

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2017****Subject Code: 2163407****Date: 03/05/2017****Subject Name: Plastic Manufacturing Technology****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.

		<b>MARKS</b>
<b>Q.1</b>	<b>Short Questions</b>	<b>14</b>
	1 Small pharmaceuticals bottles with accurate neck finish is produced by----- process a. Extrusion blow molding b. Injection blow molding c. Injection stretch blow molding d. All of these	
	2 Define Back Pressure	
	3 Define Plasticizing Capacity	
	4 Reverse taper nozzle in injection molding is used for ----- material	
	5 What is nozzle drooling?	
	6 Why PTFE cannot be Injection Molded? (a) Very costly (b) High chemical resistance (c) High Viscosity (d) All the above	
	7 Suck back prevents drooling. Say True or False.	
	8 Crosshead die is used for production of insulated wires and cables. Say True or False	
	9 Injection Stretch Blow Moulding is suitable for processing of PET. Say True or False	
	10 Thermoset materials are not blow moulded. Say True or False	
	11 Fish eye defect is related to extrusion molding process. Say True or False	
	12 Pinch off is must in injection blow molding process. Say True or False	
	13 Write Functions of Breaker Plate	
	14 The function of mandrel is _____. a) to shape the mold b) to shape the article c) to shape the plastic material d) all of the above	
<b>Q.2</b>	(a) Define: Plastics Processing Techniques. Which are the selection criteria for choosing a particular processing method?	<b>03</b>
	(b) Explain about thermoset injection moulding process, parts and with a neat sketch	<b>04</b>
	(c) Explain Extrusion Blow Molding Process with neat sketch	<b>07</b>

	<b>OR</b>	
	(c) Compare :Thermoplastics Injection Molding with Thermoset Injection Molding	<b>07</b>
<b>Q.3</b>	(a) What is L/D ratio and compression ratio?	<b>03</b>
	(b) Explain the types of mold used in compression molding with diagram	<b>04</b>
	(c) What is parison programming? Explain about it in detail	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Draw generalized Screw used for Injection molding. Explain any three terminologies related to it.	<b>03</b>
	(b) Explain drape forming and plug assisted forming with suitable sketches	<b>04</b>
	(c) Explain the construction and working of injection blow moulding along with its applications in a neat sketch	<b>07</b>
<b>Q.4</b>	(a) Explain Process Steps of Compression Molding with suitable sketch	<b>03</b>
	(b) Explain the cavity pressure profile in injection moulding	<b>04</b>
	(c) Explain Plunger type Transfer Molding with neat sketch	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) Explain about Tie Layer	<b>03</b>
	(b) Discuss Extrusion blow moulding v/s. injection blow moulding in detail	<b>04</b>
	(c) What is stretch Blow Molding Process? Why it is used? Explain with advantages & disadvantages	<b>07</b>
<b>Q.5</b>	(a) Discuss Matched Die forming	<b>03</b>
	(b) Discuss the plug assist thermoforming process with applications	<b>04</b>
	(c) Write about twin screw extruders in detail and give its merits and demerits?	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Explain faults, causes and remedies of compression moulded article	<b>03</b>
	(b) Explain the manufacturing process of RPVC pipe with line diagram	<b>04</b>
	(c) Explain vented barrel extruder operation with a neat sketch along with its applications	<b>07</b>

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