

The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Textile and Apparel Technology



Study Programme	: Bachelor of Technology Honours in Engineering/ Bachelor of Industrial Studies Honours
Name of the Examination	: Final Examination
Course Code and Title	: TAX4540 Garment Manufacture
Academic Year	: 2020/2021
Date	: 30 th January 2022
Time	: 0930-1230hrs
Duration	: 3 hours

General Instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of **Eight (8)** questions in four **(4)** pages.
3. Write down your Index Number in all the pages of answer scripts.
4. Answer the question one (Q1), which is compulsory and five (05) more questions from Q2 to Q8. Question one (Q1) carries 25 marks and questions two (Q2) to eight (Q8) carry fifteen (15) marks each.
5. Answers to each question should commence on a new page. If a question has many parts, all the parts should be answered in the chronological order under the same question.
6. Write down the answered question numbers in the answer book.
7. Answers should be in clear hand writing.
8. Do not use red colour pens to write the answers.

Compulsory Question

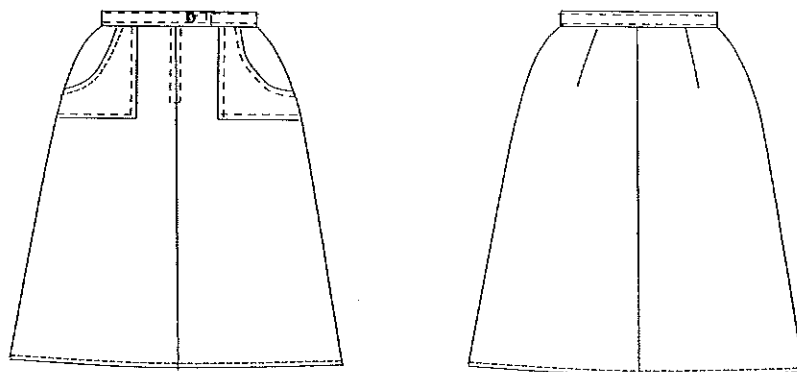
- (Q1) (a) Give four (04) major properties of a good quality packing materials used in garment industry. (04 marks)
- (b) Write down two (02) widely used testing standards for testing paper based packing materials used in garment industry. (02 marks)
- (c) Name the three (03) major factors you should consider when selecting a garment washing method for obtaining special effects on garments. (03 marks)
- (d) Write down three (03) limitations of steam presses, when they are used for fusing process. (03 marks)
- (e) Name the two (02) widely used forms of fabric spreads. (02 marks)
- (f) Mention four (04) specific features/ facilities available in newly developed spreading machines compared to traditional/ conventional spreading machines. (04 marks)
- (g) Give three (03) major activities of the servo motors equipped in computer control cutting machines. (03 marks)
- (h) Give four (04) types of presser feet, which can be fitted to sewing machines for different sewing purposes. (04 marks)

Answer any five (05) questions from the following seven (07) questions

- (Q2) (a) Briefly discuss the importance of the fabric spreading in garment manufacturing process. (04 marks)
- (b) With the aid of a suitable diagram, describe the "splicing" technique used in fabric spreading. (05 marks)
- (c) Describe a suitable technique, which can be used prior to spreading process to minimise colour shading problem of garments made of denim fabrics. (06 marks)
- (Q3) (a) Discuss the possible causes for inaccurate cutting of fabrics and provide possible solutions for each of them. (05 marks)

- (b) In one of the cutting techniques, the fabric stack is moved instead of cutting machine. Discuss the specific disadvantages of this cutting technique. (06 marks)
- (c) Describe the two (02) major differences of rotary and straight knives. (04 marks)
- (Q4) (a) With an aid of a suitable diagram, explain a suitable method, which can be used to determine the appropriate number of operators per production line or module. (05 marks)
- (b) "Engineering of the sewing workplaces depend on the product type used". Giving appropriate factors, justify the given statement. (05 marks)
- (c) In one of the garment manufacturing system, time wise work content at each workstation is equal. Describe the operational principle of this manufacturing system. (05 marks)
- (Q5) (a) Write a comprehensive note on the "details/ information required from the buyer and from the manufacturer" for preparing operational breakdowns of garments. (06 marks)
- (b) Discuss why operational breakdowns are prepared in the process of garment manufacture. (06 marks)
- (c) Explain why chain stitches are widely used for sewing knitted garments. (03 marks)
- (Q6) The construction details of a skirt are given below. The front and back views are also provided for your reference.

The front is constructed by two panels. Two pockets are attached to the front panels. A zipper is also attached to the centre front of the skirt. The back is also constructed by using two panels. Two back darts are sewn. When constructing the waist band of this skirt, two waist band panels and a fusible interlining are used. A button is attached to the waist band for fastening. The necessary panels are to be overlapped.



By using the details provided, prepare a suitable operational breakdown for the skirt. The required machines, equipment and tools should be included for each operation in the operational breakdown. (15 marks)

(Q7) Write short notes on the following processes/techniques used for garment manufacturing.

- (a) Fusing (03 marks)
- (b) Moulding (03 marks)
- (c) Welding (03 marks)
- (d) Use of adhesives (03 marks)
- (e) Pressing (03 marks)

(Q8) (a) Giving materials and equipment required, describe the screen-printing process, which can be used for garment printing. (08 marks)

(b) Briefly discuss the steps involved in vacuum packing of garments. (04 marks)

(c) Discuss the advantages of vacuum packing of garments. (03 marks)