B. Tech. (Carpet & Textile Technology)
(SEM. IV) EXAMINATION, 2006-07
FABRIC MANUFACTURE - II

Time : 3 Hours] [Total Marks : 100

Notes : (1) All questions are compulsory.
        (2) Explain question to the point only.
        (3) Draw necessary diagram wherever required.

1 Attempt any two parts of the following : (10 marks each)

   (a) What is advantage of Automatic loom over
       Plain Power loom? Why production is more on
       Automatic loom in comparison to plain Power
       loom. Give classification of Automatic loom?

   (b) The Yarn space in the Reed is 100 cm and
       the Shuttle length, with the curved ends neglected
       is 30cm. The loom speed is 200 Picks per
       minute and 100 degree crank shaft rotation is
       available for shuttle traverse through the shed.
       If the retardation is 950 cm/Sec² determine :

       (i) The mean Velocity of Shuttle
       (ii) The maximum Velocity of Shuttle
(iii) The minimum Velocity i.e. that before the shuttle enters the box.

(c) What do you understand from Actual and Nominal Picking Motion? Calculate the production per shift of 8 hours of a loom running at 200 Picks per minute with 90 per cent efficiency. The number of Picks per inch inserted in cloth is 56.

2 Attempt any two parts of the following: (10 marks each)

(a) Explain working of Knowle's doby? What is the advantage of Knowle’s doby over Climax doby?

(b) Explain limitation of Tappet in comparison to Dobby. What is scope of Dobby? Explain characteristic and working of Climax doby?

(c) Explain Pegging for Right hand doby with suitable weave. How many hooks, Knife, Needles will be present in Climax doby to control 20 head shaft loom?

3 Attempt any two parts of the following: 10+10

(a) Why Weft Selection Mechanism is Important? Explain any weft selection mechanism in detail.

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(b) What is the advantage of Pick and Pick motion? What is limitation of 4×1 drop box motion? Explain pattern Card formation for below pattern in detail:

2 Pick Blue
2 Pick Yellow
4 Pick Red
2 Pick Yellow
4 Pick Green
4 Pick Yellow
2 Pick Red

(c) What is the Importance of Warp Protecting Mechanism? Explain one such Mechanism in detail.

4 Attempt any four parts of the following: (5 marks each)

(a) Why warp stop motion needed on Automatic Power Loom?

(b) What kind of fault may occur in absence of Warp stop motion, explain any two?

(c) Explain working of Mechanical warp stop motion?

(d) What are the disadvantages of Mechanical warp stop motion?
(e) What is the importance of Weft Stop Motion? What are the advantage and disadvantage of Side Weft Fork Motion?

(f) Explain working of Side Weft Fork Motion in detail.

5 Attempt any four parts of the following: (5 marks each)

(a) Explain working of 7 wheel take up Motion? What are the advantages of 7 wheel take up motion over 5 Wheel Take up Motion?

(b) What are the advantages of Positive let off motion over Negative let off motion?

(c) What are the uses of Temple? Explain various types of temple and their operation?

(d) Why Weft Replenishment mechanism is important in weaving loom?

(e) Explain working of any weft feeler in detail? What do you understand from Bunching length?

(f) Write short notes on any one topic given below:
   (i) Unifil Loom Winder
   (ii) Hunt Positive let off motion
   (iii) Pirm Changing Mechanism.