

[Time: 3 Hours]

[Total Marks:80]

Please check whether you have got the right question paper.

N.B: 1. Question No.1 is compulsory.

2. Attempt any three out of remaining five questions

- Q.1 Write short notes on the following.
- a Brain storming 05
 - b Ergonomics 05
 - c Concept testing 05
 - d Modern product development process 05
- Q.2
- a Explain the significance of product life cycle. 10
 - b Explain the steps in concept generation 10
- Q.3
- a With the help of neat sketch explain any one rapid prototyping technique. 10
 - b Explain the steps in quality function deployment 10
- Q.4
- a Explain value engineering and value analysis. 10
 - b Describe the role of product costing in product design and development. 10
- Q.5
- a Explain Failure Mode Effect Analysis (FMEA) technique 10
 - b Explain psychological and physiological considerations in automotive product design. 10
- Q.6
- a Explain the methods of design for manufacturing and assembly with suitable examples. 10
 - b Explain the steps in establishing product architecture 10