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Question Paper Code : X 67626

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2020
Seventh Semester
Mechanical Engineering
ME 1403 – COMPUTER INTEGRATED MANUFACTURING
(Regulations 2008)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. What do you understand by the term 'CIM' in manufacturing ?
2. List out the benefits of implementing a CIM system.
3. What is cellular manufacturing ?
4. What are the basic approaches of CAPP ?
5. What are the types of Bar code ?
6. What are the benefits of FMS ?
7. What are the main components of LAN ?
8. What is PDM ?
9. State some applications of Technical Office Protocol (TOP).
10. What are the types of relays for interconnections sub networks using the OSI model ?

PART – B

(5×16=80 Marks)

11. a) i) Briefly explain the need for production planning in CIM and its advantages. (10)
ii) What are the basic activities that must be carried out in a factory to convert raw material in a finished product ? (6)
- (OR)
- b) i) Describe the scope and importance of marketing engineering. (8)
ii) Write short note on Islands of automation and software. (8)



12. a) i) Explain briefly the chain-type structure of coding system in GT. (8)
ii) Mention briefly the role of process planning in CAD/CAM integration. (8)

(OR)

- b) Draw and explain the structure of a generative CAPP system. What are the benefits of CAPP over manual process ? (16)

13. a) i) Write short notes on various materials handling equipment that are commonly used in a FMS. (8)
ii) Explain the Bar code technology with suitable diagram. (8)

(OR)

- b) Explain the components of FMS and FMS layout configuration.

14. a) Explain the components of local area network and its implementation. (16)

(OR)

- b) i) Explain the CIMOSA model with a neat diagram. (8)
ii) Describe the types of IDEF models. (8)

15. a) What is meant by open system interconnection ? Explain briefly seven layers of ISO/OSI reference model. (16)

(OR)

- b) i) Explain the merits and demerits of relational database. (8)
ii) Explain Manufacturing Automation Protocol. (8)
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