

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV(New) • EXAMINATION – WINTER 2016

Subject Code:2142301

Date:18/11/2016

Subject Name:Basic Plastic Processing and Thermal 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 Short Questions

14

- 1 List any two methods for processing of thermoset plastics.
- 2 Define conduction
- 3 State the importance of preheating in compression moulding.
- 4 Define transfer molding.
- 5 List any two products made by rotational molding process.
- 6 What is plastic processing.
- 7 State any two uses of thermoforming process.
- 8 What is plastic memory?
- 9 PET bottles are manufactured by _____ process.
- 10 List any two molding defects of compression molding.
- 11 Wastage is less in injection blow molding than extrusion blow molding. (True or False)
- 12 What do you mean by breathing in compression molding?
- 13 What is a heat exchanger?
- 14 What is a parison in blow molding process?

- Q.2**
- (a) What is bulk factor and state its importance. **03**
 - (b) List the steps in compression molding. **04**
 - (c) Differentiate between injection blow molding and extrusion blow molding. **07**

OR

- (c) Explain the extrusion blow molding process. **07**
- Q.3**
- (a) What are performs? How are they helpful in compression molding? **03**
 - (b) What is breathing and why is it important in compression molding process? **04**
 - (c) Describe injection blow molding process with a neat sketch. **07**

OR

- Q.3**
- (a) Compare blow molding process with rotational molding. **03**
 - (b) Explain the properties of materials required for thermoforming process. **04**
 - (c) Write a short note on parison programming. **07**

- Q.4**
- (a) What is pinch- off in blow molding. **03**
 - (b) Explain the pressure forming process. **04**
 - (c) With a neat sketch explain pot type transfer molding process. **07**

OR

- Q.4** (a) List any three defects occurring in blow molding and give its causes and remedies. **03**
- (b) List the advantages and disadvantages of transfer molding process. **04**
- (c) Explain the plunger type transfer molding process with a neat sketch. **07**
- Q.5** (a) List three points of difference between thermoplastics and thermosets. **03**
- (b) Explain the rotational molding process with a neat sketch **04**
- (c) List the types of molds in compression molding and explain any one. **07**

OR

- Q.5** (a) List the advantages and disadvantages of rotational molding process. **03**
- (b) List the types of heat exchanger and explain any one. **04**
- (c) Write a short note on plug assist vacuum forming technique. **07**
