NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF TEXTILE TECHNOLOGY
END OF SEMESTER EXAMINATIONS MAY 2004
FABRIC TECHNOLOGY II – TXT 1208
TIME: 3 HOURS

INSTRUCTIONS

Answer all Questions in Section A and 2 questions in Section B.

1. Explain each of the 8 parts of a basic loom. (8 marks)

2. What advantages does sectional warping have over cone and beam winding (4 marks)

3. (a) Use a diagram to explain the jacquard harness. Give an example of explaining hoy 1600 ends cam be threaded through rows and hooks on a jacquard harness. (10 marks)

   (b) Show how the Jacquard lift is achieved. (5 marks)

4. With an illustration, explain weaving resistance. (6 marks)

5. A loom runs at 210 picks a minute at 82% efficiency. If the warp within the reed is 1.5m what is the weft consumption per 10 hours of the 30 tex weft yarn. (6 marks)

6. A 20 tex cotton yarn is quoted as having a size percentage of 10%. Determine the oven drymox in size and per kg on unsised yarn. (4 marks)

7. Explain positive take up motion by giving an example of a seven wiltreed take up motion. Use a diagram to show how pick-spacing can be calculated.(8 marks)

8. A reed has 15 dents/cm and the warp is drawn in two ends per dent. If the finished width is 1.5m wide in the reed, what is the finished warp set. (6 marks)

8. Briefly explain the fig below.

SECTION B

1. Compare and contrast mechanical and electrical warp stop motion. Use figures. (20 marks)

2. (a) How is the Repier weaving achieved when using
   (i) The devas principle
   (ii) The Gabler principle
   (iii) Rigid rapier driven from eccentric (10 marks)
   (b) What is illustrated in the figures below. (5 marks)

3. (a) Use figures to explain 4 types of sheds. (12 marks)

   (b) Describe how negative dobby shedding is achieved. Illustrate. (8 marks)

4. Explain how the negative automotive let off (developed by the Shirley Institute controlled. Use figures. How does this differ from the positive let-off? (20 marks)

END OF QUESTION PAPER