

Roll No. ....

## OLE-24484

### B. Tech. 7th Semester (ME) Examination – April, 2021

#### COMPUTER INTEGRATED MANUFACTURING

Paper : ME-425-F

*Time : Three Hours ]*

*[ Maximum Marks : 100*

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*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

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**Note :** Attempt any *five* questions in all. Question No. 1 is *compulsory* and selecting at least *one* question from each Section. Assume suitable data whenever required.

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|---|---|
| 1. (a) What are the component of CIM system ? | 5 |
| (b) Explain fixed/floating zero in CNC.       | 5 |
| (c) Write briefly CIMS ?                      | 5 |
| (d) Distinguish between CIM and FMS.          | 5 |

## **SECTION – A**

2. What is CAD/CAM ? Explain with its detailed parts. 20
3. What is NC machine ? Explain its components, procedure along with its relative advantages and disadvantages. 20

## **SECTION – B**

4. Explain the various types of punched tapes used in NC machines and also discuss the various types of tape coding and format. 20
5. Discuss the various types of sensors used in robotics. Discuss the various applications of robots. 20

## **SECTION – C**

6. (a) What do you understand by material handling system. Explain Automated MHD ? 10
- (b) Explain FMS workstation in detail. 10

7. (a) Discuss the various types contact and non contact Inspection methods. 10
- (b) Explain the various methods of computer aided testing. 10

### **SECTION – D**

8. Explain the various types of machine tools and their related equipments used in CIM. 20
9. Write short notes on the following : 20
- (a) Direct Numerical Control
- (b) Automated guided vehicle system
- (c) Robotics technology.
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