## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER-VIII (NEW) - EXAMINATION - SUMMER 2017

Subject Code: 2181921 Date: 09/05/2017

**Subject Name: Design for Manufacturing and Assembly** 

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.

Explain the Stages of Product Life Cycle.

0.1 Discuss the General Design Principles for Manufacturability. 07 What is Geometrical Tolerancing? Draw the Symbols used for Form tolerance & **07 (b)** Orientation tolerance. With Suitable Sketch, Discuss the basic Rules for Form Design of Forging. 0.2 (a) 07 Design Recommendation For Parts Generated on Milling Machine. **(b)** 07 **(b)** Discuss Design for Accessibility and Design for Recyclability 07 What is Group Technology? State its Advantages and limitations. 07 Q.3 (a) Discuss the DFA Guidelines. **(b) 07** OR Explain about all the rules to be followed in designing a casting. **Q.3** 07 (a) Factors to be considered for the Sound welding joint. 07 **Q.4** (a) Discuss the features that Facilitate machining with suitable examples. 07 Explain following. 07 **(b)** 1. Datum Feature & Datum Target. 2. Design for Clamp ability. OR Factors to be considered for Energy Efficient Design of product. 0.4 07 (a) **(b)** Explain following. 07 1. Design for Economy. 2. Tolerance Stack. Q.5 What is Design for Environment? Discuss guidelines for DFE. 07 (a) Illustrate with suitable example and sketches, to Obviate cores. **(b) 07** OR (a) Discuss the Design considerations for minimum material usage for Q.5 07 Remanufacture.

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