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Question Paper Code : 70828

M.E./M.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2019
First Semester
Manufacturing Engineering
MF 5102 – COMPUTER INTEGRATED MANUFACTURING SYSTEMS
(Regulations – 2017)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. What are the available types of dimensioning ?
2. Write the expression to scale a straight line about a fixed point.
3. What are the types of CIM data transmission methods ?
4. State the advantages of networks in CIM.
5. What is CMPP system ?
6. Compare the approaches in computer aided process planning.
7. What are the various types of information/data to be collected from the shop floor ?
8. What are the types of materials handling devices used in FMS ?
9. What is lean manufacturing ?
10. What are the objectives of inventory management ?

PART – B

(5×13=65 Marks)

11. a) A trapezoidal lamina ABCD lies in the x-y plane as shown with A(6, 1), B(8, 1), C(10, 4) and D(3, 4). The lamina is to be rotated about the z-axis by 90°. Determine the new position A*B*C*D* after rotation.
(OR)
b) Explain in detail about the editing operations available on CAD/CAM systems.
12. a) i) Describe the salient features of MAP model. (5)
ii) Differentiate between LAN, MAN and WAN. (8)
(OR)
b) Explain the functions of each layer in OSI model for Network Communications.

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13. a) Determine the form code in the OPITZ parts classifications and coding system for the given rotational part design in figure 1.

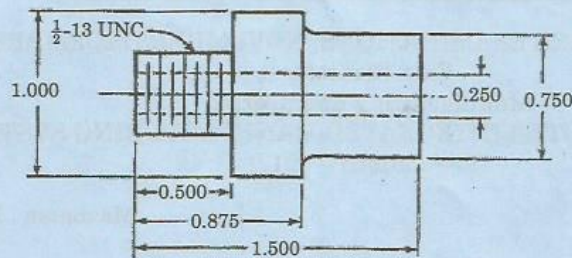


Figure 1

(OR)

- b) i) What is cellular manufacturing? Write the objectives of cellular manufacturing. (5)
ii) Explain about Retrieval CAPP with a flow chart in detail. (8)

14. a) Explain about Barcode technology in detail.

(OR)

- b) i) State the benefits of Flexible Manufacturing System. (5)
ii) Explain the phases in shop floor control. (8)

15. a) i) What is MRP? Write its benefits. (5)
ii) Explain briefly about DDC. Write its benefits. (8)

(OR)

- b) What is agile manufacturing? Compare lean and agile manufacturing.

PART - C

(1×15=15 Marks)

16. a) Explain in detail about drawing features in CAD.

(OR)

- b) Explain in detail about the components of FMS and various types of FMS layout.