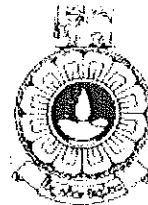


**The Open University of Sri Lanka**  
**Faculty of Engineering Technology**  
**Department of Textile and Apparel Technology**



Study Programme	: Advanced Certificate in Apparel Technology
Name of the Examination	: Final Examination
Course Code and Title	: <b>TAX2585/TAI2530/TTI2230 Introducing Textiles</b>
Academic Year	: 2019/2020
Date	: 10 <sup>th</sup> August 2020
Time	: 1330 -1630hrs
Duration	: <b>3 hours</b>

### **General Instructions**

1. Read all instructions carefully before answering the questions.
2. This question paper consists of Eight (8) questions in Three (3) pages.
3. This is a Closed Book Test (CBT).
4. Write down your Index Number in all the pages of answer scripts.
5. Answer the question one (01), which is compulsory and five (05) more questions from 02 to 08. Question one (01) carry twenty-five (25) marks and questions two (02) to eight (08) carry fifteen (15) marks each.
6. Answer for each question should commence from a new page. If a question has many parts, all the parts should be answered in the chronological order under the same question.
7. Write down the answered question numbers in the answer book.
8. Do not write answers to the additional questions.
9. Answers should be in clear hand writing.
10. Do not use red colour pens to write the answers.

Compulsory question

01.

- a) State four (04) different requirements of clothing. (02 marks)
- b) Write two (02) reasons for considering knitted fabrics as more suitable for undergarments. (02 marks)
- c) Write definitions for “Weaving” and “Knitting”. (04 marks)
- d) Draw a sketch for a completed knitted stitch and name the three (03) important parts. (03 marks)
- e) 2000 meters of cotton yarn weighs 80 grams. Calculate the tex count of this yarn. (02 marks)
- f) Write three (03) primary motions of weaving. (03 marks)
- g) Write two (02) examples for the fibre categories given below. (04 marks)
- i. Man-made regenerated fibres
  - ii. Man-made synthetic fibres
- h) What is “Singeing”? (02 marks)
- i) Write the three (03) main tests that are carried out for assessing the colour fastness in textile dyeing. (03 marks)

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

02. Write short notes on the following topics related to applications of technical textiles.

- a) Fabrics for transport and automobile industry (05 marks)
- b) Fabrics for filters and paper industry (05 marks)
- c) Fabrics for buildings and geotextiles (05 marks)

03. Draw the point paper representations of the following weaves.

- a) 1/1 Plain weave (03 marks)
- b) 1/2 Twill weave (03 marks)
- c) 2/1 Twill weave (03 marks)
- d) 8 end satin with move number 3 (03 marks)
- c) 2/2 matt weave (03 marks)

04. a) Describe the terms “Swing” and “Shog” associated with warp knitting. (03 marks)  
b) With aid of suitable diagrams, briefly explain the basic six (06) steps of loop formation by latch needle in warp knitting. (12 marks)
05. a) Write two (02) open-end spinning methods. (02 marks)  
b) Write five (05) advantages of open-end spinning method over ring spinning method. (05 marks)  
c) The carded and combed sliver is subjected to “Drafting” and “Doubling” in a draw frame machine in cotton yarn manufacturing. Briefly describe those two (02) actions using diagrams. (08 marks)
06. a) Classify natural fibres into three (03) main categories. (03 marks)  
b) Draw the cross-sectional view and the longitudinal view of the fibre types given below. (04 marks)  
i. Cotton fibre  
ii. Wool fibre  
c) Briefly explain two (02) advantages and two (02) disadvantages of each of the above mentioned fibre types. (08 marks)
07. Write short notes on the following common dye types used in the textile industry.  
a) Acid dyes (05 marks)  
b) Vat dyes (05 marks)  
c) Disperse dyes (05 marks)
08. Describe “Textile Printing” including principles and methods. (15 marks)

**-End of the question paper-**