

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**ME Semester –I Examination Feb. - 2012**

Subject code: 712503N

Date: 17/02/2012

Subject Name: Modern Weaving Technology

Time: 10.30 am – 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) Write in detail on comparison between single hole and shower type relay nozzles with reference to air profile. Also write uses of different types of relay nozzles for different yarns. **10**
- (b) What kinds of disturbances are experienced due to the presence of yarn tube inside the main nozzle? **04**

- Q.2** (a) Give comparison between selvages of shuttle and shuttleless looms. Explain various selvages formed on shuttleless looms. **07**
- (b) Write briefly on modern developments of drum driven winding machines. **07**

**OR**

- (b) Write briefly on modern developments of spun yarn sizing machines. **07**

- Q.3** Write short note on following **14**
- (i) Projectiles
- (ii) Yarn feeders

**OR**

- Q.3** (a) Write major characteristics of M8300 multiphase weaving machine. Also compare properties of fabrics made on M8300 with that of projectile loom. **07**
- (b) Write on different features of QSC on modern rapier looms. **07**

- Q.4** Analyze the stresses on warp and weft yarns during rapier weaving with special reference of using fine count worsted yarns. **14**

**OR**

- Q.4** (a) Discuss effects of yarn structure and count on performance in air jet loom. **07**
- (b) With reference to torsion rod picking, write on following: **07**
- (i) Velocity and acceleration of picker shoe
- (ii) Formula for axial twisting of rod
- (iii) Energy requirements for picking

- Q.5** (a) How following developments in modern shuttleless looms help improve production and/or quality? **07**
- (i) ELO (ii) ETU
- (iii) Auto pick repair (iv) Auto switching of package.

- (b) Write briefly on modern developments of creels used on warping machines. **07**

**OR**

- Q.5** (a) Write in brief on features of modern water jet loom. **07**
- (b) Explain features of total stop mark prevention system as used on water jet loom by Toyota. **07**

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