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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER–VII (NEW) EXAMINATION – WINTER 2018 Subject Code: 2173409 Date: 03/12/2018			
Subi	iect `	Name: Plastic mold & Die design	
Time: 10:30 AM TO 01:00 PM Total Marks: 70			
	2.	Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	
			MARKS
0.1	(a)	What is the role of CNC Machines in mould fabrication	03
	(b)	What are the principles of mould design?	04
	()		07
	(c)	what are the different types of materials used for different parts of the mould?	07
Q.2	(a)	Why heat treatment of mould is necessary? Name 3- Heat treatment techniques	03
	(b)	Explain compression molding cycle with neat sketch	04
	(c)	Explain the working principle of CNC-Lathe machine. How many	07
		working axis does a lathe machine posses.	
	(c)	Explain three plate mould with neat sketch	07
0.3	(a)	How mould heating can be achieved?	03
C.	(b)	Explain sub-marine gate.	04
	(c)	Explain pin-ejection system with neat sketch OR	07
Q.3	(a)	Explain a. Ejector plate b. Retainer Plate c. Push back pin	03
	<b>(b)</b>	Differentiate injection molding Vs Compression molding	04
	(c)	Explain Dog-leg cam actuation system with neat sketch.	07
Q.4	<b>(a</b> )	Explain Mould cooling?	03
	<b>(b)</b>	What are the requirements of Runner?	04
	(c)	Explain different types of runners and their efficiencies with neat sketches.	07
		OR	
Q.4	(a)	Explain pin-point & Tab gate with neat sketch	03
	<b>(b)</b>	Explain blade-ejection system with neat sketch.	04
	(c)	What is plastic extrusion? Explain the extrusion die construction	07
05	$(\cdot)$	principles.	0.2
Q.5	(a) (b)	Explain integer & Insert type of moulds.	03
	(D)	Explain supper & valve ejection system with heat sketches.	04
	(c)	Explain positive & Semi positive type of compression moulds with neat sketches	07
		OR	
Q.5	(a)	Name the process parameters of transfer mould.	03
	<b>(b)</b>	What is gate? Why gate positioning is important?	04
	( <b>c</b> )	Explain pot & plunger type of transfer mould with neat sketch.	07

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