

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VIII (NEW) - EXAMINATION – SUMMER 2018****Subject Code: 2182602/2182608****Date: 02/05/2018****Subject Name: Belts, hoses & Footwear Technology (Departmental Elective - III)****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** Answer the following

- (a) Draw the labeled diagram of Rubber Shoe. (03)
- (b) Write about the Belt Modulus & Specific Modulus for Conveyor Belt. (04)
- (c) Discuss the different principles which can be set down for the fitting of Hose Couplings in general. (07)

**Q.2** Answer the following.

- (a) Write the properties & uses of EVA Soles. (03)
- (b) Short Note on Upper Cutting by Water Jet cutting system. (04)
- (c) Discuss the general Compounding for Footwear. (07)

**OR**

- (c) Discuss in detail about Cellular Rubber -Soled (DV) Footwear. (07)

**Q.3** (a) Write the classifications of Hoses according to pressure ratings. (03)

- (b) Explain the correct method of determining Braiding Angle. (04)
- (c) What do you mean by Dross? Why it is not preferable for Hose Industry? How many ways it is occurred? Discuss the different methods to remove it. (07)

**OR****Q.3** (a) Define the term 'Bend Radius'. State its importance. Write the formula for determine bend length. (03)

- (b) Discuss the Test method for Oil Suction & Discharge Hose. (04)
- (c) Short Note on General Inspection & Testing of Hose. (07)

**Q.4** (a) Explain about Conveyor Belt properties like Troughability & Transition Distance according to the applications. (03)

- (b) Write about Steel Cord construction for Conveyor Belt. (04)
- (c) Write in detail about the different Polymers used for manufacturing of Conveyor Belt. (07)

**OR****Q.4** (a) Write the importance of Breakers for Conveyor Belt construction. (03)

- (b) Short Note on Spliced joint for Conveyor Belt. (04)
- (c) Discuss in detail about Compounding & Vulcanization of Conveyor Belt. (07)

- Q.5** (a) Write the importance of Yarn Twisting construction for manufacturing of V belt. Which are the different methods for Yarn twisting? Which one is widely used? Why? (03)
- (b) Short Note on 'Repair of Flat Belting'. (04)
- (c) Explain the Building & Skiving processes for Wrapped V-Belts. (07)

OR

- Q.5** (a) Discuss the importance of Polyester Yarn selection for Cord Processing for manufacturing of V belt. (03)
- (b) Discuss the Mechanical Properties for V-Belt. (04)
- (c) Write about Control Factors of Grinding Resistance for processing of V-Ribbed Belts. Also write about the types of Grinding Stones. (07)

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