

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER– VII (New) EXAMINATION – WINTER 2019****Subject Code: 2172902****Date: 23/11/2019****Subject Name: Modern Weaving Technology****Time: 10:30 AM TO 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) What are the limitations of shuttle loom. **03**  
(b) Write features of shuttle-less looms. **04**  
(c) Which are the various types of selvages formed on shuttle-less weaving machines? Explain each of them with help of diagram. **07**
- Q.2** (a) What are the yarn quality requirements for shuttle-less looms? **03**  
(b) Explain weft insertion system of air jet weaving machine. **04**  
(c) Explain the working principle of M 8300 multi-phase looms with neat sketch. **07**
- OR**
- (c) What are the factors that affect the pneumatic weft propulsion in air jet weaving? Explain in detail. **07**
- Q.3** (a) Compare drum type accumulator with loop type accumulators. **03**  
(b) Compare types of shuttles-less loom in terms of weft insertion rate. **04**  
(c) Explain picking mechanism of projectile weaving machine with a neat sketch. **07**
- OR**
- Q.3** (a) Classify of Rapier looms. **03**  
(b) Explain in brief the main features of projectile weaving. **04**  
(c) Highlight in detail the features of the State-of-the-art sizing machines. **07**
- Q.4** (a) State important areas of applications of rigid rapier looms. **03**  
(b) Compare tip transfer with loop transfer type of weft insertion used on rapier loom. **04**  
(c) Explain double rapier tip transfer type weft insertion system with the help of neat diagram. **07**
- OR**
- Q.4** (a) Compare rigid rapier with flexible rapier loom. **03**  
(b) Explain any one mechanism used for driving rigid rapier head with diagram. **04**  
(c) Why weft accumulators and weft measuring are an essential requirement in air jet weaving machine? **07**
- Q.5** (a) Discuss about Triaxial fabrics. **03**  
(b) Discuss merits and demerits of water-jet weaving machine. **04**  
(c) Write a short note on drying of fabric in water jet weaving machine, quality of water needed and water jet width. **07**
- OR**
- Q.5** (a) Highlight the features of recent generation sectional warper. **03**  
(b) Draw a loom-timing diagram of air jet loom. **04**  
(c) Name any five important parts of Air Jet looms for Weft insertion. **07**  
Explain the functioning of any of the three?

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