

GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER –I-(New) EXAMINATION – SUMMER 2019

Subject Code: 3710810

Date: 10/05/2019

Subject Name: Design for Manufacturing and Assembly

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.

- Q.1** (a) What is Geometrical Tolerancing? Draw the Symbols used for Form tolerance & Orientation tolerance. **07**
- (b) Discuss the General Design Principles for Manufacturability. **07**
- Q.2** (a) Explain the basic design rules of form design of forging. **07**
- (b) Illustrate the design features for machining especially for drilling and milling operations. **07**
- OR**
- (b) Explain the application of DFMA in different industries. **07**
- Q.3** (a) Explain the Design for machinability and clampability. **07**
- (b) Design Recommendation For Parts Generated on Milling Machine. **07**
- OR**
- Q.3** (a) Explain the Dowels and Dowelling procedure. **07**
- (b) Explain about all the rules to be followed in designing a casting. **07**
- Q.4** (a) Discuss the DFA Guidelines. **07**
- (b) Explain Concurrent Engineering. write the advantage and disadvantage of concurrent engineering. **07**
- OR**
- Q.4** (a) Explain design rules for part separation. **07**
- (b) Explain the General DFMA criteria and their manufacturing characteristics. **07**
- Q.5** (a) Discuss the global issues influencing design for environment. **07**
- (b) Explain the six sigma principles. **07**
- OR**
- Q.5** (a) What is Design for Environment? Explain design method for reducing environmental impact. **07**
- (b) Discuss the Design considerations for minimum material usage for Remanufacture. **07**
