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SEAT No. :

P4720

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## M.E. (Mechanical) (Computer Aided Design, Manufacturing & Engg.)

## COMPUTER AIDED DESIGN

## (2012 Pattern)

*Time :3 Hours]* *[Max. Marks :100*

***Instructions to the candidates:***

1) ***Answer any three questions from each section.***

2) ***Figures to the right indicates full marks***

### SECTION - I

***Q1)*** What is significance of synthetic curves? Explain Hermetic cubic spline curve and Bezier curve with its characteristics and applications. **[16]**

***Q2)*** What is parametric representation of surface? Where it is recommended? How ruled surface and Blending surface is represented parametrically? **[16]**

***Q3)*** Represent Bezier surface. What are its properties? Explain:Displaying Segmentation. **[16]**

***Q4)*** What is tabulated surface? Explain its significance. Represent 2D & 3D orthogonal transformations. **[18]**

***P.T.O.***

## SECTION - II

***Q5)*** Brief the following concepts about solid modeling. **[16]**

a) Representation technique --- any two

b) Mechanical tolerances and Mass property calculations.

***Q6)*** What is evaluation of data? List data exchange formats. Explain IGES & STEP. **[16]**

***Q7)*** Explain: **[16]**

a) Algorithm for shading and rendering.

b) Variational modeling and tolerance modeling.

***Q8)*** Brief the concepts with its features. **[18]**

a) Al in design

b) Collaborative Design --- Principles & Approach