

Total No. of Questions : 4]

SEAT No. :

PC-439

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[6359]-560

**S.E. (AUTOMOBILE & MECHANICAL/MECHANICAL S.W/  
AUTOMATION & ROBOTICS) (Insem.)  
SOLID MODELING & DRAFTING  
(2019 Pattern) (Semester - III) (202042)**

*Time : 1 Hour]*

*[Max. Marks : 30*

*Instructions to the candidates :*

- 1) Answer Q.1 or Q.2, Q.3 or Q.4.
- 2) Neat diagrams must be drawn whenever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume the suitable data, if necessary.

**Q1) a)** Explain any four from following software modules of CAD, **[8]**

- i) Collaboration module
- ii) Operating system module
- iii) Geometric module
- iv) Applications module
- v) Programming module
- vi) Communication module

**b)** What is Product Life Cycle? Explain various steps involved Engineering Design process? **[7]**

OR

**Q2) a)** Explain the concept of Primitives, Features and Sketching in detail. **[6]**

**b)** Compare Wireframe, Solid and Surface Modeling with suitable example. **[9]**

*P.T.O.*

**Q3) a)** Explain Zero Order, First Order and Second Order continuities with a neat sketch. [6]

b) A line is represented by end points P (5, 7, 2) and Q (-4, 6, 3). If 'u' at P and Q is 0 and 1 respectively, determine its length. Also determine the co-ordinates of points represented by  $u=0.4$ ,  $u=0.25$  and  $u=0.5$ . [9]

OR

**Q4) a)** Describe the Reverse Engineering Process with its important stages and applications. [7]

b) Explain Bezier surface and B-Spline surface with suitable sketches. [8]

