

22462

**21222**

**3 Hours / 70 Marks**

Seat No.

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15 minutes extra for each hour

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- 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.

**1. Attempt any FIVE of the following : 10**

- (a) Explain objects of Pirn Winding machine.
- (b) Enlist the features of modern Pirn winding machine.
- (c) State objective of shedding motion.
- (d) The actual output per spindle per minute of an automatic superspeed pirn winder is 672 yards of 12<sup>s</sup> Ne cotton yarn. Calculate the time that will be required to wind 1200 lbs of yarn on 30 spindles.
- (e) State importance of bunch on pirn for auto loom pirn.
- (f) State the functions of Box Swell.
- (g) Give causes and remedies for missing ends and cracks.

**2. Attempt any THREE of the following : 12**

- (a) Describe construction and working of tappet shedding mechanism for plain weave with a neat sketch.
- (b) Explain the basic concept of design, draft and peg-plan.

- (c) Define reed count and explain the relation between fabric width reed count and EPI.
- (d) What is the object of picking ? Describe working of a over pick mechanism with the help of a neat diagram.

**3. Attempt any THREE of the following :**

**12**

- (a) Enlist the causes and remedies for any two defects in pirn winding.
- (b) State the importance of let-off mechanism. List advantages and disadvantages of positive let-off mechanism.
- (c) Explain the stock port system of reed count and calculate the no. of ends/inch if reed count is 80 and no. of ends/dent are 2.
- (d) Compare with sketches the merits and limitations of closed shed and open shed.

**4. Attempt any THREE of the following :**

**12**

- (a) Describe with sketch the working of seven wheel take-up motion.
- (b) Describe the working of cone under pick mechanism with a neat sketch.
- (c) Explain with sketch the working of beat up mechanism.
- (d) Sketch and label the parts of a plain power loom shuttle box and write functions of all parts.
- (e) List down different types of cam shedding mechanisms. Draw diagrams of them and compare their relative merits and demerits.

**5. Attempt any TWO of the following :****12**

- (a) What are the causes and remedies for following weft-wise fabric defects
- Double pick
  - Miss pick
  - Weft bars
- (b) List the different machine defects in woven fabric and state causes of any three defects.
- (c) Determine the weight of warp by using following parameters.  
Fabric length – 12000 yards, EPI – 80, Yarn count – 60 Ne, Fabric width-48 inches.

**6. Attempt any TWO of the following :****12**

- (a) Describe the working of negative let-off motion with a neat label sketch.
- (b) Explain early and late shedding. Explain its use.
- (c) A loom is running at 300 rpm and producing a fabric with 60 picks per inch. Calculate the production of loom per day if the efficiency of loom is 85%.
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