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**Question Paper Code: 52213**

M.E.DEGREE EXAMINATION, JUNE 2016

Second Semester

CAD / CAM

15PCD203 – INTEGRATED PRODUCT DESIGN AND PROCESSES DEVELOPMENT

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. There are \_\_\_\_\_ types of Product Development Projects.  
(a) Two                      (b) Three                      (c) Four                      (d) Five
2. The first screening in evaluation of concepts involves an assessment of the \_\_\_\_\_ of the design concepts by the experts.  
(a) Reliability                      (b) Manufacturability  
(c) Maintainability                      (d) Feasibility
3. Product Architecture makes its influence felt during  
(a) Manufacturing                      (b) Assembly                      (c) Marketing                      (d) Inventory
4. Industrial design may be involved in the overall product development during \_\_\_\_\_ phases.  
(a) Few                      (b) All                      (c) Several                      (d) Two
5. Analytical Prototypes are generally more flexible than \_\_\_\_\_ Prototypes.  
(a) Physical                      (b) Mathematical                      (c) Chemical                      (d) Functional

PART - B (5 x 3 = 15 Marks)

6. What are the needs for organization process management?
7. Explain how the problems can be explored in concept generation process?
8. Write down the steps involved in establishing product architecture.
9. In what way user make an impact in Industrial design?
10. Write down the different types of economic analysis.

PART - C (5 x 16 = 80 Marks)

11. (a) (i) “The customers are the drivers for new product development and innovation” explain the above statement with an example. (8)
- (ii) Explain about the behavior analysis. (8)

Or

- (b) Explain the organization process management and improvement in IPPD. (16)
12. (a) (i) Discuss the role of customers in the concept generation process. (8)
- (ii) Explain about standardization in concept selection. (8)

Or

- (b) Compare between the various methods of choosing a concept. (16)
13. (a) (i) Whether firms will be able to achieve high product variety without a modular product architecture? Justify your answer with examples. (8)
- (ii) Explain about architectures in service industries such as hospitals, hotels and educational institutions. (8)

Or

- (b) Briefly explain the slot modular architecture, bus modular architecture, section modular architecture. (16)
14. (a) (i) Explain with examples how the industrial design process influence the manufacturing cost of the product. (8)
- (ii) What types of product do not benefit from Industrial design involvement in the development process. (8)

Or

(b) Explain the process of CAE/CAD/CAM in Industrial design. (16)

15. (a) (i) Whether it is possible to determine the cost of product once it is put into production? Explain. (8)

(ii) Briefly explain about project execution. (8)

Or

(b) Explain the Design For Manufacturing (DFM) methodology with a flow chart. (16)

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