

Total No. of Questions : 4]

SEAT No. :

PE587

[Total No. of Pages : 1

[6578]-60

**S.E. (Automobile & Mechanical/Mech. Sandwich/Automation
& Robotics) (Insem)**

**SOLID MODELING & DRAFTING
(2019 Pattern) (Semester-III) (202042)**

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Attempt Q.1 or Q.2, Q.3 or Q.4.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume suitable data, wherever necessary.*

Q1) a) What is Product Life Cycle? Explain CAD tool used in design process of Product Cycle? [8]

b) What are the different types of CAD software modules? Explain any three in detail. [7]

OR

Q2) a) Compare Wireframe, Surface and Solid Modeling with suitable examples and sketches. [9]

b) What is modeling strategy? Explain effective modeling strategies in CAD? [6]

Q3) a) Distinguish between analytical and synthetic curves? [6]

b) A circle is passing through two end points P1 (10, 20) and P2 (25, 50). Find the co-ordinates of center point, radius and parametric equation of circle. Also find coordinates of points on the circle at $\varnothing = 0^\circ$, $\varnothing = 30^\circ$, $\varnothing = 60^\circ$ and $\varnothing = 90^\circ$. [9]

OR

Q4) a) Explain the concept of Bezier surface and B-Spline surface with suitable sketches. [8]

b) What is Reverse Engineering? Explain role of CAD in it? [7]

