

Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code: 95P21

M.E.DEGREE EXAMINATION, JAN 2021

Elective

CAD / CAM

19PCD521 – INTEGRATED PRODUCT DESIGN AND PROCESS DEVELOPMENT

(Regulation 2019)

Duration: 1:15 hours

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. Designs are periodically modified to CO1- R
 - (a) improve product performance
 - (b) make products easier and faster to manufacture
 - (c) strive for zero-based rejection and waste
 - (d) all of the mentioned

2. Life-cycle engineering is also called CO1- R
 - (a) green design
 - (b) expensive design
 - (c) easy design
 - (d) none of the mentioned

3. The life cycle of a product includes CO2- R
 - (a) extraction of natural resources
 - (b) processing of raw materials
 - (c) manufacturing of products
 - (d) all of the mentioned

4. The following is the preliminary stage of Production planning CO2- R
 - (a) Capacity planning
 - (b) Material requirements planning
 - (c) Scheduling
 - (d) Product development and design

5. _____ helps in establishing the interchangeability of products CO3- R
- (a) Standardization (b) Simplification
(c) Diversification (d) Specialization
6. Product _____ is the ultimate objective of variety reduction CO3- R
- (a) Simplification (b) Standardization
(c) Specialization (d) All of the above
7. Work sampling is applied for CO4- R
- (a) Estimation of the percentage utilization of machine tools
(b) Estimating the percentage of the time consumed by various job activities
(c) Finding out time standards, specially where the job is not repetitive and where time study by stop watch method is not possible
(d) All of the above
8. For a product layout the material handling equipment must CO4- R
- (a) Have full flexibility
(b) Employ conveyor belts, trucks, tractors etc.
(c) Be a general purpose type
(d) Be designed as special purpose for a particular application
9. Which of the following layouts is suited for mass production? CO5- R
- (a) Process layout (b) Product layout
(c) Fixed position layout (d) Plant layout
10. The process of creating mechanisms and shapes of mechanical elements for a machine to get the desired output for a given input is called as ____ CO5- R
- (a) analysis (b) innovation
(c) synthesis (d) designing

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Describe the block diagram of generalized measurement system and explain different stages with examples CO1- U (8)
12. Briefly explain the promoting customer understanding CO2- U (8)

- | | | | |
|-----|--|--------|-----|
| 13. | Briefly explain the concept generation. | CO3- U | (8) |
| 14. | Briefly explain the Product development management. | CO4- U | (8) |
| 15. | Explain the management of Industrial design process. | CO5- U | (8) |