

Seat No.: _____

Enrolment No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER – VII • EXAMINATION – WINTER - 2018

Subject Code: 3372304

Date: 04 - 12-2018

Subject Name: Designing of plastic product

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.**
- 4. Use of programmable & Communication aids are strictly prohibited.**
- 5. Use of only simple calculator is permitted in Mathematics.**
- 6. English version is authentic.**

Q.1	Answer any seven out of ten.	14
	1. Define product design & undercut.	
	2. State difference between "Design and Drawing".	
	3. Draw figure showing draft angle.	
	4. List any two purposes of ribs and bosses.	
	5. Name some plastic material used for medical application.	
	6. Name any two transparent plastic materials.	
	7. Give any two examples of products where plastic materials replaced metals.	
	8. Write best suitable process for raincoat and water tank.	
	9. List out two long term and short term properties of plastic materials.	
	10. List out factors to be consider for process selection.	
Q.2	(a) Prepare ideal check list for plastic product design.	03
	OR	
	(a) Draw figure showing rib and bosses.	03
	(b) Explain any two design consideration of wall thickness in product design	04
	OR	
	(b) Explain any two type of undercut with sketch.	04
	(c) Write short note on inserts	07
	OR	
	(c) Write short note on threads.	07
Q.3	(a) How functional requirements of product affect material selection?	03
	OR	
	(a) Give suitable materials for electrical switch, spectacle glass and crockery.	03
	(b) Explain steps involved in material selection in product design.	04
	OR	
	(b) Draw figure showing various types of holes with sketch.	04
	(c) Write case study on plastic gear.	07
	OR	
	(c) List any seven plastic materials with its specialized properties.	07
Q.4	(a) State the effect of material type on process selection	03
	OR	
	(a) State the effect of lot size on process selection	03
	(b) Compare rotational molding and blow molding process with respect to	04

1/2

1/2

product shape, size, quality, quantity .

OR

- (b) Write any four features of injection molding process.
 - (c) Write case study on any one electric product design.
- Q.5**
- (a) Write material selection for disposable cup.
 - (b) Explain radii and fillet in short.
 - (c) List and explain steps involved in product design.

04
07
03
04
07
