

NR

Code No: A5203

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.Tech I - Semester Examinations, March/April-2011

PRODUCT DESIGN AND DEVELOPMENT STRATEGIES

(DESIGN FOR MANUFACTURING)

Time: 3hours

Max. Marks: 60

Answer any five questions  
All questions carry equal marks

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- 1.(a) Explain the need for creative thinking for product success in the life cycle of a product.  
(b) Describe the innovation criteria for the success of a new product in product life cycle. [12]
- 2.(a) Describe the role of models in product design.  
(b) What is weighted property index? Explain its significance. [12]
- 3.(a) What are the problems of material selection? Explain.  
(b) Describe the cost-versus-performance relations in materials. [12]
- 4.(a) Explain the influence of mechanical loading on form design.  
(b) Write a note on form design of plastic mouldings. [12]
- 5.(a) Explain the influence of space, size, and weight on form design.  
(b) Write a note on form design of Gray castings. [12]
- 6.(a) Distinguish between the production and inspection datums.  
(b) Write a note on the dimensioning of a product. [12]
- 7.(a) What is tolerance analysis? Explain.  
(b) Write a note on the aesthetic and ergonomic considerations in product design. [12]
8. Write short notes on:  
(a) Nature and scope of product engineering  
(b) Form design of welded fabrications. [12]

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