Enrolment No.____

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-IV (New) EXAMINATION – WINTER 2015

Subject Code:2143407 Date:19/12/2015 Subject Name: Mould Manufacturing Technology Time: 2:30pm to 5:00pm **Total Marks: 70** Instructions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 0.1 (a) What are the different steel materials commonly used in Mould 07 manufacturing? Explain the applications of the materials? **(b)** What are the applications of Berylium copper material in mould 07 construction? Explain the advantages & disadvantages of using Berylium copper material. 0.2 (a) Explain about the steps involved in vacuum hardening process. 07 Describe the nickel plating process. What are the advantages & **(b)** 07 applications of Nickel Plating? OR (b) Write a short note on Nitriding & Chemical Etching. 07 (a) Explain the working of pantograph engraving machine with the help of a **Q.3** 07 suitable sketch. (b) What are the advantages & applications of CNC Machines? 07 OR Q.3 What are the differences between case hardening and through hardening? 07 (a) **(b)** What are the different aluminum alloys used in mould manufacturing? 07 Explain. What are the different types of micrometers? Explain about any two. 07 **Q.4** (a) (b) How tapers can be measured? Explain about any one method. 07 OR What is CMM? How CMM used for measuring? Explain. 07 **Q.4** (a) What are the different types of Dial gauges? Explain about anyone with a 07 **(b)** sketch. What are the different components of Two plate Injection mould? Explain Q.5 07 (a) function of each part. (b) How to repair moulds? Explain how to protect moulds against corrosion. 07 OR (a) What are the differences between CNC machines and conventional Q.5 07 machines? (b) Write a short note on (i) Rapid Prototyping & (ii) Life of Moulds. 07
