Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII • EXAMINATION – SUMMER • 2014

Subject Code: 172902 **Date: 22-05-2014**

Subject Name: Modern Weaving Technology

Time: 02:30 pm - 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)**	Give classification of rapier looms. With the help of neat diagram, explain loop transfer type of rapier weft insertion system in detail.	**07**
	(b)	With neat diagram explain the passage of yarn through Air jet loom.	**07**
Q.2	**(a)**	With the help of neat diagram, explain the torsion bar picking mechanism of projectile loom. Also, state the methods of changing the picking force.	**07**
	(b)	With the help of neat diagram, explain the construction and working of picking mechanism on water jet loom.	**07**
		OR	
	(b)	State the object of accumulator. With the help of neat diagram, explain the working of accumulator in detail.	**07**
Q.3	**(a)**	Compare beat-up mechanism of projectile loom with that of shuttle looms. With the help of neat diagram, explain the beat-up mechanism of projectile loom in detail.	**07**
	(b)	State the need for modern weaving machines in India. Also, discuss problems with shuttle looms and hence techno economics of modern weaving machine installation.	**07**
		OR	
Q.3	**(a)**	Classify multi-phase loom. With the help of neat diagram, explain shedding mechanism of latest multi-phase loom in detail.	**07**
	(b)	With the help of neat diagrams, explain the mechanisms used for driving the heads of flexible rapier weaving machine in detail.	**07**
Q.4	**(a)**	Write a note, in detail, on compressor house of Air jet loom with the help of neat diagram.	**07**
	(b)	State and explain the requirements for weft supply packages used on shuttleless looms. Also, discuss different varieties of weft supply packages prepared for shuttleless looms.	**07**
		OR	
Q.4	**(a)**	With the help of neat diagrams, wherever required, define flying start, flying end and lead angle.	**07**
	(b)	Compare some of the important features of Air jet loom with Water jet loom.	**07**
Q.5	**(a)**	Explain, in detail, on setting of nozzle on water jet loom with the help of neat diagram.	**07**
	(b)	State the importance of selvedges and hence explain different types of selvedges produced on shuttleless looms in detail.	**07**
		OR	
Q.5	**(a)**	State the type of shedding mechanism used on projectile loom and hence explain the same, in detail, with the help of neat diagram. Also, state some of the important settings of shedding mechanism.	**07**

(b) Compare triaxial weaving with normal weaving operation. Explain the principle of working of triaxial weaving in detail. **07**

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