

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-IV(New) EXAMINATION – SUMMER 2016**

**Subject Code:2143407**

**Date:26/05/2016**

**Subject Name:Mould 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>Q.1</b>	<b>Short Question</b>	<b>Marks</b>
		<b>14</b>
	<ol style="list-style-type: none"><li>1. Carbon steels are identified according to their carbon content percentage. Low-carbon steel contains less than _____% carbon.</li><li>2. The lathe operates on the principle of _____</li><li>3. What does CNC signify _____</li><li>4. The rate at which the cutting too and work piece move in relation to one another is called _____</li><li>5. Examples of Non-ferrous metals _____</li><li>6. Example of Zink alloy _____</li><li>7. Example of aluminum alloy _____</li><li>8. Least count of Vernier caliper _____</li><li>9. Least count of Micrometer _____</li><li>10. _____ can be checked using Dial gauge.</li><li>11. Expand CMM _____</li><li>12. Mould Cost includes mainly _____</li><li>13. _____ process is used to protect mould steel from corrosion.</li><li>14. _____ material can be used for manufacturing core of a mould.</li></ol>	
<b>Q.2</b>	<ol style="list-style-type: none"><li>(a) What are the properties of steels used for mould making?</li><li>(b) Write a short note on life of a mould.</li><li>(c) What are the applications of Zink Alloys in mould materials?</li></ol>	<b>03</b> <b>04</b> <b>07</b>
	<b>OR</b>	
	<ol style="list-style-type: none"><li>(c) What are the advantages and applications of epoxies for mould construction?</li></ol>	<b>07</b>
<b>Q.3</b>	<ol style="list-style-type: none"><li>(a) What is the importance of surface treatment of mould materials?</li><li>(b) What are the advantages of vacuum hardening process?</li><li>(c) What are the applications of chemical etching process in mould manufacturing?</li></ol>	<b>03</b> <b>04</b> <b>07</b>
	<b>OR</b>	
<b>Q.3</b>	<ol style="list-style-type: none"><li>(a) What are the advantages of Hard chrome plating?</li><li>(b) Write a short note on nickel plating process.</li><li>(c) What are the different mould polishing techniques to be followed to achieve the required finish? Explain.</li></ol>	<b>03</b> <b>04</b> <b>07</b>
<b>Q.4</b>	<ol style="list-style-type: none"><li>(a) What are the different measuring instruments used in Tool Room?</li><li>(b) What are the dimensions that can be measured by using Height Gauge &amp; Slip gauge?</li><li>(c) Build the following dimensions using M-87 Slip Gauge set. (i) 49.3825 mm (ii) 87.3215 mm</li></ol>	<b>03</b> <b>04</b> <b>07</b>
	<b>OR</b>	
<b>Q.4</b>	<ol style="list-style-type: none"><li>(a) What are the applications of Pantograph engraving machine?</li><li>(b) What are the advantages of CNC Machines over Conventional Machines?</li><li>(c) Explain about the Working of CNC Milling machine.</li></ol>	<b>03</b> <b>04</b> <b>07</b>

- Q.5** (a) Why dial gauges are used in manufacturing of moulds? **03**  
(b) What are the instruments used for measuring tapers & angles? **04**  
(c) What are the different kinds of tools used in mould assembly? Mention it's function. **07**

**OR**

- Q.5** (a) Why maintenance of moulds to be done? What are the advantages? **03**  
(b) What are the different parts of basic moulds? **04**  
(c) What is the procedure for estimating mould cost? What precautions to be followed while estimating mould cost? **07**

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