

THE OPEN UNIVERSITY OF SRI LANKA

DIPLOMA IN INDUSTRIAL STUDIES/TECHNOLOGY

49

FINAL EXAMINATION - 2006/2007

TTI3235/TTD2212- APPAREL PRODUCTION

DURATION – THREE HOURS



DATE:22nd March 2006

TIME:0930 - 1230 HOURS

Total Number of questions =09 Number of questions to be answered = 06

Answer Question 1, which is compulsory and additional five (5) questions.

Question 1 carries twenty five (25) marks.

- (1) (a) Define the terms "Tex" & "Denier". (02 Marks)
- (b) What is meant by "moisture absorption" (02 Marks)
- (c) The process of product development includes four major processes.
What are they? (02 Marks)
- (d) There are several types of sample garments. State five(5) of them. (03 Marks)
- (e) How do you calculate the marker efficiency? (03 Marks)
- (f) State the sequence activities involved in the method study operation. (03 Marks)
- (g) State six classes of stitch types according to British Standard. (03 Marks)
- (h) State five (5) types of sewing machine beds according to their shapes. (03 Marks)
- (i) What is the size of the needle if the blade diameter is 1.0mm?
(Use Metric System). (02 Marks)
- (j) State three (3) requirements that should meet a well off pressed garments. (02 Marks)
- (2) (a) Explain why interlinings are used with some particular garment components / garments. (05 Marks)
- (b) What is the purpose of using informative label? (05 Marks)
- (c) Identify the different parts of a zipper. (05 Marks)

(3) (a) Explain the following two methods of pattern construction.

(i) Pattern Drafting

(ii) Pattern Manipulation

(03 Marks)

(b) "Body measurements are one of the main requirements to draft patterns". Explain with clear diagrams the correct way of taking following measurements.

(i) Bust

(ii) Waist

(iii) Body rise

(iv) Across back width

(v) Upper arm girth

(10 Marks)

(c) What do you mean by "Pattern Grading"?

(02 Marks)

(4) (a) Explain the importance of fulfilling following requirements in spreading fabrics.

(i) correct ply tension

(ii) alignment of plies

(iii) easy separation of cut lay into bundles.

(iv) avoidance of fusion of plies during cutting

(08 Marks)

(b) What are the types of fabric losses outside the marker?
Explain how, they could be minimised?

(07 Marks)

(5) (a) How do you calculate the basic time of an operation if you are given observed time, observed rating and the standard rating?

(04 Marks)

(b) A time study gives following information. (assume std rating 100)

Element	Observed time(minutes)	Observed Rating
1. Get bundle and sort parts	0.10	95
2. Position zip	0.15	70
3. Sew first side of zip	0.47	80
4. Reposition	0.07	100
5. Sew second side of zip	0.52	80
6. Dispose of garment	0.06	90
7. Dispose of bundle, take ticket	0.15	100

7.5% allowance on machine elements for machine delay. 10% Relaxation allowances on all elements.

Average bundle size is 06

Calculate a standard minute value for one garment, based on above data.

(11 Marks)

(6) (a) Explain why is it necessary to balance a sewing line.

(03 Marks)

(b) A production line is scheduled to produce 4000 garments per week. A breakdown of operations is shown below.

Operation	SMV per garment
1. sew 4 darts	0.75
2. sew pleats panels	1.20
3. over lock edges & placket	0.55
4. sew zip & back seam	1.60
5. Make up	0.80
6. Tape twist	1.60
7. attach waist band	0.50
8. over lock waist band	0.70
9. Bag out waist band	0.85
10. Blind stitch hem	0.45

Length of working day is 480 minutes

How many operators would be needed to staff the sewing line? **(12 Marks)**

(7) (a) Define the term "seam" according to British Standard. **(03 Marks)**

(b) With aid of clear diagrams, explain the formation methods of following seam types.

(i) Welt seam

(ii) Bound seam

(iii) Enclosed seam

(iv) Channel seam

(12 Marks)

(8) (a) What is the functions of a presser foot used in a sewing machine?
(02 Marks)

(b) Explain four (4) types of presser feet with their applications. **(08 Marks)**

(c) List the common types of feed mechanisms used in the sewing machines and state their characteristics. **(05 Marks)**

(9) (a) Following defects on finished garments have been found in a particular production line of a garment factory. Explain the causes and the actions to be taken to overcome these faults in the future.

- Skipped stitches
- Needle thread breakage
- Heating damage to fabric

(09 Marks)

(b) What are the costs associated with quality assurance?
Briefly explain them.

(06 Marks)