April 2024

Time – Three hours
(Maximum Marks: 100)

[N.B.   1.   Answer all questions under Part-A. Each question carries 3 marks.

2.   Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART – A

1.   What are the advantages and disadvantages of solid modelling?

2.   Compare Wire frame modelling and Solid modelling.

3.   Define MRP.

4.   What are the concepts of CIM?

5.   What are canned cycles?

6.   What are the applications of rapid prototyping?

7.   What are the benefits of AGV?

8.   List out the sensors used in robots.

9.   Define house of quality.

10.   List out the types of values.

[Turn over.....

PART – B

11. (a) (i) Discuss about the FEA procedure. (8)
    (ii) Explain the IGES graphic standard format. (6)

    (Or)

    (b) Discuss about the Shigley's design process.

12. (a) (i) Discuss about the Shop Floor Control. (7)
    (ii) Explain the Enterprise Resource Planning. (7)

    (Or)

    (b) Explain the CIM wheel with neat sketch.

13. (a) (i) Explain about Virtual machining. (7)
    (ii) Explain any one rapid prototyping process with neat sketch. (7)

    (Or)

    (b) Write the part programs using canned cycles for the
    (i) Rectangular pocketing. (7)
    (ii) Circular pocketing operations. (7)

14. (a) Explain the working of a FMS with neat sketch.

    (Or)

    (b) Explain the working of AS/RS with neat sketches.

15. (a) Discuss about steps in FMEA.

    (Or)

    (b) (i) Discuss about the product life cycle. (7)
    (ii) Explain the concept of augmented reality. (7)

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