



Oxford Cambridge and RSA

Monday 20 June 2022 – Morning

**A Level in Design and Technology:
Fashion and Textiles**

H405/02 Problem Solving in Fashion and Textiles

Resource Booklet

Time allowed: 1 hour 45 minutes



INSTRUCTIONS

- Use the Resource Booklet to answer all the questions.
- You should spend **35 minutes** reading this Resource Booklet.
- Do **not** send this Resource Booklet for marking. Keep it in the centre or recycle it.

INFORMATION

- This document has **8** pages.

ADVICE

- Read this Resource Booklet carefully before you start your answers.

The stimulus in this booklet relates to issues and opportunities connected with wearing clothing that has been designed and manufactured as nightwear.



Why Is Sleep Important?

Getting a good night's sleep is well known to be beneficial for our health and wellbeing. We spend up to one-third of our lives asleep and the overall state of our 'sleep health' remains essential throughout our lives.

To get a good night's sleep there are a number of factors that need to be taken into account. These include:

- Sticking to a sleep routine.
- Thinking about what you eat and drink before bed.
- Creating a restful environment.
- Avoiding digital devices.
- Limiting naps in the day.
- Undertaking physical activity as part of a daily routine.
- Managing any anxiety/concerns.
- Not being too hot or cold in bed.

Nightwear

'Forty Winks' is a small manufacturing company that specialises in luxury nightwear. The designs it creates are popular with the younger demographic with a higher disposable income.

The design team at 'Forty Winks' has been conducting research into sleep. It has found that what you wear to bed can make a real difference between dozing and a long, full night of restful sleep.



Fig. 1

Choosing appropriate nightwear is very much driven by personal preference. As part of the research, the design team met with a focus group who gave it feedback on the most important requirements that must be considered when purchasing this kind of product.

User requirements of nightwear

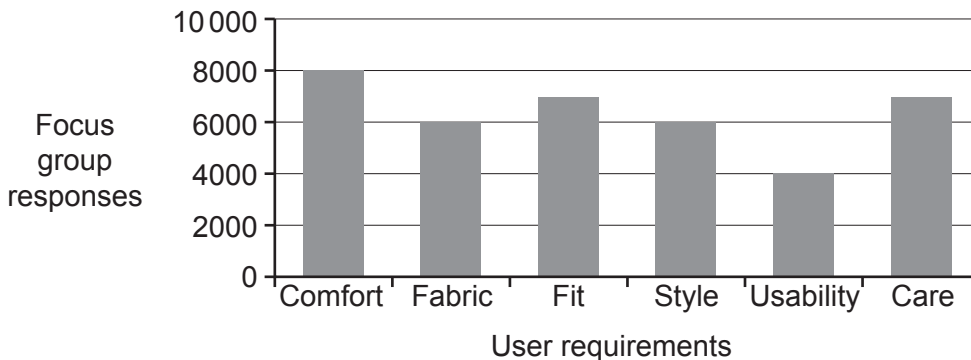


Fig. 2

The Forty Winks Unisex Pyjama

The most popular style of nightwear in recent years has been pyjamas. They are two-piece garments and usually consist of loosely fitting trousers of various widths and lengths and some form of top. Pyjamas are traditionally viewed as practical garments and as such haven't always responded to changing fashion trends. More recently, with more people working from home and increased sales in loungewear, manufacturers have seized the opportunity to increase sales by developing products that reflect a fashionable silhouette.

Fig. 3 shows the most popular style of unisex pyjama and related product specification. Many variations based on this traditional style are available.

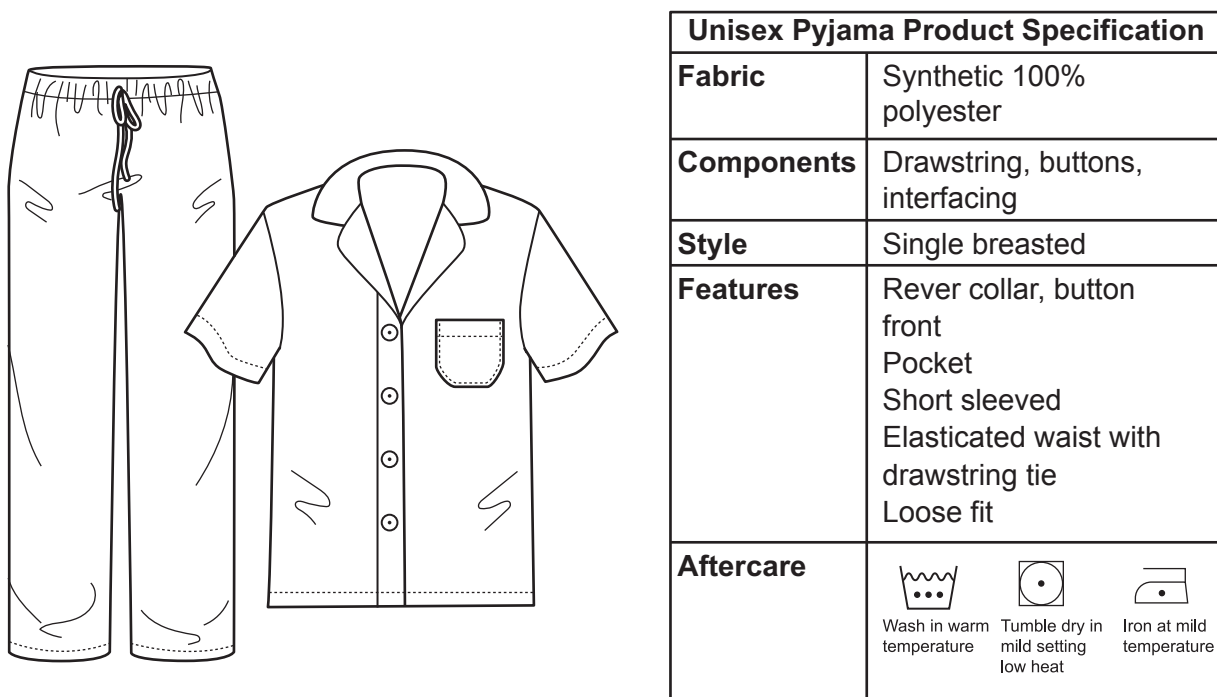


Fig. 3

Trend Forecast 2022

Fig. 4 shows one of the trends that will be influencing fashion in 2022.

RUFFLES

With a season steeped in romantic influences, frills and big sleeves are making their comeback.



Fig. 4

Product Development

The Forty Winks design team knows that current trends are popular with its target customers.

To ensure sales remain high in a competitive market, it has updated the classic pyjama top to reflect the 'ruffle' trend which is shown in Fig. 5 below.

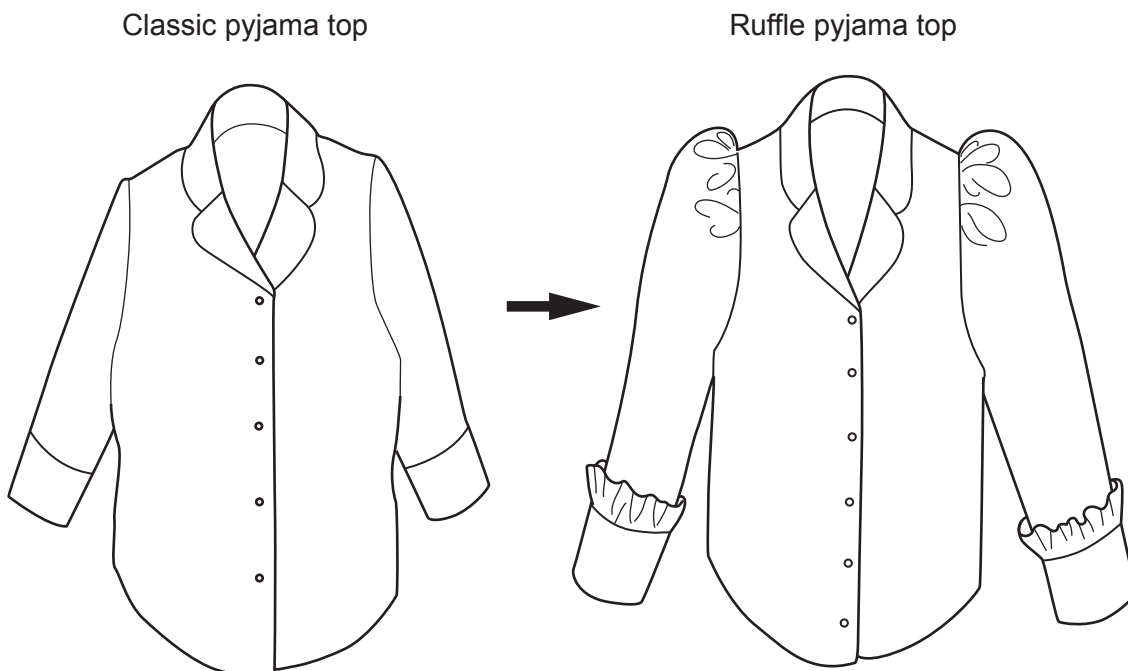


Fig. 5

Fabric Selection

The design team at Forty Winks has researched global fabric manufacturers that will be able to supply fabric that is suitable to represent the latest trends but also be appropriate for the pyjamas.

Fig. 6 shows fabrics the design team is considering including the fabric specifications.




Fabrics:	
Bohemian Chic 	Composition: 100% cotton lawn Width: 150 cm Weight: 76 g/per square metre Cost: £9.99 per metre Country of origin: Indonesia
Velvet Night 	Composition: 18% silk / 82% viscose Width: 115 cm Weight: 195 g/per square metre Cost: £15.99 per metre Country of origin: France
Smooth Satin 	Composition: 95% polyester / 5% elastane Width: 150 cm Weight: 110 g/per square metre Cost: £13.99 per metre Country of origin: China

Fig. 6

Night to Day

From silk to satin and loose to tailored, pyjamas as daywear have been the fashion trend that has been worn by celebrities, fashion bloggers, editors and street style stars for the past few seasons. Along with having a style for every consumer, the versatility of the pyjama is another key component that makes this trend so easy to adopt. More and more retailers are selling sleepwear suitable for daytime use.

Forty Winks has decided to develop its luxury pyjama range to capitalise on this trend. It has carried out research into its primary user to establish how the classic pyjama style can be developed for daywear. The feedback highlighted the need for a sleek and structured look along with pockets.

The design team has adapted its original pyjama pattern to include:

- front diagonal trouser pockets;
- front darts;
- piping.

These modifications can be seen in **Fig. 7** below.

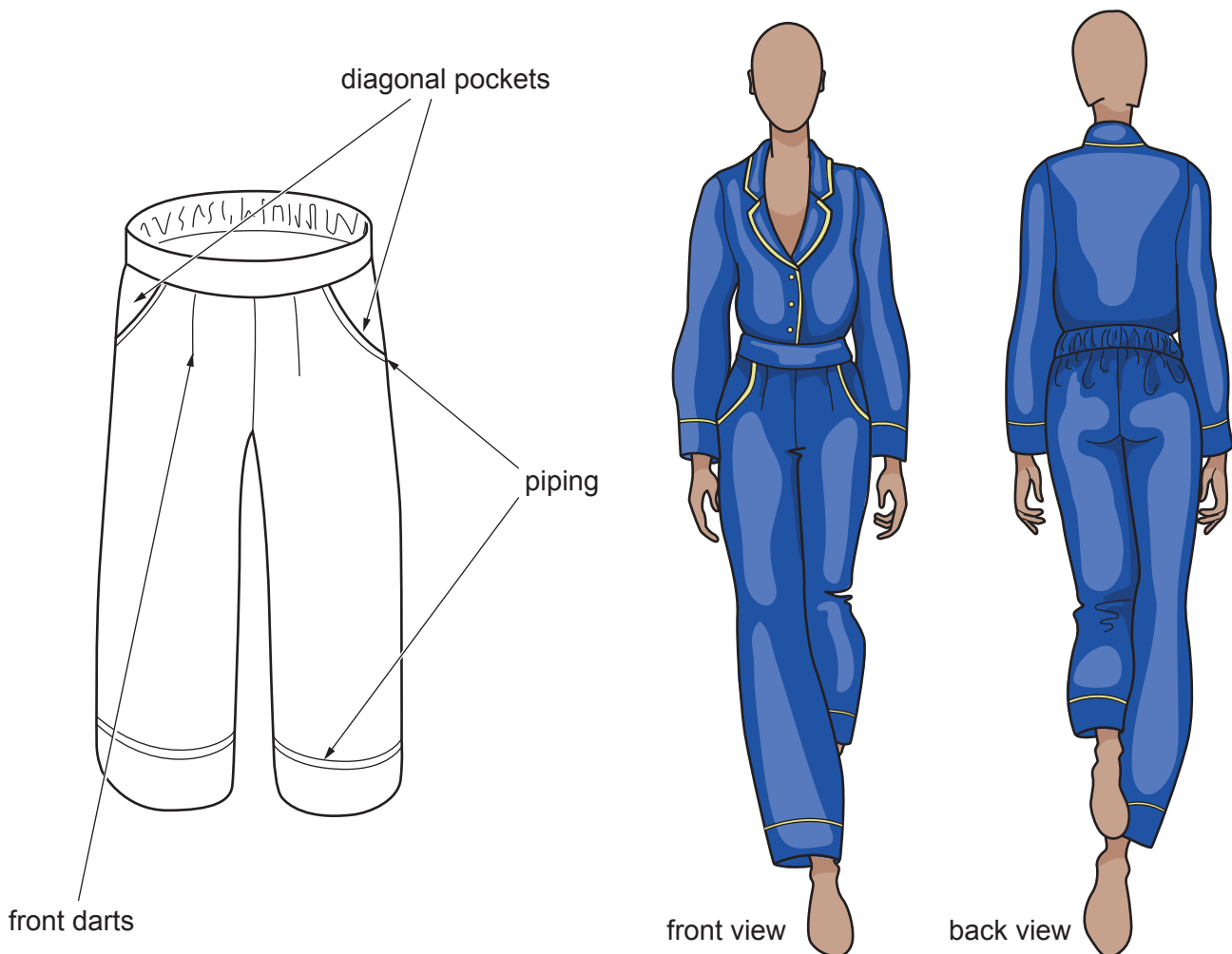


Fig. 7

Forty Winks has recently conducted a marketing campaign on social media to gather feedback on its new daytime pyjama design. The feedback it has gathered includes whether potential customers would be willing to pay a little extra to receive the garments in a presentation box rather than a sealed plastic bag.

4 325 people responded to the request for feedback from the marketing campaign with 3 400 people stating that they would be happy to pay extra for the presentation box.

Before making the decision to include the option for customers to purchase a presentation box, Forty Winks wants to analyse the feedback from the marketing campaign. This is because there are additional cost implications in relation to hiring extra staff to prepare and pack the garments into the presentation boxes. For this to be cost effective the relative percentage of customers who would purchase a presentation box must be 200% or more than those who would not purchase the presentation box.

Presentation Box



Fig. 8

The presentation box has the following dimensions:

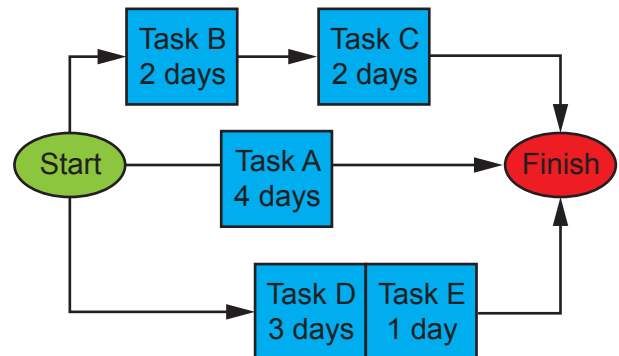
- Length: 40 cm
- Width: 30 cm
- Depth: 15 cm

The presentation box will be lined with tissue paper which folds over the top of the garments.

Forty Winks has decided the product launch of its new daytime pyjama design will be Spring 2023. There is a lot of work to do and the design team is looking into a range of project management approaches to help it design and manufacture its new product range and achieve success through efficiency and reducing costs. Three project management approaches that the design team is looking into are described below.

Critical Path Analysis

This method involves the use of flow charts to plan the route through production in the shortest possible time. Each stage of manufacture is listed with the time needed so that a schedule can be created, with a focus on the critical stages that are needed and the time they take.



Scrum

The focus of this approach is working as a team to develop the product and move into manufacture. Each part of the production involves different aspects of the business, including suppliers. A lead person works with all team members to identify any issues or potential delays and resolves them prior to production, usually through daily meetings.



Six Sigma

This method of product management uses data and analysis to plan for production. A team of experts follow a set sequence of steps which include: Define, Measure, Analyse, Improve, Control.



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