http://www.bputonline.com

Registration No : | | | | | | | | | | |

Total Number of Pages : 02 **B.Tech**

PME6J003

6th Semester Regular / Back Examination 2018-19
CAD/CAM
BRANCH : MECH
Time : 3 Hours
Max Marks : 100
Q.CODE : F613

Answer Question No.1 (Part-1) which is compulsory, any eight from Part-II and any two from Part-III.
The figures in the right hand margin indicate marks.

Part- I

Q1 Short Answer Type Questions (Answer All-10) (2 x 10)

a) State the importance of CAD and CAM in the industry?
b) What are the functions of input and output devices?
c) How a NC machine isdifferent from a CNC machine?
d) What do you mean by scaling transformation?
e) What are the parameters that are required to define view?
f) What are the different types of memory?
g) Name few input devices in computer aided design?
h) What is graphic software?
i) What the following function stand for M03 and M08?
j) State the unit load principle with respect to material handling system?

Part- II

Q2 Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

a) Discuss the benefits and limitations of CAD&CAM?
b) Briefly discuss the various geometric modelling capabilities?
c) Distinguish between wireframe and surface modelling?
d) What are the different DNC systems? What do the following G codes stand for (i) G40 (ii) G41 (iii) G42?
e) Enumerate the main components of a NC machine tool?
f) What are the advantages of having a centralize database?
g) What are the functions of graphic software? Explain briefly
h) What are the types of CNC? State the functions of CNC?
i) Compare CNC with DNC? What are the advantages of combining CNC and DNC?
j) Illustrate the use of following preparatory functions G01, G02 and G03?
k) Describe the main features of machine control unit?
l) How CIM is different from Cam? What are the benefits of CIM over that of CAM?

http://www.bputonline.com

Part-III

Long Answer Type Questions (Answer Any Two out of Four)

Q3 Elaborately discuss the different part programming languages? **(16)**

Q4 **Write short notes on :**

a) AGVs **(8)**

b) Lean manufacturing **(8)**

Q5 A triangular has corners PQR. The coordinates of the points P,Q and R are (20,20), (40,25), (30,40) respectively. The lamina is rotated through 30 degrees in the clockwise direction. **(16)**

a) Obtain the concatenated matrix for the transformation

b) Calculate the new coordinate of the triangle.

Q6 A picture is to be translated through 20 and 30 units in X and Y direction respectively. Write the matrix in homogeneous coordinate for translation. **(16)**