SUBJECT CODE NO:- P-297
FACULTY OF ENGINEERING AND TECHNOLOGY
T.E.(Mech) Examination May/June 2017
CAD/CAM/CAE
(Revised)

[Time: Three Hours]   [Max.Marks:80]

Please check whether you have got the right question paper.

N.B   i)Use suitable data if required.
             ii)Attempt three questions from each section.

Section A

Q.1   a)Explain the hardware requirement for implementing CAD/CAM facility.   06
        b)Explain the role of CAD,CAM & CAE in product life cycle.   07

                                        OR

        a)Explain with neat diagram the data output devices used in CAD/CAM implementation.   07
        b)Explain and differentiate the vector scan and Raster scan techniques.   06

Q.2   a)Differentiate between solid modeling and wireframe modeling techniques.   07
        b)Explain the concept of pointing and positioning.   06

                                        OR

        A Rectangle ABCD is defined in a 2D graphic system by its vertices as A(2,2), B(6,2), C(6,5) & D(2,5).   13
        Perform the following transformations on this rectangle and represent it on graph paper.
        i)Translation- 2 units in x direction & 3 units in y direction.
        ii)Rotate the original fig. by 40° in anticlockwise direction about the origin.

Q.3   Write short notes on any two.   14
        a)Concurrent Engineering
        b)Software requirement for CAD applications.
        c)LCD and Plasma panels.
        d) Manufacturing data base.

Section B

Q.4   a)Discuss the role of computers in process planning.   07
        b)Explain the Group Technology & its advantages.   06

                                        OR

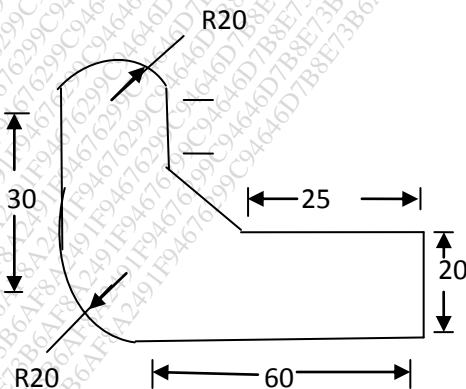   Write down the APT programme for the part shown in fig.1 . Consider the thickness of part to 18mm.   13

Fig.1

Q.5 a)Explain the concept of Fixed 3150 and floating 3150 with reference to NC-machines.   06
     b)Explain the NC motion control systems.   07
                              OR
     a)Explain the base for selection and use of Industrial Robot for spray painting and Heat treatment   06
     applications
     b)Explain with neat diagrams the different types of sensors and grippers used in Industrial Robot   07
     along with suitable example.
Q.6 Write short notes on any two: 14
     a)Robot programming
     b)CNC/DNC
     c)CAQC
     d)FMS.

2017