C16-M-RAC–**505**

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BOARD DIPLOMA EXAMINATION, (C-16)

JANUARY/FEBRUARY—2022

DME - FIFTH SEMESTER EXAMINATION

COMPUTER AIDED MANUFACTURING SYSTEMS

Time : 3 hours]   [_Total Marks_ : 80

PART—A   3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define the process control and process monitoring.

2. What are the steps involved in NC manufacturing?

3. List out the basic features of DNC system.

4. What is feedback device? What are its types?

5. Draw a neat sketch of incremental encoder and label its parts.

6. Define part programming. What are the two types of part programming?

7. What is miscellaneous function? Give any two examples.

8. List out the six types of automated guided vehicle systems.

9. Write any six applications of FMS.

10. Define CIM. List out any three principle components of CIM.

PART—B

10×5=50

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Define CAM. Explain in detail various benefits of CAM.

12. Explain the working principle of NC system with block diagram.

13. Explain the salient features of CNC, CMM with a neat sketch.

14. *(a)* What is tool magazine? What are its types?

(b) Explain with neat sketch drum type tool magazine.

15. Describe the procedure involved in part programming. Write any four differences between manual part programming and computer aided part programming.

16. Explain in detail principle components of a robot with a neat sketch.

17. Explain the various elements of FMS with a neat sketch.

18. Explain in detail with illustration the concept of lean manufacturing.

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