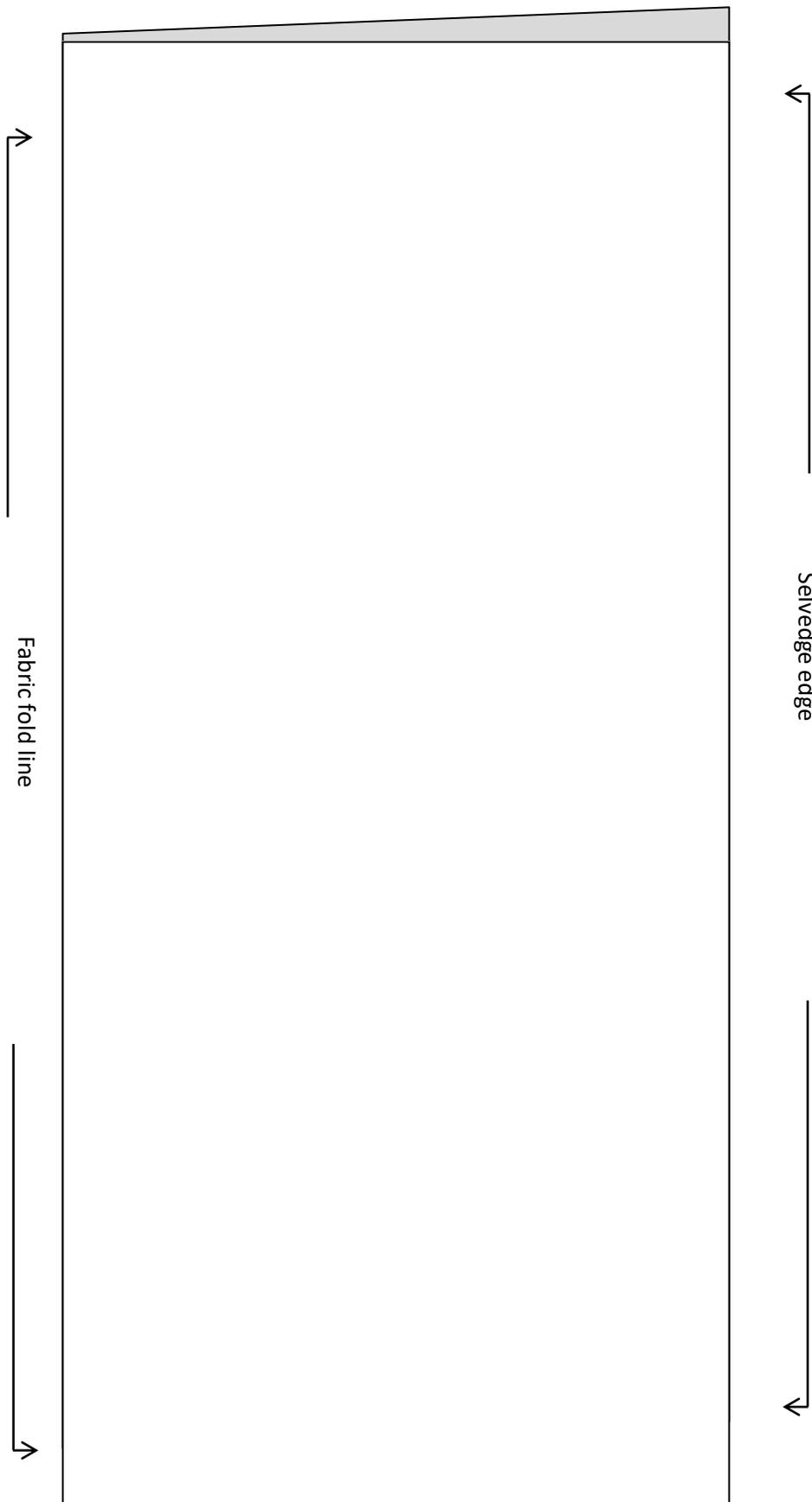
(f) Where and why will the interfacing be used in the pants? (2 marks)

(g) Suggest an ideal interfacing fabric for this purpose? (1 mark)

(h) Use the technical drawing template provided at the back of the exam paper to draw the working drawings / trade sketches for the View A pants in the space below. (5 marks)

- (j) Using the pant pattern pieces provided on the separate page with this exam as a reference, arrange the pieces economically and correctly on the fabric layout below.

(7 marks)



See next page

Question 9 continued

Innovative process: _____

b) Identify **TWO (2) mechanical properties** of fibres and fabrics and discuss how these properties can be changed through the **blending of fibres and yarns**. (4 marks)

Mechanical property 1 : _____

Mechanical property 1 : _____

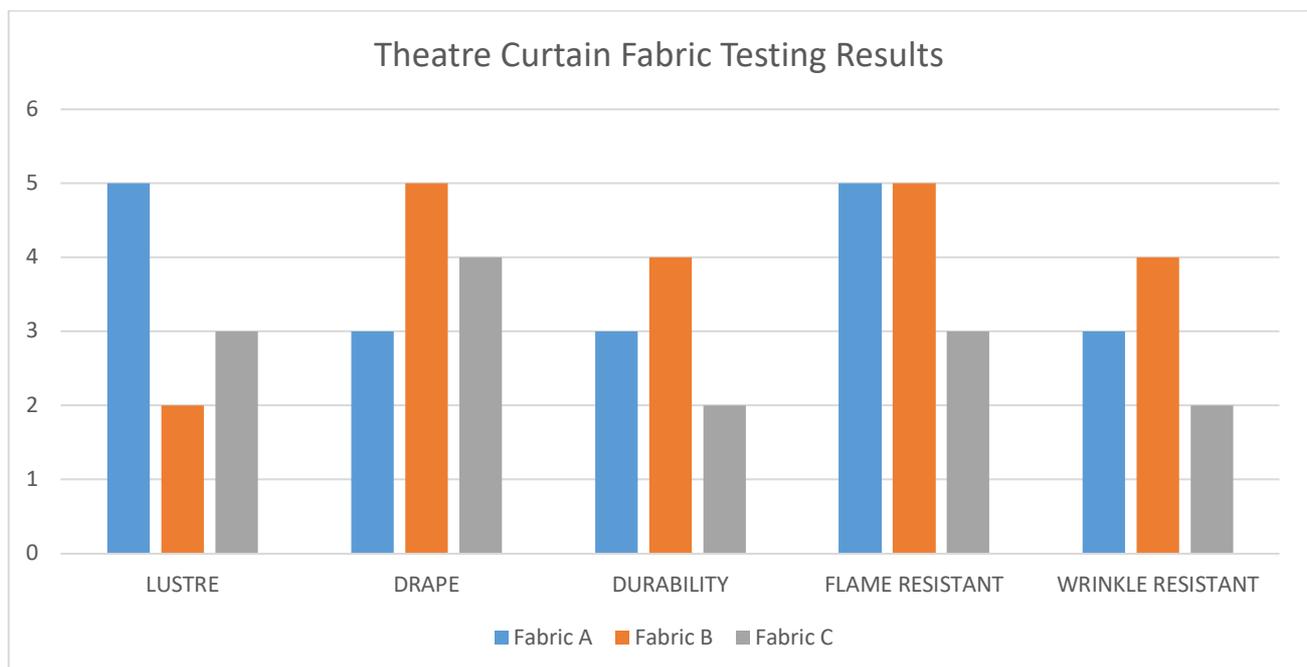
c) Give an example of a chemical finish applied to a fabric and explain how it changes the performance of the fabric. (2 marks)

Chemical Finish: _____

The City Council has asked you to manufacture new curtains for the front of the stage at His Majesty's Theatre in Perth. In the table and graph below is the data received from testing three different dark red fabrics for consideration.

| Theatre Curtain - Fabric Test Comparison Data | Fabric A | Fabric B | Fabric C |
|---|----------|----------|----------|
| LUSTRE | 5 | 2 | 3 |
| DRAPE | 3 | 5 | 4 |
| DURABILITY | 3 | 4 | 2 |
| FLAME RESISTANT | 5 | 5 | 3 |
| WRINKLE RESISTANT | 3 | 4 | 2 |

0 = LOW - 5 = HIGH



Using the data provided, select and justify your choice of fabric for this scenario.

(a) Select your choice of fabric _____ (1 mark)

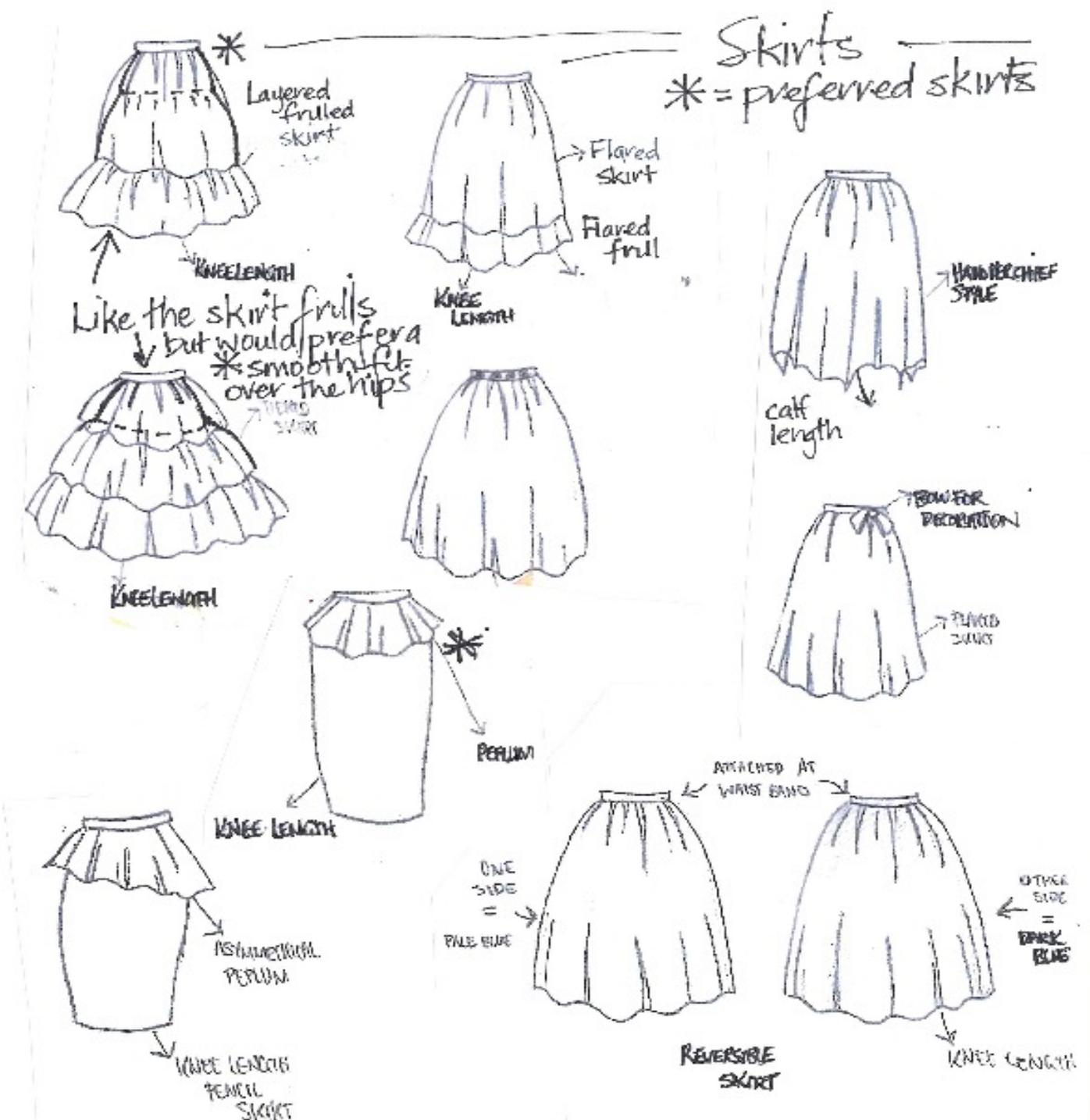
See next page

Below is a range of initial rapid concept sketches that a designer produced for their client. To help the designer develop some concept sketches, the client gave the following design specifications:

- The garment should have a bohemian / peasant style
- The top should be easy to put on and remove without a fastening
- The skirt should have a waistband, be full and create a hourglass shape when fastened using a back zipper
- The jacket / cape should have an embellishment or decorative feature
- The fabric used should be cool, comfortable and easy care, with minimal ironing required

The annotated designs shown below have some client feedback for the designer to consider in their further design development.

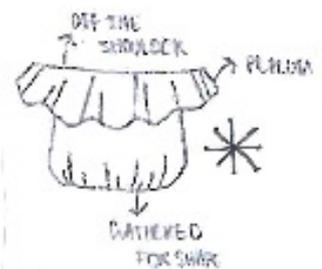
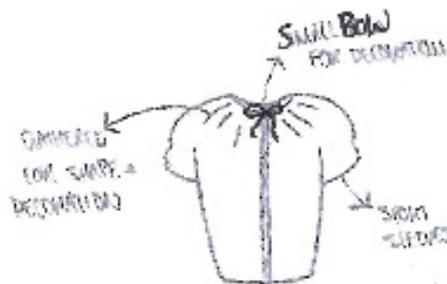
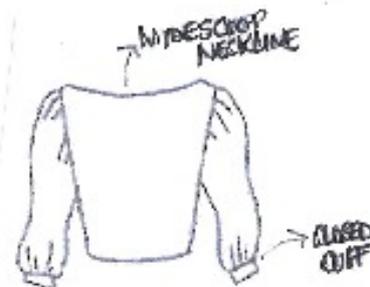
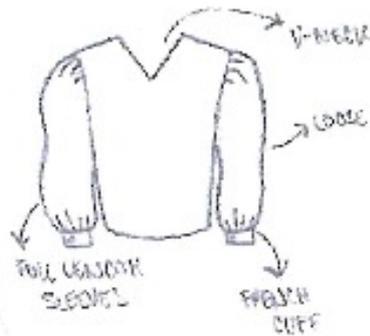
NOTE: Skirt Designs – client preferred skirts have an asterisk against them



Tops, Bodices, Jackets and Cape Designs – client preferred designs have an asterisk against them

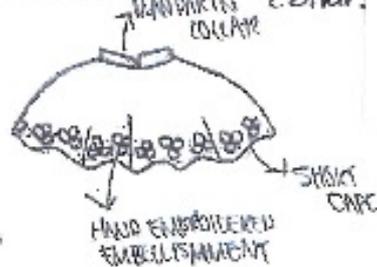
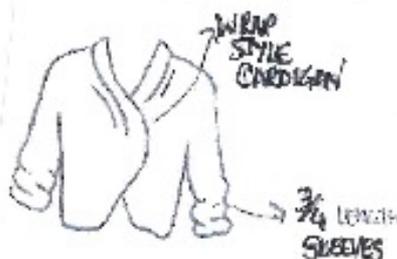
Preferred tops = *

Tops/bodices



Jackets & Capes

do not like the mandarin collar.

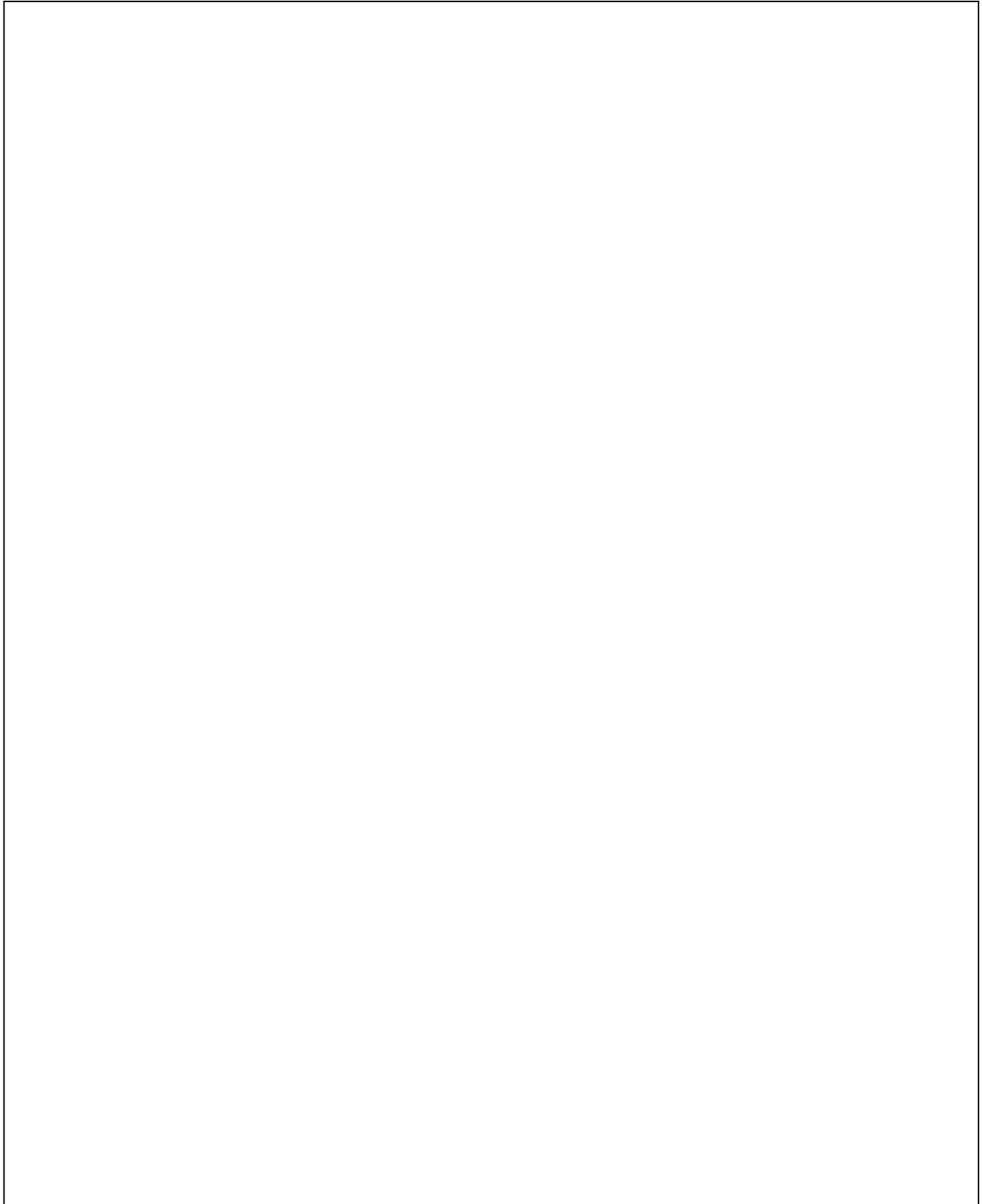


Question 11 continued

Using the information on the previous pages that identifies the **client preferred designs**, and using the fashion template provided at the back of the exam paper, **create ONE (1) three dimensional rendered design concept (presentation drawing)** that could be presented to the client for consideration.

Use **annotation to describe and justify** your design decisions.

(10 marks)



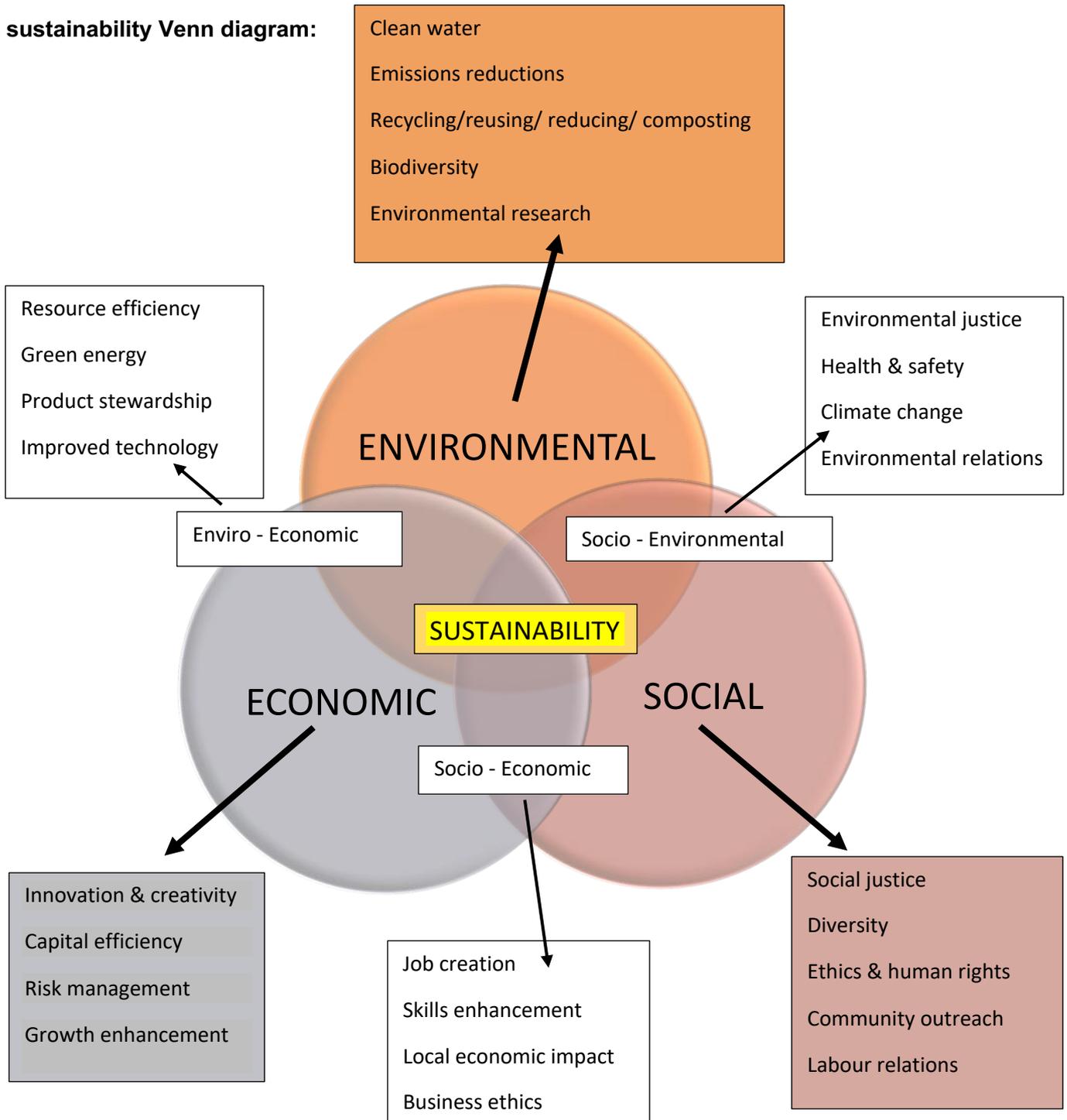
See next page

Use the information provided in the paragraph and the Venn diagram below to **discuss current ideas concerning implementation of sustainability concepts in a Fashion and Textiles context.**

‘Sustainability thinking in the past was focused mainly on environmental factors; however, the thinking now is more focused on the interaction between the environment, society and economics. For a product or system to be sustainable, it needs to consider the impact on the environment, how it affects people and it needs to make sense economically.’

The Venn diagram shown below depicts three overlapping circles, representing environmental needs, economic needs, and social needs; the area where the circles overlap and all three needs are met is the area of sustainability.

A sustainability Venn diagram:



See next page

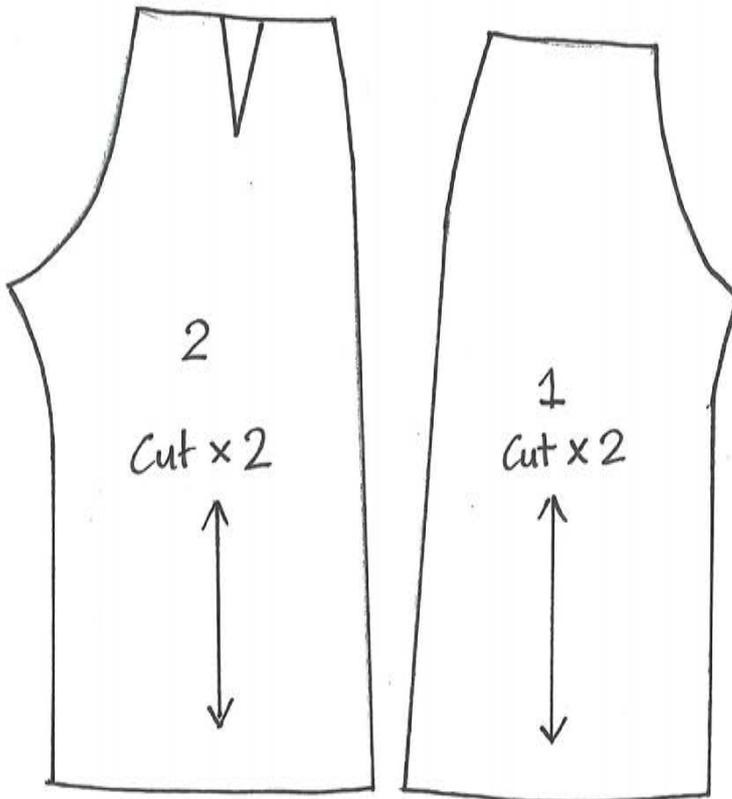


See next page

VOGUE V9361 pant pattern pieces

View A Culotte

- 1 front pant
- 2 back pant
- 3 back waistband
- 4 right front waistband
- 5 left front waistband
- 6 pocket flap



3 Cut 2 on Fold

4 ↓ Cut x 2

5 ↓ Cut x 2

6 ↓ Cut x 4