**Roll No……..** **Total No. of Printed Pages: [1]**

**Total No. of Questions: [09]**

**B. Tech. (Textile Engg.) (Semester – 3rd)**

**KINEMATICS OF MACHINES**

**Subject Code: BTEXS1305**

**Paper ID: [18112614]**

**Time: 03 Hours** **Maximum Marks: 60**

**Instruction for candidates:**

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

**Section – A** **(2 marks each)**

Q1. Explain the following:

a) Kinematics
b) Curvilinear motion
c) Kinematic element
d) Compound gear train
e) Velocity ratio of epicyclic gear train
f) Epicyclic gear train in textile testing
g) Shoe brake
h) Band Brake
i) Power transmitted by a belt
j) Rope Drive

**Section – B** **(5 marks each)**

Q2. Write about relation between linear and angular quantities of motion.

Q3. Define Kinematic chain and explain types of kinematic chains.

Q4. Explain about gears in textile machines and their types.

Q5. Differentiate between band, block and internal expending brake.

Q6. What points you will keep in your mind while selecting of belt drive?

**Section – C** **(10 marks each)**

Q7. Give in detail about gear train and its classification.

Q8. Define brake. Explain classification of brakes. What material you will use for brake lining?

Q9. Explain the following in detail-

a) Types of belts
b) V-belt drive