

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE – SEMESTER IV (NEW SYLLABUS) EXAMINATION- SUMMAR 2018**

**Subject Code: 2143407****Date: 17-05-2018****Subject Name: Mould Manufacturing Technology****Time: 10:30 to 01:30****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

<b>Q.1*</b>	(a)	Write short note on CMM	<b>03</b>
	(b)	Describe briefly the mould allowance	<b>04</b>
	(c)	What are the different non-ferrous metallic materials used in Mould making? What are the applications of these materials in mould making	<b>07</b>
<b>Q.2</b>	(a)	Briefly explain heat treatment process	<b>03</b>
	(b)	What are the different properties of steels required for mould making	<b>04</b>
	(c)	Explain the electric discharge machining (EDM) process. What are the applications of EDM in mould making?	<b>07</b>
<b>OR</b>			
<b>Q.3</b>	(c)	Describe the chemical etching process	<b>07</b>
	(a)	Write the advantage and disadvantages of CNC milling	<b>03</b>
	(b)	Write procedure Mould cost estimating	<b>04</b>
	(c)	What is rapid prototyping? Explain about any one rapid prototyping technique.	<b>07</b>
<b>OR</b>			
<b>Q.3</b>	(a)	How to measure the dimensions by using slip gauges? Explain.	<b>03</b>
	(b)	Explain the height gauge	<b>04</b>
	(c)	Explain the steps of Mould assembly	<b>07</b>
<b>Q.4</b>	(a)	Explain vacuum hardening for surface treatment .	<b>03</b>
	(b)	Explain the nickel plating	<b>04</b>
	(c)	Explain the Mould maintenance	<b>07</b>
<b>OR</b>			
<b>Q.4</b>	(a)	Briefly explain the CNC lathe	<b>03</b>
	(b)	Explain vacuum hardening process	<b>04</b>
	(c)	Write a short note on Vernier caliper and Micrometer.	<b>07</b>
<b>Q.5</b>	(a)	Write a short note on Life of Moulds.	<b>03</b>
	(b)	Explain the procedure for estimating mould cost	<b>04</b>
	(c)	Write a short note on Dial gauges. Mention the applications.	<b>07</b>
<b>OR</b>			
<b>Q.5</b>	(a)	Definition 1). Hydro Copying 2) CNC 3) Wear	<b>03</b>
	(b)	Write a short note on Nitriding & Chemical Etching.	<b>04</b>
	(c)	What is the importance of scheduling mould maintenance? Explain	<b>07</b>

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