

2021
M.E. (Manufacturing Technology)
Third Semester
MMT-7103: Computer Aided Design and Manufacturing

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt any five questions.

x-x-x

- I. a) Engineering design is an iterative process? Explain how CAD helps in optimising the engineering design?
b) Discuss parametric and variational design approaches. (7,3)
- II. How will you select a graphic package for design for manufacturing? (10)
- III. a) Discuss the solid representation techniques in CAD package.
b) Explain the Rotational transformation in 3 D. (7,3)
- IV. a) What is homogeneous transformation? Using homogenous transformation find the coordinates of the comers of triangle with coordinates (10,20), (40,40), (10,40). when triangle is rotated by 30^0 anticlockwise about (i) origin and (ii) about the point (10,20). Compute the new coordinates in both cases.
b) What are the solid manipulation techniques used in CAD? (6,4)
- V. a) What are the different types of surfaces in CAD? Explain the operations done in surfacing.
b) W hat is data translator in CAD? Why are these required? (7,3)
- VI. Discuss the features of CAD package available in your college laboratory. (10)
- VII. Explain the procedure for finite element analysis of a simply of a simple wall mounted L shape bracket. (10)
- VIII. a) How will you select the configuration of a CAD workstation?
b) What is a plotter? Discuss why plotters are popular in CAD? (6,4)

x-x-x