PVP 14

Code: ME5T6

III B.Tech - I Semester – Regular/Supplementary Examinations
October 2018

CAD/CAM
(MECHANICAL ENGINEERING)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks

11x 2 = 22 M

1. a) Describe the elements of product cycle.
   b) Write the advantage of UCS over WCS.
   c) What is a layer?
   d) What are Boolean operations in solid modeling?
   e) Write the matrix representation of top view.
   f) Define NC.
   g) Write the meaning of the codes M03, M04 and M06.
   h) Write any two contact and non contact inspection devices.
   i) Write the function of probe used in CMM.
   j) What is CIM wheel?
   k) What is a computer control system?

PART – B

Answer any ***THREE*** questions. All questions carry equal marks. 16 x 3 = 48 M

2. a) Explain Cohen-Sutherland line clipping algorthm. 6 M

   b) The vertices of a triangle are situated at points (15,30), (25,35) and (5,46). Find the coordinates of the vertices if the triangle is rotated by 30^0 in a counterclockwise direction about its centroid. 10 M

3. a) A cubic Bezier curve is defined by the control points as (30,30), (50,80), (100,100) and (150, 30). Find the equation of the curve and its midpoint. 8 M

   b) Specify the range of applications for which geometric modeling information is used. 8 M

4. a) Write the features of machining center. 6 M

   b) Explain the structure of a CNC machine tool. 10 M

5. a) Explain Opitz coding system used in Group Technology. 8 M

   b) Explain the methodlogy to be followed for developing a retreival type CAPP system. 8 M

6. a) Write a short notes on AGVS. 8 M

b) Explain the advantages that will be gained by the implementation of CIM. 8 M