

Reg. No.

Question Paper Code

21328

M.E. /M.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022

First Semester

M.E. - CAD/CAM

20PCDPC102 - COMPUTER AIDED TOOLS FOR MANUFACTURING

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level,CO</i> |
|--|------------------------------|
| 1. What are the manufacturing metrics? | 2,K1,CO1 |
| 2. List the salient features of CAD/CAM. | 2,K1,CO1 |
| 3. Distinguish some commercial variant and generative CAPP software systems. | 2,K2,CO2 |
| 4. Compare the types of CAM-I and CMPP. | 2,K1,CO2 |
| 5. Identify an important element of Engineering Tolerances | 2,K1,CO3 |
| 6. Assess any four benefits implementation of non-contact inspection. | 2,K2,CO3 |
| 7. List the components of REVERSE ENGINEERING | 2,K1,CO4 |
| 8. Explain Developing Technical data | 2,K2,CO4 |
| 9. Generalize the need for RE assembly programs | 2,K2,CO5 |
| 10. Summarize the commonly used data management systems | 2,K1,CO5 |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) (i) Analyze various implementation issues on NC, CNC and DNC systems. 13,K3,CO1
(ii) Explain with various applications of languages, G code and M code.
- OR**
- b) Narrate Manufacturing Processes: Removing, Forming, Deforming and joining. 13,K5,CO1
12. a) List the two approaches commonly used in CAPP systems bringing out their advantages and limitations. 13,K1,CO2
- OR**
- b) Express about production planning process in discrete part manufacturing. 13,K2,CO2

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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13. a) Summarize CAI methodology used in manufacturing. *13,K2,CO3*
OR
b) Name the various tolerance accumulation and surface quality. *13,K2,CO3*
14. a) Assess different types of CMM software along with their application. *13,K2,CO4*
OR
b) Summarize With suitable sketches, explain the various digitizing techniques prevalent today. *13,K2,CO4*
15. a) Demonstrate short notes on RE user interface. *13,K2,CO5*
OR
b) Identify and Draw the neat sketch of components of Recycling software and explain briefly. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Elaborate CMM and its feature capturing -surface and solid modeling systems. *15,K3,CO4*
OR
b) Elaborate CAM-I, D-CLASS CMPP and Criteria in selecting a CAPP System. *15,K3,CO2*