

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)**

**CLASS: M.Tech CADD  
BRANCH: MECHANICAL**

**SEMESTER : II  
SESSION : SP/22**

**SUBJECT: ME512 REVERSE ENGINEERING AND RAPID PROTOTYPING**

**TIME: 2 HOURS**

**FULL MARKS: 50**

**INSTRUCTIONS:**

- 1. The question paper contains 5 questions each of 10 marks and total 50 marks.**
  - 2. Candidates have to attempt all 5 questions maximum of 50 marks.**
  - 3. The missing data, if any, may be assumed suitably.**
  - 4. Before attempting the question paper, be sure that you have got the correct question paper.**
  - 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.**
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- Q1. (a) What is Reverse Engineering? Explain its basic phases and importance. (5)
- Q1 (b) How will you interpret Reverse Engineering to  
(i) Value Engineering (ii) Legal Infringement and Theft. Tell with example. (5)
- Q2. (a) What do you understand by Candidate Pre-screening? Enumerate the basic requirements for evaluating a candidate. (5)
- Q2 (b) Write short notes on (5)  
(i) Return on Investment  
(ii) Project Prioritization
- Q3 (a) Explain Contact type and Non classifying Contact type of Reverse Engineering hardware systems. How are they classified. (5)
- Q3 (b) Describe the fundamentals of Reverse Engineering operation. What do you understand by Data Registration and Data Optimization? (5)
- Q4 (a) What is Rapid Prototyping? What is the basic necessity of Rapid prototyping? What are the different ways of it? (5)
- Q4 (b) Explain any one process of Rapid prototyping with its application and limitation (5)
- Q5 (a) How is Reverse Engineering accepted as challenge in medical and automotive sectors. Show with proper judgement. (5)
- Q5 (b) Write short notes on (i) Rapid Tooling (ii) Subtractive manufacturing (iii) Forward engineering (5)