Day : Friday   Time : 02:30 PM-05:30 PM
Date : 17-06-2022   **S-13478-2022**   Max. Marks : 60

N.B.:
  1)   All questions are **COMPULSORY**.
  2)   Figures to be the right indicate **FULL** marks.
  3)   Draw neat and labeled diagram **WHEREVER** necessary.
  4)   Assume suitable data necessary.

Q.1   Define CAD and CAM .Explain conventional product cycle and product **(10)** cycle with CAD/CAM.

OR

Q.1   A rectangle ABCD has cortices A (2,2), B(3,2), C(3,4) and D (2,4).It is to be rotated 30^0 in clockwise direction about point P(3,2) **(10)** Determine-
  i)   The composite transformation matrix.
  ii)   The new coordinates of rectangle.

Q.2   What is Hermite cubic splines? Derive the parametric equation for Hermite **(10)** cubic spline curve. Also state its limitations.

OR

Q.2   Describe C-Rep and B-Rep in detail.   **(10)**

Q.3   What is Group technology? How group technology layout is differing from **(10)** process type layout? Also state benefits of Group technology.

OR

Q.3   Describe types of FMS in detail.   **(10)**

Q.4   Describe Rapid product development and manufacture in detail.   **(10)**
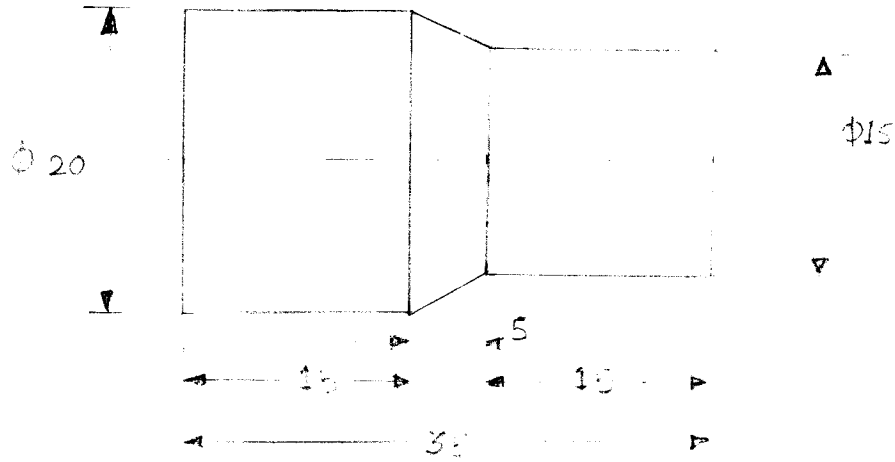
OR

Q.4   Explain in detail the CIM modes of Digital Equipment Corporation.   **(10)**

P.T.O.

Q.5   Describe constructional details of CNC machines.   **(10)**

OR

Q.5   Write a part program for following component. Consider speed 1000 rpm &   **(10)**
feed 200 mm/min.

Q.6   Describe traditional process planning and Automated process planning in   **(10)**
detail.

OR

Q.6   Describe CAPP and MIPLAN process planning system in detail.   **(10)**

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