

17569

16172

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.
  - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

**1. Attempt any FIVE :**

**20**

- (a) Give comparison of shuttle loom V/s shuttle less loom.
- (b) Classify the rapier weaving machines based on no. of rapiers.
- (c) Compare between Air jet loom and water jet loom.
- (d) Enlist different types of projectiles used on projectile weaving machine. Give their specification.
- (e) Give classification of shuttleless weaving machines.
- (f) State the objects of Geotextiles.
- (g) Give classification of non-wovens.

**2. Attempt any TWO :****16**

- (a) Explain with neat figure construction and working of torsion bar picking mechanism used on projectile weaving machine.
- (b) State different types of selvages used on shuttleless weaving machine. Explain any one of it with neat figure.
- (c) Explain construction and working of impulsive beat-up mechanism and its advantages.

**3. Attempt any TWO :****16**

- (a) Explain picking cycle of rapier weaving machine based on loop to loop transfer principle.
- (b) Explain rapier drive for rigid and flexible rapiers.
- (c) Give salient features of modern rapier weaving machine.

**4. Attempt any TWO :****16**

- (a) Explain weft insertion principle of Airjet loom.
- (b) What are requirement of air quality compressor and distribution system on air jet weaving machine ?
- (c) State the precautions has to be taken for preparation of warp sheet for shuttleless weaving machine. Why ?

**5. Attempt any TWO :****16**

- (a) Explain various factors affecting properties of needle punched non-woven fabric.
- (b) Briefly explain manufacturing technique of non-woven fabric.
- (c) Define non-woven. Explain various applications of non-woven fabric.

**6. Attempt any TWO :****16**

- (a) Give classification and functions of Geotextiles.
  - (b) Explain various applications of geotextiles with neat figure.
  - (c) Discuss various techniques of bending & explain any one briefly with neat figure.
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