

6641
BOARD DIPLOMA EXAMINATION
MARCH/APRIL - 2019
DIPLOMA IN MECHANICAL ENGINEERING
COMPUTER AIDED MANUFACTURING SYSTEMS
FIFTH SEMESTER EXAMINATION

Time: 3 Hours

Total Marks: 80

PART - A (3m x 10 = 30m)

Note 1: Answer all questions and each question carries 3 marks

2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. What is meant by part family?
2. List out the applications of NC technology
3. What are the advantages of CNC over NC system.
4. State the requirements of machine bed in CNC machine tool.
5. Write the functions of tool magazine and Automatic Tool changer.
6. Mention the G code for the following:
 (a) feed rate in mm/min (b) Dimensioning in metric units (c) Absolute dimensioning
7. Write the general format of auxiliary statement used in APT language
 .Give an example to it
8. Define ROBOT
9. Write about volume flexibility of FMS
10. What is meant by module of a computer integrated manufacturing system

PART - B (10m x 5 = 50m)

** Note 1: Answer any five questions and each carries 10 marks*

2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. Discuss the use of computers in the design, process planning functions of manufacturing
12. Draw NC machine tools and state functions of each component.
13. Explain in detail about CNC CMM with a neat sketch
14. Give the classification of feed drives used for CNC and explain them
15. Discuss various standard formats used to write NC part program

16. **Explain the basic components of a Robot and write functions of each.**
17. **Draw the lay out showing various components of FMS and explain the necessity of FMS**
18. **What are the functions of CIMS. State the benefits of CIM?**

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