

Time: 3 Hours

Max. Marks: 80

- Note: 1. Assume suitable data if necessary
2. Figures to the right indicate full marks
3. Question No. 1 is compulsory
4. Solve any **three** out of the remaining **five** questions

Q1. Write short notes on following: (Any Four)

- | | | |
|---|---------------------------------------|---|
| A | House of Quality | 5 |
| B | Design for Serviceability. | 5 |
| C | Fused Disposition Modelling. | 5 |
| D | Various phase of product development. | 5 |
| E | Gorden Technique. | 5 |
| F | Brainstorming. | 5 |

Q2.

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|---|--|----|
| A | What are the Qualities of Creative Thinkers | 5 |
| B | Discuss Market Segmentation. | 5 |
| C | What is Stereo Lithography (SLA)? Explain its working in detail. | 10 |

Q3.

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|---|--|----|
| A | Which are the five steps to identify customer needs. | 5 |
| B | Discuss Product Life cycle issues in design. | 5 |
| C | Discuss in detail Manufacturing cost Analysis. | 10 |

Q4.

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|---|---|----|
| A | Explain market Research. | 5 |
| B | Which are the methods for gathering Product information. | 5 |
| C | Construct Pugh's Matrix for Mobile handset by considering four variants and five factors. | 10 |

Q5.

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|---|--|----|
| A | Discuss Design for Environment | 5 |
| B | Describe Product Architecture. | 5 |
| C | What is mean by Concept Embodiment. Explain with Suitable example. | 10 |

Q 6.

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|---|---------------------------------------|----|
| A | Write about Design for Assembly. | 5 |
| B | Explain voice of Customer. | 5 |
| C | Discuss methods of Creative Thinking. | 10 |