

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. - SEMESTER – VII • EXAMINATION – WINTER 2012****Subject code: 172902****Date: 26/12/2012****Subject Name: Modern Weaving Technology****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Write on Ecopack, Variopack and Propack as available on Autoconer. **07**
 (b) Explain the difference between Toyota 610 and 710 model air jet looms. **07**

- Q.2** (a) Write in detail on features of tappet shedding mechanisms of projectile loom. **07**
 (b) Why accumulators are required? What is meant by WIR and WUR on shuttleless looms? Write in short on weft yarn package for shuttleless looms. **07**

OR

- (b) What are the different types of projectiles? 153" R.S. projectile loom works with 3 widths of 44" at 280 RPM with D1 type projectile. Picking consumes 200 deg of rotation. Calculate WIR, WUR, projectile velocity and acceleration. **07**
- Q.3** (a) Give various equations of drag force acting on the weft yarn on an air jet loom? **06**
 (b) With a neat sketch discuss working of single nozzle picking mechanism of WIVITA air jet loom. **08**

OR

- Q.3** (a) Write in detail on weft yarn feeders of modern air jet looms. **08**
 (b) Write in short on main features of modern multiphase loom. **07**

- Q.4** (a) With a neat sketch explain various aspects of rapier heads of flexible rapier loom. **10**
 (b) What are the requirements of yarn to be used for shuttleless looms? **04**

OR

- Q.4** What are the requirements of water for water jet looms? With neat sketch explain working of picking mechanism of water jet loom. **14**

- Q.5** (a) Write a short note on tucked in selvedge as used on shuttleless looms. **07**
 (b) What are the textile and engineering disadvantages of shuttle looms? Write briefly on techno economics of shuttleless looms. **07**

OR

- Q.5** (a) With graph explain rapier and sley velocity for rigid rapier tip transfer loom. **09**
 (b) Write on any one type of yarn tensioning unit of modern warping machine. **05**

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