

N.B 1) Solve any four questions.

2) Assume suitable **data** if **necessary**.

3) **Figures** to the **right** indicate **full** marks.

- Q.1 a How can the concept selection methods be used to benchmark or evaluate existing products? Perform such an evaluation for five automobiles you might consider purchasing. 10
- b What is Anthropometry? Discuss with suitable illustration. 10
- Q.2 a How products are classified? What means product specification? 10
- b Explain role of concurrent engineering in product development process. 10
- Q.3 a Explain elements of manufacturing cost of product. 10
- b Explain Psychological & Physiological considerations in ergonomics and aesthetics in product design. 10
- Q.4 a Explain design of experiment and robust design. 10
- b Explain morphology of design. 10
- Q.5 a Explain the steps involved in Design For Manufacturing Process with illustration 10
- b Discuss concept, types, and use of rapid prototyping in product development process 10
- Q.6 Write short notes 20
- a Intellectual property
 - b Value engineering.
 - c Product architecture
 - d Design for Maintainability
