VASAVI COLLEGE OF ENGINEERING *(Autonomous)*, HYDERABAD
M.E. I Year (Mech.) I-Semester (Make Up) Examinations, March-2016
(Advanced Design & Manufacturing)
Product Design and Process Planning

Time: **3** hours

Max. Marks: **70**

Note: Answer ALL questions in Part-A and any FIVE questions from Part-B

Part-A (10 X 2=20 Marks)

1. Define product design and process planning functions.
2. List the various sources of Ideas.
3. Formulate the selling price of a product.
4. Describe the concept of Break Even Point with a neat sketch.
5. List the basic design rules for casting.
6. Describe about the importance of properties of engineering materials while designing product.
7. Define Anthropometry.
8. Discuss the concept of Just In Time.
9. Define Computer Aided Design and Computer Aided Manufacturing.
10. Explain various salient features of Group Technology.

Part-B (5 X 10=50 Marks)
(All bits carry equal marks)

11. a) Discuss about the various phases of morphology of design.
    b) Define value of appearance and explain various laws of appearance.

12. a) Categorize the significant aspects of patents and copy rights.
    b) Define value analysis and explain the procedure.

13. a) Discuss the criteria in the selection of plastics.
    b) Explain basic product design rules to be considered in forging.

14. a) Define Ergonomics and mention Man – Machine Information considerations
    b) Explain the concept of process sheet and narrate its importance.

15. a) Briefly explain the role of computers in product design and manufacturing?
    b) Discuss the integration of product design, manufacturing and production control.

16. a) Derive the equation for Breakeven point.
    b) Describe the material and process selection parameters.

17. a) Writ short notes on any three of the following
    a) Selection of right product.
    b) Failure analysis of a new product.
    c) Computer Aided Process Planning.
    d) Production Flow Analysis.
    e) Benefits of Group Technology.

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