

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2021

Subject Code:2172312

Date:04/08/2021

Subject Name:Additives and Compounding of Plastics

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.

MARKS

- Q.1** (a) Give Short note on Natural Fillers. **03**
(b) Write briefly on Engineering Plastics. **04**
(c) Defined the term Additives. Give complete classification of Additives. **07**
- Q.2** (a) Describe difference between LDPE, HDPE and LLDPE. **03**
(b) What are the Lubricants? Give its complete classification. **04**
(c) How Plasticizer works? Explain plasticization of PVC. **07**
- OR**
- (c) Write short notes on Anti-Static agents & Blowing agents. **07**
- Q.3** (a) Give types of Colorant with examples. **03**
(b) Write down about Processing Aids with examples. **04**
(c) What are Stabilizers? Classify and explain its function. **07**
- OR**
- Q.3** (a) What are Impact Modifiers? Give its examples. **03**
(b) Define Compounding and explain the objectives of Compounding. **04**
(c) What are flame-retardants? List the mechanism of functioning of flame-retardants. **07**
- Q.4** (a) Differentiate between Mixing and Compounding. **03**
(b) What is a Nucleating Agent? Give its examples. **04**
(c) Write down the compounding process of Plastics by Planetary Mixer. **07**
- OR**
- Q.4** (a) Explain types of Twin Screw Extruders. **03**
(b) Give details on the various steps of compounding of Plastics. **04**
(c) Explain the working of a High Speed Mixer used for compounding with the help of a neat diagram. **07**
- Q.5** (a) Which plastics were use in Packaging, Building, and Transport? **03**
(b) Describe Two-roll mill for plastic compounding with diagram. **04**
(c) Explain the Banbury Mixture with a neat diagram as compounding equipment. **07**
- OR**
- Q.5** (a) Enlist uses of Plastics in Electrical, Electronics and Telecommunications, **03**
(b) Describe working of Ribbon Blender used for the compounding of Plastics. **04**
(c) Write a short note on theory of mixing. **07**
