

Seat No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV(NEW) – EXAMINATION – SUMMER 2019****Subject Code:2142603****Date:25/05/2019****Subject Name: Rubber engineering****Time:02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

MARKS

- Q.1** (a) Write down the limitations of transfer mix. **03**
(b) Explain the construction and working of Farrel continuous Mixer (FCM). **04**
(c) Discuss in detail about the various stages of mixing process. **07**
- Q.2** (a) Compare single gear mixing mill with double gear mixing mill. **03**
(b) Write down the advantages and disadvantages of internal mixer compared to two roll open mill. **04**
(c) Explain following parameters with respect to internal mixer: (i) Rotor Speed (ii) Rotor Geometry. **07**
- OR**
- (c) Write about the construction and working of Transfer Mix. **07**
- Q.3** (a) List any three factors affecting the output of extrusion process. **03**
(b) Define the following terms: (i) Friction ratio (ii) Flight (iii) Extrudate (iv) Extrusion. **04**
(c) Explain the differences between the ram extruder and screw extruder. **07**
- OR**
- Q.3** (a) Write down the major function of head for extruder machine. **03**
(b) Which different types of discharge door are used in Internal Mixer? Which one is preferable? **04**
(c) Explain the following features with respect to Extruder: (i) Hopper (ii) Screw. **07**
- Q.4** (a) Draw different roll configurations of four roll calendar. **03**
(b) Define the term skim-coating. Explain the procedure to carry out the skim-coating. **04**
(c) Discuss in detail about the cooling system provided to calendar roll for temperature control. **07**
- OR**
- Q.4** (a) Mention the compound related difficulties to achieve accuracy in calendaring. **03**
(b) Write about the device used to control the thickness of rubber sheet. **04**
(c) What do you mean by frictioning? Discuss frictioning operation with respect to calendar. **07**
- Q.5** (a) Define the term mould. Also give the general classification of mould. **03**
(b) Write down the main sources of potential danger, typical sources of accidents and methods of guarding for single daylight press and multi daylight press respectively. **04**
(c) Compare the Transfer Moulding process with Injection Moulding process. **07**

- Q.5**
- (a) Write a note on positive type Compression Mould. **03**
 - (b) Write down the importance of Mould Releasing Agent. Also give its examples. **04**
 - (c) Discuss in detail about the types of injection units used in Injection Moulding machine. **07**

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