



Study Programme	: Bachelor of Industrial Studies Honours
Name of the Examination	: Final Examination
Course Code and Title	: TAI4344 Industrial Garment Washing and Finishing
Academic Year	: 2020/2021
Date	: 14 th February 2023
Time	: 1330-1630hrs
Duration	: 3 hours

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. 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

- (1) (a) What do you understand by the term "garment washing and garment finishing" in the apparel industry? (03 Marks)
- (b) State two (02) different examples for each of "wet process" and "dry process" in relation to garment washing and finishing methods. (04 Marks)
- (c) List three (03) methods of enzyme deactivation used in garment washing and finishing industry. (03 Marks)
- (d) Briefly explain the importance of using "softeners" in the final stage of garment washing and finishing process. (03 Marks)
- (e) What do you understand by the term "dipole effect" of a detergent? (03 Marks)
- (f) Given below are different types of stains that are common on garments. Give one (01) type of stain remover that can be used for each type of stain.
- i. Acids
 - ii. Blood
 - iii. Fruit stains (03 Marks)
- (g) Define the process of "napping" in relation to garment abrasion. (04 Marks)
- (h) Write any two (02) reasons for performing a "rinse wash" process in garment washing and finishing industry. (02 Marks)

Answer any five (5) questions from the following seven (7) questions

- (2) (a) Giving examples, explain the three (03) main criteria according to which garment washing and finishing methods can be classified. (09 Marks)
- (b) Briefly explain the factors, that you should consider when loading garments to a washing machine in industrial garment washing and finishing. (06 Marks)
- (3) (a) Briefly explain why "denims" are more suitable for abrasion. (05 Marks)
- (b) Explain the following methods of garment abrasion used in the apparel manufacturing industry.
- i. Abrasion by means of pumice stones
 - ii. Abrasion by means of enzyme (10 Marks)
- (4) (a) Briefly explain the operating principles of the below given machines used in garment washing.

- i. Horizontal drum type washing machine
ii. Hydro extractor (06 Marks)
- (b) Briefly explain the three (03) major stages of soil removal process from fabrics/garments in an aqueous medium. (09 Marks)
- (5) (a) Briefly explain any two (02) performance requirements of dyes and pigments. (05 Marks)
- (b) Describe the five (05) main steps of reduced vat dye method used in textile colouration. (10 Marks)
- (6) Write short notes on followings in relation to garment washing and finishing.
- i. Wetting agents (05 Marks)
ii. Emulsifying and dispersing agents (05 Marks)
iii. Buffers (05 Marks)
- (7) (a) Explain the disadvantages of stone washing process over enzyme washing process in industrial garment washing and finishing. (07 Marks)
- (b) Compare and contrast the below given fabric/garment abrasion techniques in all aspects.
- i. Grinding
ii. Brushing (08 Marks)
- (8) (a) What do you understand by the term "bio-polishing"? (03 Marks)
- (b) Briefly explain the problems associated with garment dyeing against fabric dyeing. (06 Marks)
- (c) Briefly explain the below given fabric/garment dyeing techniques used in textile colouration.
- i. Dip Dyeing
ii. Drip Dyeing (06 Marks)

