

M. Tech.-I (Mechanical CAD/CAM) (CBCS – 2015 Course) :
WINTER - 2018
SUBJECT : COMPUTER AIDED DESIGN

Day : Monday
Date : 03/12/2018

W-2018-3120

Time : 11.00 AM TO 02.00 PM
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 Explain Bezier Curve. Write characteristics of Bezier curve. **(10)**

OR

Explain B-spline curve. Write characteristics of B-spline curve. **(10)**

Q.2 Write short notes on: **(10)**

- a) Plane surface
- b) Surface of Revolution
- c) Tabulated cylinder

OR

Explain surface modeling. Also explain surface entities. **(10)**

Q.3 Find the equivalent bicubic formulation of an open and closed cubic B-spline surface. **(10)**

OR

Explain in detail Hermite Bicubic surface with suitable application. **(10)**

SECTION - II

Q.4 Differentiate between: **(10)**

- a) Boundary representation and constructive solid Geometry
- b) IGES and STEP

OR

Explain different methods used to calculate mass of body. **(10)**

Q.5 Write algorithms for **(10)**

- a) Shading
- b) Rendering

OR

Explain the role of Artificial Intelligence in design. **(10)**

Q.6 Explain the principles and tools used in the collaborative design. **(10)**

OR

Explain how mechanical industry manages his data using product data management. **(10)**

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