

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VIII (New) EXAMINATION – WINTER 2019****Subject Code: 2182308****Date: 21/11/2019****Subject Name: Plastic Product Design****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) Define Bosses in plastic product design.	03
	(b) What do you mean by undercuts? Why it is important?	04
	(c) Explain the factors to be considered while designing the product.	07
Q.2	(a) Design suggestion for molded lettering.	03
	(b) How surface treatments affect the product design?	04
	(c) Describe Preliminary design consideration for plastic product.	07
	OR	
	(c) Explain the product design process for designing an overhead water storage tank.	07
Q.3	(a) What is the importance of ribs and bosses?	03
	(b) List out various plastic processing methods. Write its advantages and disadvantages.	04
	(c) What is the importance of ribs and bosses? What are the design considerations to be taken while designing ribs and bosses?	07
	OR	
Q.3	(a) Explain in brief blow molding process.	03
	(b) Explain the importance of designing radii and fillets in a product.	04
	(c) Give comparison between compression molding, transfer molding, and rotational molding.	07
Q.4	(a) List out plastic materials utilized for medical applications.	03
	(b) Give the comparison of various plastic materials.	04
	(c) Explain short term and long term properties in relation to plastic materials.	07
	OR	
Q.4	(a) Explain the selection of material for designing a contact lens.	03
	(b) List out Different plastic materials used for making a product.	04
	(c) Explain the process to manufacture the pipes which are utilized for water supply.	07
Q.5	(a) Why plastic products fails as compare to other materials give suitable reasons?	03
	(b) Which is the process suitable for producing pump impellers? Justify.	04
	(c) Explain the process steps for designing any plastic based transparent and optical products.	07
	OR	
Q.5	(a) What is the importance of decorating a part in part design?	03
	(b) Explain the selection of material for designing a contact lens.	04
	(c) Explain the product design process for designing a wrist watch gear.	07
