Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII EXAMINATION – SUMMER 2016

Subject Code:172902 **Date:16/05/2016**

Subject Name:Modern Weaving Technology

Time:02:30 PM to 05:00 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)**	With sketch explain timing diagram of relay nozzle based air jet loom. What is called lead angle?	**07**
	(b)	What are the requirements of weft yarn to be used on shuttleless looms? What is the role of weft accumulator/measuring mechanisms? Calculate the speed of weft yarn with and without accumulator in case of projectile loom running at 310 RPM having 89% efficiency and 101 inches R.S.	**07**
Q.2	**(a)**	Explain how the movement of rapier and sley is synchronized on loom? Discuss rapier drive.	**07**
	(b)	Discuss in short on following mechanism of modern weaving machinery: - WBS, TAPO, PSC, FDP, ESS, F-Kick & R-kick.	**07**
		OR	
	(b)	Discuss pre-requisites of water jet loom. Also discuss advantages and disadvantages of water jet loom.	**07**
Q.3	**(a)**	Which Quick Style Change features are available on modern shuttleless looms? Discuss any three in detail.	**07**
	(b)	Discuss need for modernization in weaving machine in India and pre-requisites for the shuttleless loom.	**07**
		OR	
Q.3	**(a)**	With a neat sketch explain tip transfer and loop transfer mechanism on rapier loom.	**07**
	(b)	Write in detail on various possibilities available with shedding mechanisms of projectile loom.	**07**
Q.4	**(a)**	With a neat sketch explain construction and working of picking mechanism of projectile loom.	**10**
	(b)	What are the limitations of rapier loom with reference to width changes? Which changes are to be made on loom when the width change is to be done?	**04**
		OR	
Q.4	**(a)**	Discuss modern features of Tsudakoma 9100 and Toyota 710 airjet looms.	**07**
	(b)	Write in detail on latest features of warping and sizing machines to prepare yarn for shuttleless looms.	**07**
Q.5	**(a)**	With neat sketch explain working of picking mechanism of water jet loom.	**07**
	(b)	Write briefly on any two methods of picking of multiphase weaving looms.	**07**
		OR	
Q.5		Write short note on following: 1. Projectiles 2. Triaxial fabric forming	**14**

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