

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII • EXAMINATION – WINTER 2013

Subject Code: 173404

Date: 05-12-2013

Subject Name: Design for Manufacture, Assembly and Environment

Time: 10:30 TO 01:00

Total Marks: 70

Instructions:

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

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|------------|---|-----------|
| Q.1 | (a) Explain the general design principles for manufacturability. | 07 |
| | (b) What is design for machinability? Explain. | 07 |
| Q.2 | (a) How tolerances influencing manufacturability? Explain. | 07 |
| | (b) Explain simplification by separation and amalgamation. | 07 |
| | OR | |
| | (b) Write about various factors influencing design. | 07 |
| Q.3 | (a) Explain design for assembly. | 07 |
| | (b) Write about design features to facilitate machining. | 07 |
| | OR | |
| Q.3 | (a) Explain design for economy. | 07 |
| | (b) Explain design for clampability and accessibility. | 07 |
| Q.4 | (a) Explain the computer applications for DFMA. | 07 |
| | (b) What are the design considerations for plastic parts? | 07 |
| | OR | |
| Q.4 | (a) Explain the design for assembly for plastic components. | 07 |
| | (b) Explain the design considerations for casting process. | 07 |
| Q.5 | (a) What is design for environment? Explain its significance. | 07 |
| | (b) Write about design for energy efficiency. | 07 |
| | OR | |
| Q.5 | (a) Explain lifecycle assessment with suitable example. | 07 |
| | (b) Write about design for recyclability. | 07 |
