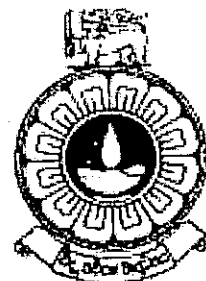


THE OPEN UNIVERSITY OF SRI LANKA  
 BACHELOR OF INDUSTRIAL STUDIES /  
 BACHELOR OF TECHNOLOGY  
 FINAL EXAMINATION 2009 / 2010  
 TTX4242 KNITTED GARMENT TECHNOLOGY  
 DURATION - THREE HOURS



DATE: 18<sup>th</sup> March 2010

TIME: 09.30-12.30 HOURS

Total Number of Questions = **9** Number of questions to be answered = 06

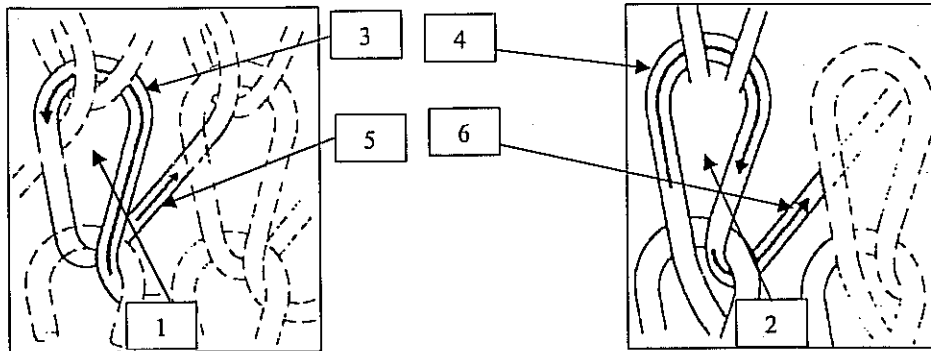
Answer the question 1, which is compulsory, and five (05) additional questions.  
 Question 1 carries twenty five (25) marks and questions 2 to 09 carry fifteen (15) marks each.

01. Compulsory Question

- a) Briefly explain the required conditions to reach wet relax state and finished relax state. (02%)
- b) What are the advantages of fully fashion garment making method over the other methods? (03%)
- c) State two production stages, where shrinkage has to be considered during production of cut and sewn knitted garment. (02%)
- d) What is the difference found in wales of purl fabric compared to the other weft knitted fabrics? (02%)
- e) What is the use of Band Cutting machine? (03%)
- f) What do you understand by "spirality" of circular weft knitted fabrics? (02%)
- g) What are the three reasons for having rib borders in fully fashion garment panels? (03%)
- h) Explain terms narrowing and widening during the production of fully fashion garment panels. (02%)
- i) What is the purpose of transferring **more loops at a time by one space** during widening or narrowing to produce neck opening or armhole in fully fashioned garment panels? (02%)

- j) Briefly explain the following two fashioning statements. (02%)  
6 fashioning X 3 courses X 1 loop space with four loops transfer  
7 fashioning X 4 courses X 2 loop spaces
- k) Explain how to calculate the angle of fashioning for one loop transfer for every three courses. (02%)
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- 2 a) With suitable diagrams explain the steps involved in formation of knitted loop when latch needles are employed. (07%)  
b) Draw the yarn path diagram and point paper notation of full cardigan fabric (weft knitted fabric with tuck stitches). (04%)  
c) Explain how to produce tubular fabric with flat bed knitting machine and draw the yarn path diagram of two consecutive courses. (04%)
- 3 a) Discuss the important knitted fabric characteristics such as insulation property, stretchability, form stability, laddering, shrinkage. (05%)  
b) Explain the structural differences between weft knitted fabrics and warp knitted fabrics. (04%)  
c) Compare the physical properties, appearance and structural differences of plain knit and purl fabric. (06%)
- 4 a) Name and briefly explain six different knitted fabrics faults. (06%)  
b) A wet relaxed plain knitted worsted fabric is made from 55Tex yarn and has a stitch length of 5mm. Estimate the stitch density and the fabric weight (gsm). (Wet relaxed  $k_s = 2160$ ,  $k_c = 53$ , and  $k_w = 41$ ). Calculate the number of wales and number of course per cm, if the R is 1.3 (09%)

5. a) Write short notes on the following in relation to guide bar movements in warp knitting Swing, Shog, Overlap and Underlap. (05%)
- b) In the below figure we can see open lap, closed lap, under lap and over lap, which are numbered 1 to 6. Labeled the numbers selecting the correct terminology (indicate in your answer sheet the number and the terminology). (05%)



- c) Draw the guide bar lapping movements for the given notation (05%)  
 (i) 1-2/1-0 front guide bar, 1-0/4-5back guide bar
6. a) What do you understand by linking, explain it briefly? (05%)
- b) Briefly explain, for which types of fabrics you need a cup seaming machine? (04%)
- c) Explain a modern method of cutting for removing excess fabric in cut stitch shape or in integral garments. (03%)
- d) Explain the limitation of laser cutting. (03%)
7. a. Discuss the following stitch types and their variations for suitability in making knitted garments.
- i) Chain stitch and its variation
  - ii) Lock stitch and its variation (09%)
- b. Explain the differences between over edge chain stitch and covering chain stitch. (06%)

