

22246

21819

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.

- | | Marks |
|---|--------------|
| 1. Attempt any FIVE of the following : | 10 |
| (a) Draw Interlacing diagram of warp and weft and label the same. | |
| (b) State the importance of tensioner in Winding machine. | |
| (c) Enlist objects of winding process. | |
| (d) Give salient features of precession winding machine. | |
| (e) State the objects of drawing in process. | |
| (f) For supplying yarn for shuttless weaving machine, which type of yarn joining device is recommended splicer or knitter ? | |
| (g) State the concept of patterning. | |
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| 2. Attempt any THREE of the following : | 12 |
| (a) Describe process sequence to manufacture mono colour fabric and checks fabric. | |

- (b) Give the classification of the looms.
- (c) Enlist different types of yarn faults found in ring spun yarn. Give causes and remedies for any two faults.
- (d) Draw a passage of yarn through a “Drum winding” machine, label the parts.

3. Attempt any THREE of the following :

12

- (a) Explain the role of yarn clearer in winding machine. Which type of yarn clearer you will recommend on modern winding machine ? Justify your recommendation.
- (b) State the role of knot factor and clearing efficiency in winding process.
- (c) Differentiate between Precision Winding Machine and Drum Winding Machine.
- (d) Enlist various types of knots used on winding machine. Draw figure of any two types of knots.

4. Attempt any THREE of the following :

12

- (a) Explain the concept of unwinding accelerator on modern winding machine.
- (b) Define the following :
 - (i) Tex
 - (ii) Denier
 - (iii) Woollen count
 - (iv) Metric yarn numbering system
- (c) State importance of winding process with respect of weaving process.
- (d) Define the terms :
 - (i) Traverse length
 - (ii) Coil Angle
- (e) State the practical difficulties in measuring the yarn diameter. Explain how yarn count is estimated in English system.

5. Attempt any TWO of the following : 12

- (a) Describe any two methods of yarn tensioning with help of neat figure.
- (b) Construct the Classimat-II chart for different size of yarn defects.
- (c) Calculate cotton count for 100 metres yarns which weighs 3 gm and also find out its equivalent Tex and Denier system.

6. Attempt any TWO of the following : 12

- (a) Explain the working principle of precision winding machine with neat sketch.
 - (b)
 - (i) Give the classification of winding machine.
 - (ii) State the concept of hybrid winding.
 - (c) Calculate production of winding machine, if machine is operating with following particulars :
 - (i) Drum speed – 800 rpm
 - (ii) Drum diameter – 3 inches
 - (iii) Yarn count – 60^s Ne
 - (iv) No. of drums/machine – 60
 - (v) Efficiency – 89%
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