

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV (NEW) EXAMINATION – WINTER 2018

Subject Code:2143407

Date:22/11/2018

Subject Name:Mould Manufacturing Technology

Time: 02:30 PM TO 05:00 PM

Total Marks: 70

Instructions:

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

		MARKS
Q.1	(a) What is wall thickness of a plastic product? Why it is important.	03
	(b) Explain the nomenclature of standard outside micrometer with neat sketch.	04
	(c) Explain different types of materials used for mould construction.	07
Q.2	(a) What is CMM and its applications	03
	(b) Write a short note on beryllium copper alloy	04
	(c) Explain carburizing technique	07
	OR	
	(c) Explain cryogenic treatment process.	07
Q.3	(a) Name different types of non-metallic materials used for mould construction	03
	(b) What is mould polishing? What are the factors which affects the polish ability of mould?	04
	(c) Explain the procedure for preparing the quotation/costing for a mould.	07
	OR	
Q.3	(a) What are the applications of pantograph in mould construction?	03
	(b) Explain the precautions to be taken while performing mould assembly	04
	(c) Explain the working principle of Wire-EDM with neat sketch	07
Q.4	(a) What is a. Cutting velocity b. Feed rate c. Depth of cut 4.R.P.M	03
	(b) Write a short note on chrome plating.	04
	(c) Explain the working principle of CNC-Lathe machine? How many axis does CNC lathe posses	07
	OR	
Q.4	(a) Name measuring techniques used or measuring angles.	03
	(b) What is chemical etching and what is its role in mould manufacturing?	04
	(c) Explain the working principle of Dial-gauge and Slip gauges with neat diagrams.	07
Q.5	(a) What is the role of CNC Machines in mould making?	03
	(b) Explain vacuum hardening heat treatment.	04
	(c) Explain the working principle of EDM-machine with neat sketch.	07
	OR	
Q.5	(a) Write a short note on mould maintenance	03
	(b) Write a short note on ZINC-based alloys.	04
	(c) What is rapid prototyping? Explain stereo lithography technique	07
