

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI
Department of Mechanical Engineering
First Semester (2016- 17) Mid Semester Examination (Regular)

Course Code: DE G531

Date: 04/10/2016

Course Title: **Product Design**

MM: 40 (20%) (Closed Book)

Answer all questions (Marks are mentioned for each question).

1. Answer the following questions briefly
 - a. Define the terms: "Novel", "Creative" and "Innovative" and give examples. [3]
 - b. List and explain the guidelines for effective interaction with customers? [3]
 - c. What is product architecture development? Explain types of modularity with examples? [1+2]
 - d. Differentiate between "Function" and "Constraint", Give examples? [2]
 - e. Explain different measurement scales with examples. [2]
 - f. What characteristics of problem solver are improved by creativity methods? Explain. [2]
2. List and explain the effective characteristics of a "team" and "team member". [2.5+2.5]
3. Identify 10 problems in BITS, develop opportunities and abstract definitions for those. [5]
4. Authorities of BITS are planning to construct a new auditorium. You have been assigned the task of developing the specifications. Justify your answer. (10 specifications). [5]
5. There are lot of difficulties in parking vehicles in open space. You have been selected to work on this problem. Approach the problem systematically and solve using the techniques learned in the course. Note: Minimum 10 requirements, 5 concepts. State the methods used. [10]