

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV(NEW) – EXAMINATION – SUMMER 2019

Subject Code:2143407

Date:09/05/2019

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

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|------------|-----|---|-----------|
| Q.1 | (a) | Explain how mould cost is estimated and quoted. | 03 |
| | (b) | Explain the working principle of Vernier Caliper with neat sketch. | 04 |
| | (c) | Name different non-metallic materials used for mould construction and what are its advantages & Disadvantages | 07 |
| Q.2 | (a) | What is the necessary of hard chrome plating | 03 |
| | (b) | Explain the functioning of Dial-Gauge with neat sketch. | 04 |
| | (c) | Explain the working principle of WIRE-EDM with neat sketch. | 07 |
| OR | | | |
| | (c) | Explain beryllium-copper alloy? Why it is important in mould manufacturing? State its advantages and disadvantages. | 07 |
| Q.3 | (a) | Name different parts of the mould. | 03 |
| | (b) | Explain the working principle of micrometer with neat sketch. | 04 |
| | (c) | What is Rapid Prototyping? Explain Stereolithography technique with neat sketch. | 07 |
| OR | | | |
| Q.3 | (a) | What is Chemical etching technique? | 03 |
| | (b) | Explain how slip gauges are classified based on their accuracy | 04 |
| | (c) | What is heat treatment process? Explain nitriding heat treatment procedure. | 07 |
| Q.4 | (a) | What is pantograph? | 03 |
| | (b) | Write a short note on mould maintenance. | 04 |
| | (c) | Explain different types of steels used for mould manufacturing. | 07 |
| OR | | | |
| Q.4 | (a) | How mould life is calculated? | 03 |
| | (b) | Explain vacuum hardening heat treatment process. | 04 |
| | (c) | Why mould maintenance is important? Explain how it can be achieved by proper scheduling? | 07 |
| Q.5 | (a) | State the difference between CNC-Turning and CNC-Milling | 03 |
| | (b) | Write a short note on mould assembly. | 04 |
| | (c) | Explain how mould cavity thickness can be calculated and why it is important | 07 |
| OR | | | |
| Q.5 | (a) | How mould is protected against wear and Corrosion. | 03 |
| | (b) | Explain different types of Mould polishing techniques. | 04 |
| | (c) | What is CMM? Name different types of CMM? What are the functions of CMM? | 07 |
