Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VII(OLD) • EXAMINATION – WINTER 2016

Date: 29/11/2016

Subject Code: 172902

**Subject Name: Modern Weaving Technology** Time: 10:30 AM to 01:00 PM **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 0.1 (a) Classify shuttleless looms. State and explain different types of weft supply 07 packages used on shuttleless looms. (b) Explain, in detail, the shedding mechanism of projectile loom with the help of **07** neat diagram. Also, state the important settings of the said mechanism. Discuss the requirements of water used in water-jet looms. With the help of neat **Q.2** 07 diagram, explain the weft insertion system of water-jet loom in detail. (b) Give classification of rapier looms. With the help of neat diagram, explain loop 07 transfer weft insertion systems using single and double rapier heads. (b) Define triaxial weaving and hence explain the working of said loom, in detail, 07 with the help of neat diagram. **Q.3** With the help of neat diagrams, explain the air jet weft insertion system in 07 detail. Also, explain the importance and role of relay nozzles. State the importance of drying system provided on water jet loom and explain 07 the same in detail. OR Q.3 State the objects of weft accumulators. With the help of neat diagram, explain 07 the working of any one type of weft accumulator in detail. State the importance of selvedges. Explain different types of selvedges formed **07** on shuttleless looms in detail. **Q.4** State and explain the pre-requisites for installation of shuttleless looms. 07 (a) With the help of neat diagrams, explain different phases of circulation of 07 grippers on projectile loom. OR With the help of neat diagram, explain torsion bar picking mechanism of **Q.4** 07 projectile loom in detail. Compare multi-phase with single-phase looms. With the help of neat diagram, 07 explain the shedding mechanism of M8300 multi-phase loom in detail. State the important advantage of beat-up mechanism of projectile loom and **Q.5** 07 hence explain the said mechanism in detail with the help of neat diagram. (b) State and explain functional characteristics of modern air jet looms in detail. 07 OR (a) With the help of neat diagrams, explain different types of weft yarn tensioners Q.5 07 used on shuttleless looms. (b) With the help of neat diagrams, explain the mechanism used for driving the 07 rigid rapier head in detail.

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