

Reg. No.

Question Paper Code

11570

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

Sixth Semester

Production Engineering

PR8601 - COMPUTER AIDED PRODUCT DESIGN

(Regulations 2017)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
|--|-------------------------------|
| 1. Define CAD. | 2,K1,CO1 |
| 2. Name the basic components of computer hardware. | 2,K1,CO1 |
| 3. Write the steps in Shigley's systematic design procedure. | 2,K1,CO2 |
| 4. What did you understand by NURBS? | 2,K1,CO2 |
| 5. Define geometric modeling. | 2,K1,CO3 |
| 6. What is CSG? | 2,K1,CO3 |
| 7. Name the various product models. | 2,K1,CO4 |
| 8. What is TRIZ? | 2,K1,CO4 |
| 9. What Product life cycle? | 2,K1,CO5 |
| 10. What is product data management? | 2,K1,CO5 |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

- | | |
|--|-----------|
| 11. a) Explain the various input and output devices. | 13,K2,CO1 |
| OR | |
| b) Explain the morphology of design with neat sketch. | 13,K2,CO1 |
| 12. a) Discuss the basic 2D and 3D transformations in computer graphics with the examples. | 13,K2,CO2 |
| OR | |
| b) What is interactive computer graphics? Explain the steps involved in it in detail. | 13,K2,CO2 |
| 13. a) What is geometric modeling? Explain any two types in detail. | 13,K2,CO3 |
| OR | |
| b) Explain assembly modeling in detail with examples. | 13,K2,CO3 |

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

11570

14. a) Explain in brief the process of design for assembly and disassembly. *13,K2,CO4*
OR
b) Write the Altshuller's inventive principles in detail. *13,K2,CO4*
15. a) Explain in detail about design for product life cycle. *13,K2,CO5*
OR
b) Briefly explain FMEA process with a neat sketch. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) What is collaborative product design? Explain in detail. *15,K3,CO6*
OR
b) Discuss in brief about sourcing factor and customization factor. *15,K2,CO6*