

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
THIRD SEMESTER M.TECH DEGREE EXAMINATION, NOVEMBER 2016

Mechanical Engineering
(Machine Design)

04 ME 7501 COMPUTER INTEGRATED MANUFACTURING

Max. Marks: 60

Duration: 3 Hours

Part A: 3 marks each

1. Explain the different types of systems used in CAD/CAM hardware?
2. Explain Star, Ring & Bus LAN configurations.
3. Explain the different types of coordinate system.
4. Briefly explain about constructive solid geometry.
5. Explain Computer Aided Part Programming.
6. What are G & M Codes?
7. Discuss about computer-generated time standards.
8. Write briefly on computer aided process planning.

Part B: 6 marks each

1. Discuss about various Graphic displays used in CAD\CAM system.

OR

2. Explain the various CAD hardware components with neat sketches.
3. Explain in detail the various transformations used in CAD?

OR

4. What is IGES? Explain the IGES file structure explaining the three entities.
5. Outline the details with equations, the parametric representation of analytic and synthetic curves.

OR

6. Explain in detail about geometric modeling?

7. Explain B-rep and CSG type solid models.

OR

8. Write in detail Types and representation of surfaces.

9. What do you know about coordinate system and machine motion with reference to NC machines? Explain absolute and incremental method.

OR

10. Differentiate between CNC and DNC. Explain DNC system with a neat sketch.

11. Explain the components of retrieval type CAPP system with a schematic block diagram.

OR

12. Define Adaptive Control (AC). Explain AC with suitable example of control system and its benefits in machining.