

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE SEM-VIII Examination May 2012

Subject code: 182602

Subject Name: Belts, Hoses & Footwear Technology (Department Elective-II)

Date: 08/05/2012

Time: 10.30 am – 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 Answer the following. **14**

- (i) Define the term: (i) Band Radius (ii) Burst Pressure.
- (ii) Explain the Burst Pressure formula for Knitted Hose.
- (iii) Discuss the importance of Shoe Last for manufacturing of shoes.
- (iv) List the properties required for Shoes.
- (v) What do you mean by PP 400/4 & EP 700/3?
- (vi) List the functions of Breakers in Conveyor Belt.
- (vii) Give the difference between types of Scorching which may occur during manufacturing of V-Belt.

Q. 2 (a) Define the term 'Braid Angle'. Write the neutral value of it. Discuss the correct method of determining the braiding angle. **07**

(b) List the points which should be kept in mind for obtaining good services from Oil Suction & Discharge Hoses. **07**

OR

(b) Discuss in detail about the different principles used for fitting of Hose couplings in general. **07**

Q. 3 (a) Short Note on Carcass Reinforcement for manufacturing of Conveyor Belt. **07**

(b) List the Conveyor Belt properties that are related to applications. Write about any three in detail. **07**

OR

Q. 3 (a) Explain in detail about the conveyor Belt strength calculation. **07**

(b) Short note on Belt Joining. **07**

Q. 4 (a) Write the importance of V-Belt. Discuss the main points in cord processing for V-Belts. **07**

(b) Write in detail about Building & Skiving process for manufacturing of Wrapped V-Belt. **07**

OR

Q. 4 (a) Discuss about Mechanical properties of Cord for manufacturing of V-belt. **07**

- (b) Explain in detail about different types of Grinding stones used for V-ribbed belt making profiles. 07
- Q. 5 (a) Write the compositions, uses & properties of PBI woven fabric & Gore-Tex fabric laminate used as upper material for Shoes. 07
- (b) List the advantages of Direct Vulcanisation (D.V.) process used in footwear industries. Describe in detail about Solid Rubber Solid (DV) Footwear Process. 07
- OR**
- Q. 5 (a) List the operations required to build up Plim Solls. 07
- (b) Draw the labeled diagram of Shoes showing different parts and discuss about the manufacturing process of Canvas Shoes. 07
