

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2017****Subject Code: 2172902****Date:02/11/2017****Subject Name: Modern Weaving Technolgy****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.

**MARKS**

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|------------|--|-----------|
| <b>Q.1</b> | (a) State different types of weft accumulators used in shuttleless looms.  | <b>03</b> |
|            | (b) Explain any two types of weft tensioners used on shuttleless looms with neat diagrams.   | <b>04</b> |
|            | (c) With the help of neat diagram, explain the torsion bar mechanism of Sulzer projectile loom in detail.  | <b>07</b> |
| <b>Q.2</b> | (a) State different types of weft supply packages used on shuttleless looms.   | <b>03</b> |
|            | (b) Explain the principle of working of continuous weft feeding devices.   | <b>04</b> |
|            | (c) With the help of neat diagram, explain the shedding mechanism of Sulzer projectile loom in detail.   | <b>07</b> |
|            | <b>OR</b>  |           |
|            | (c) With the help of neat diagram, explain the let-off mechanism of Sulzer projectile loom in detail.  | <b>07</b> |
| <b>Q.3</b> | (a) Compare rigid rapier with flexible rapier loom.  | <b>03</b> |
|            | (b) State and explain different ways of classifying rapier looms.  | <b>04</b> |
|            | (c) With the help of neat diagram, explain double rapier tip transfer type weft insertion system in detail.  | <b>07</b> |
|            | <b>OR</b>  |           |
| <b>Q.3</b> | (a) State the advantages of modular structure of M 8300 Multi-phase looms.   | <b>03</b> |
|            | (b) Explain picking mechanism of M8300 Multiphase loom with the help of neat diagrams.   | <b>04</b> |
|            | (c) With the help of neat diagrams, explain any one mechanism used for driving rigid rapier head in detail. Also, state some of the important areas of applications of rigid rapier looms. | <b>07</b> |
| <b>Q.4</b> | (a) Give principle of Fluid jet looms.   | <b>03</b> |
|            | (b) Highlight the features of recent generation Sectional Warper.  | <b>04</b> |
|            | (c) Discuss the factors that essentially determine whether a yarn is suitable for pneumatic insertion or not.  | <b>07</b> |
|            | <b>OR</b>  |           |
| <b>Q.4</b> | (a) Water & air jet are not competitor but complementary to each other. Justify.   | <b>03</b> |
|            | (b) Write in brief about Autotense FX.   | <b>04</b> |
|            | (c) Discuss the pre-requisite of water jet loom. Also discuss advantages & disadvantages of water jet loom.  | <b>07</b> |

- Q.5 (a) Enlist the uses of Triaxial fabrics. **03**  
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(b) Discuss the variables that influence the insertion time & **04**  
therefore the efficiency & performance of the Air jet  
weaving machine.  
(c) Highlight in detail the features of the State-of-the-art **07**  
sizing machines.

**OR**

- Q.5 (a) Enlist the factors on which the flying stability of the weft **03**  
inserted depends in a Water jet loom.  
(b) Discuss the importance of “short quick blast” of air from **04**  
nozzle.  
(c) With a neat diagram explain the operation of Weft supply **07**  
system on Water jet weaving machine.

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