



17225

14115

3 Hours/100 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.

**MARKS**

1. Attempt **any ten** :

**20**

- Enumerate objects of pirn winding.
- Define Tex and Denier yarn numbering system.
- Give the meaning of positive and negative shedding mechanism.
- Draw the timing diagram of primary motions.
- Explain importance of sley eccentricity.
- What is dobby shedding ?
- How the picking force is adjusted in under pick mechanism ?
- Write the objects of warp protector mechanism.
- Mention the causes of defective take up motion.
- Sketch roller and ring temples.
- Give the functions of reed.
- Enumerate fabric defects : Gout and crack.
- State the formula used to calculate fabric weight in gms/m<sup>2</sup>.
- Calculate total ends in a cloth width of 110 cms. Reed of 64<sup>s</sup> stockport, drawing 2 threads/dent, is used.

2. Attempt **any four** :

**16**

- Sketch the passage of yarn through automatic pirn winding m/c and label the parts.
- State the requirements of pirn and its built up for automatic loom.
- A loom has, 180 rpm, 180 cm width, to work with 40<sup>s</sup> Ne cotton yarn in weft. Find weight of yarn reqd./day, in kg. if loom efficiency is 90%.
- Compare average count and resultant count with an example.
- Convert 40<sup>s</sup>, 60<sup>s</sup>, 80<sup>s</sup> and 100<sup>s</sup> Ne to Tex and Denier.
- Find resultant count of 10<sup>s</sup>, 2/20<sup>s</sup>, 2/40<sup>s</sup> and 4/40<sup>s</sup> Ne.

**P.T.O.**


**3. Attempt any four :**

- a) Draw a passage of yarn through power loom and label the parts.
- b) Mention primary motions and objects of each.
- c) Describe early and late shedding with its effect on fabric manufacturing.
- d) Enumerate basic requirements for construction of a shedding tappet.
- e) Mention the importance of sley eccentricity and its value for narrow and wider looms.
- f) Compare over and under picking mechanism for major eight points.

**4. Attempt any two :**
**16**

- a) Describe seven wheel take-up mechanism with neat sketch.
- b) Describe advantages and disadvantages of semi-positive let-off mechanism.
- c) Sketch and describe the working of oscillating back rest.

**5. Attempt any two :**
**16**

- a) Sketch and label shuttle box. Write functions of all parts.
- b) Compare loose reed and fast reed for atleast eight points.
- c) Sketch and describe the functions of shuttle, picker, buffer and different heald wires.

**6. Attempt any four :**
**16**

- a) Sketch, and give causes of following fabric defects.
  - i) smash
  - ii) temple marks.
- b) Describe four types of defective selvages with reasons of occurrence.
- c) Explain causes and defects for following fabric defects.
  - i) thick place
  - ii) ready fabric.
- d) Calculate production/day in meters. Loom speed 180 rpm. 60 PPI, 90% efficiency.
- e) A beam has 3960 ends. Calculate reed required, for 44 inch loom width, 4 threads per dent as drawing-in order.
- f) What is the weight in gms/m<sup>2</sup> of a fabric having following particular ?
 

Ends/cm → 22	Picks/cm → 24
Count warp → 20 <sup>s</sup>	Count weft → 20 <sup>s</sup>
Crimp%warp → 4%	Crimp%weft → 6%