

R16

Code No: 137AZ

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, December-2023/January-2024

**CAD/CAM
(Mechanical Engineering)**

Time: 3 Hours

Max. Marks: 75

Note: i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

- 1.a) In what ways CAD can help manufacturing activity? [2]
- b) Differentiate Design workstation and Graphic terminal. [3]
- c) Define the term cell composition in solid modeling. [2]
- d) What are elements of NC system? [3]
- e) Write about Simple Programming Language in NC systems. [2]
- f) What are attributes of Adaptive Control Systems? [3]
- g) Discuss the Difficulties in traditional process planning. [2]
- h) State the objectives of quality control. [3]
- i) Differentiate off-line and online inspection. [2]
- j) Draw the CIM wheel. [3]

PART – B

(50 Marks)

2. Bring out clearly the difficulties a design engineer has to face at each of the design stages if they are carried out manually. [10]
- OR**
3. Discuss in detail the term scaling, translation and rotation used in Graphics. [10]
 4. Explain the Constructive Solid Geometry (CSG) method to create models. [10]
- OR**
5. Explain detail surface modeling and their representation. [10]
- 6.a) What are the advantages and disadvantages of CNC technology. [5+5]
 - b) Explain about auxiliary statement.
- OR**
- 7.a) Differentiate MRP-I and MRP-II. [5+5]
 - b) Write about importance of Adaptive Control Systems.

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8. What is CAPP? Explain any one type of Capp with neat sketches. [10]

OR

9.a) List out MRP output records.

b) Describe about importance of Machinability data systems. [5+5]

10. Explain briefly about the non-contact inspection methods-optical non-contact inspection methods-non-optical Computer aided testing. [10]

OR

11. Define the CIM. What are different elements of the CIM? [10]

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