Code: ME5T6

III B.Tech - I Semester – Regular Examinations – December 2016

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) How would you classify the storage devices in CAD?
   b) Can you explain the need of Concatenation of transformations?
   c) Can you state the limitations in utilizing the sweep method for geometric construction?
   d) How do you ensure convex hull property in Bezier surface?
   e) What can you say about components of NC system?
   f) How would you explain the concept of cutter offset in NC machining?
   g) Can you state what a machining center is?
   h) Can you explain the significance of parts classification and coding system?
   i) How would you explain about computer aided testing?
   j) Can you list the various control systems used in CIM systems?
   k) How would you state the principles of material handling system?

PART – B

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

2. a) How would you explain the various phases of product cycle in a computerized manufacturing environment?

    8 M

   b) Can you write and explain the different techniques for the hidden surface removal?   8 M

3. a) Can you describe with the help of neat sketches the major surface entities provided by CAD/CAM systems?

    8 M

   b) Can you state and explain the various geometric commands?   8 M

4. a) Can you write notes on five important M Codes and G Codes used in Part programming?   8 M

   b) Enlist and explain various motion statements in APT Language.   8 M

5. a) Explain the code structures of variant and generative process planning methods.   8 M

b) With a block diagram explain the functioning of a
   CMM. Also mention the advantages and limitations of
   it.   8 M

6. a) Can you draw the diagram of CIM cycle and explain the
   role of each activity in it?   8 M

   b) How would you explain the role of Computer Integrated
   Manufacturing in Modern Industries?   8 M