



COLLEGE OF ENGINEERING, PUNE

(An Autonomous Institute of Government of Maharashtra.)
SHIVAJI NAGAR, PUNE - 411 005

END Semester Examination

Product Design PE(AE)-14005

Course: B.Tech

Branch: Production Engineering (Sandwich)

Semester: Sem VII

Year: 2014-2015

Max.Marks:60

Duration: 3 Hours Time:- 2-5 p.m.

Date: 2-12-2014

Instructions:

MIS No.

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1. Solve **all** questions.
2. Figures to the right indicate the full marks.
3. Mobile phones and programmable calculators are strictly prohibited.
4. Writing anything on question paper is not allowed.
5. Exchange/Sharing of anything like stationery, calculator is not allowed.
6. Assume suitable data if necessary.
7. Write your MIS Number on Question Paper

- Q.1 a) Discuss Eilon's recommended techniques to enhance aesthetic appeal in Product design. 5
- b) Write Short Notes on: 5
- 1) 3-S's in product design.
 - 2) Pro-simplification Vs Pro-variety in Product design.
- Q.2 a) Discuss Problem faced by Industrial Designer in product design. 5
- b) Discuss in details about following considerations in Product design: 5
- 1) Redundancy
 - 2) Compatibility and matching considerations.
- Q.3 a) Discuss design considerations in 'Pressed components design'. 5
- b) Discuss 'Design for safety, reliability and environmental considerations' related to Product Value enhancement. 5
- Q.4 a) What is 'Value Engineering'? Discuss steps of 'Value Analysis'. 5
- b) Discuss the 'Blocks to Creativity' in product design. 5
- Q.5 a) Discuss 'Samuel Eilon's model related to Economics of Product'. 5
- b) Discuss Different aspects related to lowering the cost of product, if they are 5

considered in design stage.

- Q.6 a) Explain use of expanded metal and wire forms in Product design. 5
- b) Explain 'Physical Ergonomics' and 'Cognitive Ergonomics'. 5
