

Roll No.

23010

**M. Tech. 2nd Semester (M. E.)
(Manufacturing & Automation)
Examination – May, 2016**

MECHANICAL DESIGN-I

Paper : 906

Time : Three Hours] [Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any five questions. All questions carry equal marks.

1. What are the requirements of a good design and explain the basic concept used for making a good design. 20
2. What is benefits implementation of Quality Function Development in the design of a component ? 20

3. Describe the different material characteristics on the basis of mechanical, thermal and electrical. 20
 4. Explain the design criteria used for manufacturing of bearing from manufacturer's catalogue. 20
 5. What do you understand by casting processes and explain different types of casting process in detail with neat sketch. 20
 6. Explain heat treatment process in detail with neat sketch. 20
 7. What are the design consideration for manufacturing of automobile body ? 20
 8. Write short notes on : 20
 - (a) Difference between hot and cold working
 - (b) Welding defects
 - (c) Metal fastening and clinching
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