

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF TEXTILE TECHNOLOGY
END OF SEMESTER EXAMINATIONS JANUARY 2008
TXT 2108 – FABRIC TECHNOLOGY II
TIME: 3 HOURS

INSTRUCTIONS

1. Answer **ALL questions in Section A and ANY TWO in Section B**
 2. The first fifteen minutes should be spent reading the question paper and making notes
 3. **Do not** open your answer sheet until told to do so
 4. Marks will be awarded for skill in appreciating the scope of questions, clarity of argument and conciseness of presentations as well as for the knowledge displayed by you.
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SECTION A: Answer All Questions

1. With the aid of diagram(s) explain the multi-step geometric needle selection in weft knitting. (15 marks)
 2. Describe the unique functions of the state-of-the-art circular bed knitting machines. (15 marks)
 3. With the aid of a diagram and measurements explain the principle of magazine weft insertion in warp terminating machines. (15 marks)
 4. Calculate the amount of yarn required to operate the machine running at 40 rev/min for one hour at 90% efficiency, and having 90 yarn feeders feeding 3000 needles. (15 marks)
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Section B: Answer any two questions in this Section

5. Use clear diagrams and calculations to explain the
 - (a) Importance and function of the Flat Needle Beds, and (10 marks)
 - (b) their basic construction (10 marks)
6.
 - (a) Use illustrations to explain the working principle of the cam system in circular knitting machines showing the displacement graph of cylinder and dial needle heads. (15marks)
 - (b) What are the characteristics of a lowering cam? (5 marks)
7.
 - (a) Explain using detailed diagrams, the compound needle action in warp flat-bed knitting machine (10 marks)
 - (b) Explain the actions/operations shown in Figure 1 a - d (10 marks)

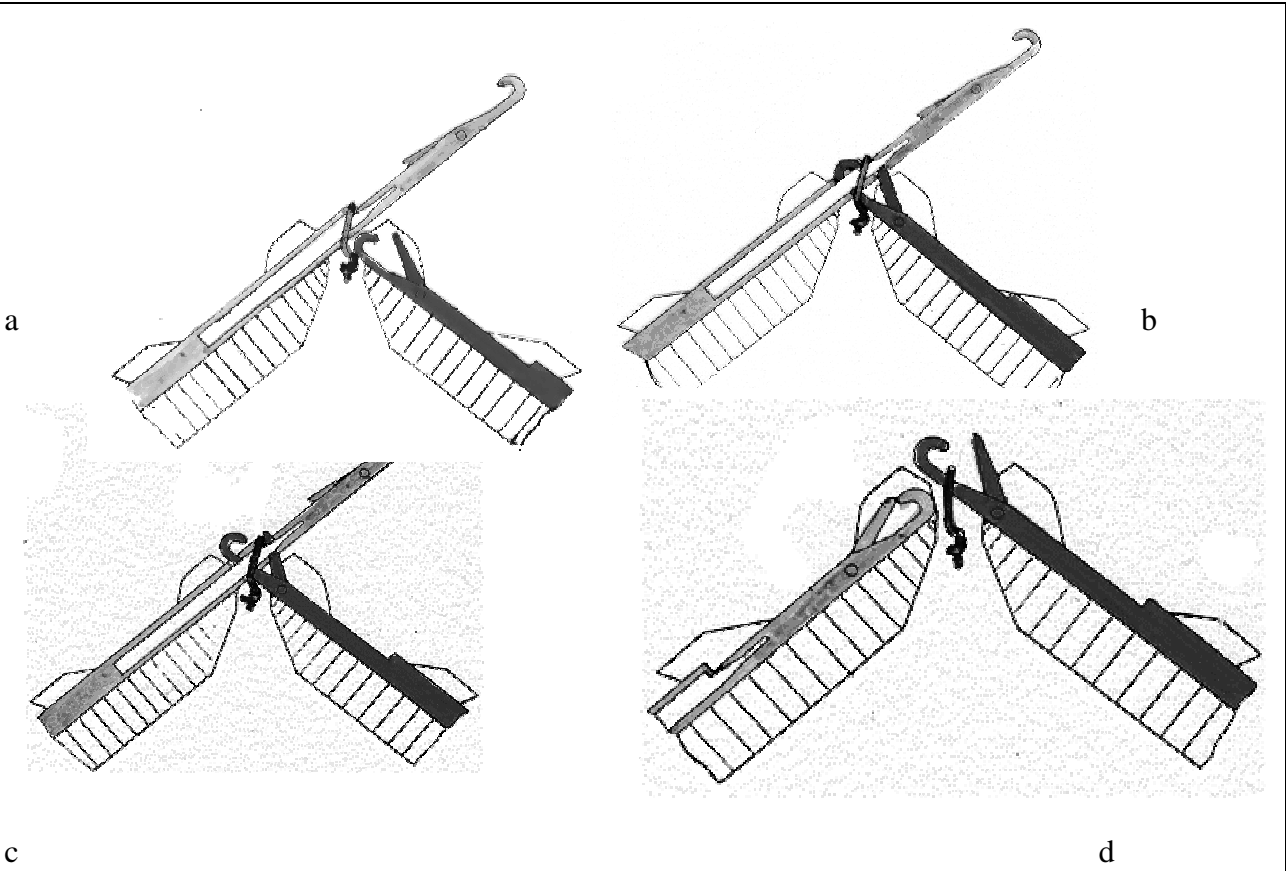


Figure 1