

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VII • EXAMINATION – WINTER 2013**

**Subject Code: 172902****Date: 26-11-2013****Subject Name: Modern Weaving Technology****Time: 10:30 TO 01:00****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)** Justify the need for modern weaving machinery in Indian Context. Also discuss pre requisites of modern weaving machinery. **07**

**(b)** Discuss in short on modern features of drum driven winding machine. **07**

**Q.2 (a)** Discuss on filament sizing. **07**

**(b)** Discuss on creel of modern warping machines. **07**

**OR**

**(b)** Why Accumulators are required? Explain WIR and WUR. By taking suitable data give values of WIR and WUR on different type of looms. **07**

**Q.3 (a)** With a neat sketch explain tip transfer and loop transfer mechanism on rapier loom. **07**

**(b)** Discuss in short on triaxial weaving. **07**

**OR**

**Q.3 (a)** Explain how the movement of rapier and sley is synchronized on loom? Discuss rapier drive. **07**

**(b)** Discuss on different types of projectiles and energy balance system in projectile picking. **07**

**Q.4 (a)** With a neat sketch explain weft insertion system of confusor based Airjet loom. Also give loom timing diagram. **10**

**(b)** Discuss in short on following mechanism of modern weaving machinery: - WBS, TAPO, PSC, FDP, ESS, F-Kick & R-kick. **04**

**OR**

**Q.4 (a)** Discuss on propelling forces acting on weft yarn of air jet loom. **07**

**Q.4 (b)** Discuss modern features of Tsudakoma 9100 and Toyota 710 airjet looms. **07**

**Q.5 (a)** Discuss pre-requisites of water jet loom. Also discuss advantages and disadvantages of water jet loom. **07**

**(b)** With a neat sketch discuss weft insertion system on projectile loom. **07**

**OR**

**Q.5 (a)** With neat sketch explain working of picking mechanism of water jet loom. **07**

**(b)** Discuss on selvage formation and brake system of projectile loom. **07**

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