

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE – SEMESTER–VIII • Remedial EXAMINATION – SUMMER • 2014**

**Subject Code: 182602****Date: 27-05-2014****Subject Name: Belts, Hoses and Footwear Technology****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) State the importance of calculating the burst pressure for manufacturing the hose. Write its formula for spiraled hose.
  - (ii) List the name of different basic processes used for manufacturing of braided hose.
  - (iii) Explain about Belt modulus and Specific modulus.
  - (iv) Write about Transition Distance.
  - (v) List the properties required for V-belt Cords. Give name of fibre and yarn used as cords for V-belt.
  - (vi) List the properties of Polybenzimidazole fibre used as a upper material for boots.
  - (vii) Give the difference between Water jet Cutting system and Laser beam Cutting System.
- Q.2** (a) Discuss the Composition, Uses and Properties of Cambrelle non-Woven fabric and Gore-Tex fabric laminate used as an upper material for Shoes. (07)
- (b) Answer the following.
- (i) Discuss in detail about the manufacturing of Canvas Shoes. (04)
  - (ii) Short note on 'Shoe Last.' (03)
- OR
- (b) Discuss in detail about Direct Vulcanisation (DV) process of making footwear. (07)
- Q.3** (a) "Flexibility and Bend Radius is important factors in Hose Design." Justify the statement. (05)
- (b) Discuss in detail about Conductive and Non-Conductive Hose. (06)
- (c) Explain the Identification code of three numbers with a letter for Hose. (03)
- OR
- Q.3** (a) Discuss in detail about manufacturing of molded hose by lead press curing method. (07)
- (b) Which points should be kept in mind for obtaining good service from Oil suction and discharge hose? (07)
- Q.4** (a) How you can increase the Heat resistance and Oil resistance of Conveyor belt? Discuss in detail. (07)
- (b) Explain in detail about Conveyor Belt Selection. (07)
- OR
- Q.4** (a) Short note on "Conveyor Belt Joining." (07)

- (b) Describe about Light belting and Steel cord construction of Conveyor Belt. (07)
- Q.5** (a) Discuss the function of each material in a Power transmission belt. (07)
- (b) Describe the mechanical properties of Cord for V-belt. (07)
- OR
- Q.5** (a) Discuss the Vulcanization process for Wrapped V-belt. (07)
- (b) Write in detail about Selection of Yarn and Yarn Twisting process for V-belt. (07)

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