

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER - VII EXAMINATION – WINTER 2014

Subject Code: 173404**Date: 02/12/2014****Subject Name: Design for Manufacture, Assembly and Environment****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.

- Q.1** (a) Explain the influence of geometric tolerances in DFMA. **07**
(b) Write about selection of product material. **07**
- Q.2** (a) Explain the basic design rules of form design of forging. **07**
(b) Discuss in detail about mechanism selection and evaluation method adopted in design. **07**
- OR**
- (b) How to explore the design alternatives? Explain. **07**
- Q.3** (a) Explain the factors influencing form design of welded members. **07**
(b) Discuss the design rules for drilled holes and turned parts. **07**
- OR**
- Q.3** (a) Illustrate with suitable examples and sketches to obviate cores. **07**
(b) Explain design for machinability and design for economy. **07**
- Q.4** (a) Explain the design rules for parts consolidation. **07**
(b) Write about the identification of uneconomical design. Explain how it can be modified. **07**
- OR**
- Q.4** (a) Discuss the computer applications for DFMA. **07**
(b) Explain about the required designer qualities. **07**
- Q.5** (a) Write about various stages of LCA. **07**
(b) Explain the design for minimum material usage. **07**
- OR**
- Q.5** (a) Discuss about the design methods for reducing environmental impact. **07**
(b) Explain design for disassembly and design for remanufacture. **07**
