

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.E SEM-VII Examination-Nov/Dec.-2011**

**Subject code: 172604**

**Date: 26/11/2011**

**Subject Name: Rubber Product Manufacturing**

**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**
1. Which points should be kept in mind during compound design for Slipper Sole?
  2. List the properties required for manufacturing of Hospital Sheeting. Justify it.
  3. Give the difference between Ebonite and semi-Ebonite rubber.
  4. Explain the three forms of conductors used for Cable manufacturing.
  5. Define terms: (i) vibration (ii) shock
  6. Write about principles of damping.
  7. Write the difference between Seals and Gaskets.
- Q.2**
- (a) Discuss in detail about the manufacturing process of Rubber band. **07**
  - (b) What do you mean by Cellular rubber? Give the difference between Micro Cellular and Macro Cellular rubber. **07**
- OR**
- (b) Explain the relationship between Mooney viscosity and Degree of expansion. **07**
- Q.3**
- (a) Write the applications of Ebonite rubber. **04**
  - (b) Write the properties, applications and formulations for Printing Blankets. **04**
  - (c) Discuss the manufacturing process for Hot water bottle. **06**
- OR**
- Q.3**
- (a) Describe the finishing process used in manufacturing of ebonite rods with diagram. **04**
  - (b) Explain in detail about solvent recovery and curing process for manufacturing of Printing Blanket. **04**
  - (c) Discuss the manufacturing process for rubber lining in tanks. **06**
- Q.4**
- (a) Why polyethylene is cross-linked as an insulation material for Cable? How? **07**
  - (b) Write short note on Melton cloth used for manufacturing of Tennis Ball. **07**
- OR**
- Q.4**
- (a) Explain in detail about continuous curing process used for manufacturing of Cable. **07**
  - (b) Discuss in detail about manufacturing of simple Play Ball. **07**

- |            |                                                                             |           |
|------------|-----------------------------------------------------------------------------|-----------|
| <b>Q.5</b> | <b>(a)</b> Discuss bonding method used for manufacturing of Rubber Rollers. | <b>04</b> |
|            | <b>(b)</b> Discuss the properties of Seal materials.                        | <b>05</b> |
|            | <b>(c)</b> Write the applications of Rubber in Defense.                     | <b>05</b> |

**OR**

- |            |                                                                                         |           |
|------------|-----------------------------------------------------------------------------------------|-----------|
| <b>Q.5</b> | <b>(a)</b> Discuss in detail about the compounding for manufacturing of Rubber Rollers. | <b>04</b> |
|            | <b>(b)</b> Discuss the selection of rubber for Oil-seals.                               | <b>05</b> |
|            | <b>(c)</b> Write the applications of rubber in Medical field.                           | <b>05</b> |

\*\*\*\*\*