

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

**Subject Code: 172902****Date: 29/11/2016****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.**

- Q.1** (a) Classify shuttleless looms. State and explain different types of weft supply packages used on shuttleless looms. **07**
- (b) Explain, in detail, the shedding mechanism of projectile loom with the help of neat diagram. Also, state the important settings of the said mechanism. **07**
- Q.2** (a) Discuss the requirements of water used in water-jet looms. With the help of neat diagram, explain the weft insertion system of water-jet loom in detail. **07**
- (b) Give classification of rapier looms. With the help of neat diagram, explain loop transfer weft insertion systems using single and double rapier heads. **07**
- OR**
- (b) Define triaxial weaving and hence explain the working of said loom, in detail, with the help of neat diagram. **07**
- Q.3** (a) With the help of neat diagrams, explain the air jet weft insertion system in detail. Also, explain the importance and role of relay nozzles. **07**
- (b) State the importance of drying system provided on water jet loom and explain the same in detail. **07**
- OR**
- Q.3** (a) State the objects of weft accumulators. With the help of neat diagram, explain the working of any one type of weft accumulator in detail. **07**
- (b) State the importance of selvages. Explain different types of selvages formed on shuttleless looms in detail. **07**
- Q.4** (a) State and explain the pre-requisites for installation of shuttleless looms. **07**
- (b) With the help of neat diagrams, explain different phases of circulation of grippers on projectile loom. **07**
- OR**
- Q.4** (a) With the help of neat diagram, explain torsion bar picking mechanism of projectile loom in detail. **07**
- (b) Compare multi-phase with single-phase looms. With the help of neat diagram, explain the shedding mechanism of M8300 multi-phase loom in detail. **07**
- Q.5** (a) State the important advantage of beat-up mechanism of projectile loom and hence explain the said mechanism in detail with the help of neat diagram. **07**
- (b) State and explain functional characteristics of modern air jet looms in detail. **07**
- OR**
- Q.5** (a) With the help of neat diagrams, explain different types of weft yarn tensioners used on shuttleless looms. **07**
- (b) With the help of neat diagrams, explain the mechanism used for driving the rigid rapier head in detail. **07**

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