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SEAT No. :

P3428

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[4660]-211

**M.E. (Mechanical) (Computer Aided Design,
Manufacturing & Engineering)**

COMPUTERAIDED DESIGN

(2012 Pattern)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates :

- 1) Attempt any three questions from each section.*
- 2) Figures to the right indicate full marks.*

SECTION - I

Q1) What is synthetic curves? Explain B-Spline curve with its mathematical, graphical features with one example. **[16]**

Q2) How surface is represented mathematically? What are surface entities and its representation? **[16]**

Q3) Explain and represent with application: **[16]**

- a) COONS Surface
- b) Blending Surface

Q4) About surface manipulation, what are the following concepts? **[18]**

- a) Displaying and Segmentation.
- b) Trimming, Intersection and Transformation.

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SECTION - II

Q5) How solids are represented? Brief this representation with two methods and its features. Which techniques are used in present software's? **[16]**

Q6) Brief concepts of: **[16]**

- a) Algorithm for Shading and Rendering.
- b) Feature recognition and Tolerance representation.

Q7) Where collaborative design is used? Explain concept with principles, approaches and its design systems. **[16]**

Q8) Explain the following: **[18]**

- a) CAD Database structure
- b) Behavioural modeling
- c) Product data management

