22232

3 Hours / 70 Marks   Seat No.

Instructions :   (1)   All Questions are *compulsory*.

(2)   Illustrate your answers with neat sketches wherever necessary.

(3)   Figures to the right indicate full marks.

(4)   Assume suitable data, if necessary.

Marks

1.   **Attempt any FIVE :**   **10**

(a)   Define Weaving.

(b)   Define linear density and the formula for Denier system.

(c)   State the effect on package if wind per double traverse is a whole number in drum winding machine.

(d)   State the object of warp winding.

(e)   Define indirect yarn numbering system.

(f)   Draw a sketch of drum with any two types of traverse.

(g)   Find the clearing efficiency of clearer if it removes 50 faults out of 90 faults per meter of yarn.

2.   **Attempt any THREE :**   **12**

(a)   Draw the process sequence for stripe pattern fabric.

(b)   Select most suitable yarn numbering system for cotton yarn and also give its definition and formula for the system.

(c) List different types of yarn faults in ring spun yarn and state the concept of objectionable faults.

(d) List the types of winding machines. Explain proper build up of end package in any one machine.

3. **Attempt any THREE :** 12

(a) Describe with neat sketch working of disc type tensioners.

(b) State the winding parameters for coarser yarn count.

(c) Compare drum winding machine with precision winding machine.

(d) Describe with neat sketch working of unwinding accelerator.

4. **Attempt any THREE :** 12

(a) List the defects occur in the end package of drum winding machine. Describe the causes and remedies for any two defects.

(b) Define the terms :

(i) Woolen

(ii) Worsted

(iii) Linen

(iv) Metric

(c) Draw neat sketch of any two supply packages shape and two end package shape of winding machine.

(d) Define the terms :

(i) Traverse ratio

(ii) Coil angle

(iii) Winding speed

(iv) Traverse length

(e) Describe the principle of splicing and draw different types of knots used in winding.

5. **Attempt any TWO :** 12

   (a) Describe the working of any yarn clearer that you know with sketch.

   (b) Construct classimat-V chart for different size of yarn defects.

   (c) Calculate the count in metric system, Denier system and French system, if a lea of cotton yarn weight 25 grains.

6. **Attempt any TWO :** 12

   (a) Study of Figure 1 and answer the questions :

      (i) Identify and write the name of part A & B and state their functions. **(2)**

      (ii) Identify and write the name of the part C and D. **(1)**

      (iii) Identify the machine and tell effect if A & B are interchanged in their position. **(3)**
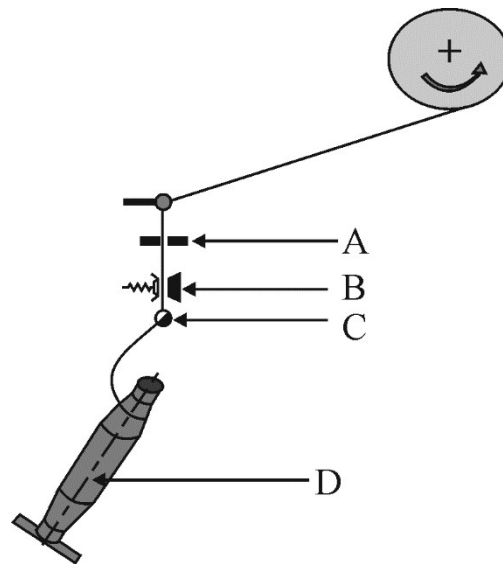
Figure – 1

   (b) (i) Define warp and weft.

      (ii) Draw interlacement diagram of plain weave warp and weft.

(c) Calculate the production of winding machine in kgs/spindle with the following particulars :

   (i)   Diameter of drum   – 3"

   (ii)   Drum speed   – 1000 rpm

   (iii) Count of yarn   – 32^S Ne

   (iv) Efficiency   – 82%

   (v)   Number of working hours – 22.5 hrs

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