M. TECH.-I (MECHANICAL CAD/CAM) (CBCS – 2015 COURSE) : SUMMER - 2018
SUBJECT : COMPUTER AIDED DESIGN

Day : **Monday** **S-2018-2982** Time : **11.00 AM TO 02.00 PM**
Date : **28/05/2018** Max. Marks : 60

N. B. :

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in the **SEPARATE** answer books.
4) Draw neat and labeled diagram **WHEREVER** necessary
5) Assume suitable data, if necessary.

SECTION - I

Q.1 Write short notes on parametric representation of Analytical curves: **(10)**

a) Circle
b) lines

OR

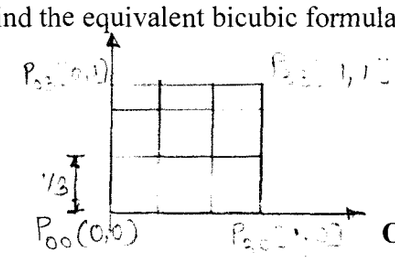
The coordinates of four control points relative to a current WCS are given as P_0 $[2\ 2\ 0]^T$ P_1 $[2\ 3\ 0]^T$ P_2 $[3\ 3\ 0]^T$ *and* P_3 $[3\ 2\ 0]^T$. Find the equation of the resulting B-spline curve. **(10)**

Q.2 Write a short note on surface modeling. Also explain surface entities. **(10)**

OR

Explain in detail the mathematical representation of surface. **(10)**

Q.3 Find the equivalent bicubic formulation of a cubic Bezier surface patch. **(10)**



OR

Write short notes on various surface manipulation techniques : **(10)**

a) Displaying
b) Segmentation
c) Intersection

SECTION - II

Q.4 Explain Boundary Representation in detail.. **(10)**

OR

How constructive solid Geometry is beneficial the other available solid modeling techniques explain with a case study? **(10)**

Q.5 Explain the technique of: **(10)**

a) Hidden line removal
b) Surface removal

OR

Explain Top-Down design approach with a case study. **(10)**

Q.6 Explain Design system, Approach and principle of collaboration Design. **(10)**

OR

Write short note on Product Data Management. **(10)**

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