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**Question Paper Code: 51P01**

M.E. DEGREE EXAMINATION, APRIL 2019

First Semester

CAD / CAM

15PCD101 - COMPUTER APPLICATIONS IN DESIGN

(Regulation 2015)

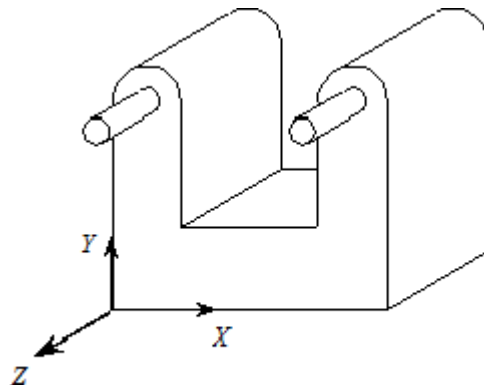
Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) (i) What is meant by scaling? CO1- U (4)  
(ii) Explain Sutherland- Hodgeman Polygon Clipping. CO1- U (16)
- Or
- (b) (i) Explain Sutherland- Hodgeman Polygon Clipping CO1- U (16)  
(ii) What is meant by combined Transformation? CO1- U (4)
2. (a) (i) Explain the exchange of CAD data through IGES. CO2- U (16)  
(ii) What is meant Data Exchange standard? CO2- U (4)
- Or
- (b) Explain the construction of the solid model shown below using Constructive Solid Geometry. CO2- U (20)



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|----|-----|---|--------|------|
| 3. | (a) | (i) Explain Mini Max Test for visibility.                         | CO3- U | (8)  |
|    |     | (ii) Explain Area oriented algorithm for hidden line removal.     | CO3- U | (12) |
|    |     | Or  |        |      |
|    | (b) | (i) What is Z- Buffer algorithm.                                  | CO3- U | (4)  |
|    |     | (ii) Explain Ray Tracing algorithm for hidden solid removal.      | CO3- U | (16) |
| 4. | (a) | (i) Explain assembly tree with example.                           | CO4- U | (12) |
|    |     | (ii) Explain location graph for assembly.                         | CO4- U | (8)  |
|    |     | Or  |        |      |
|    | (b) | Explain precedence graph for an assembly.                         | CO4- U | (20) |
| 5. | (a) | (i) Explain Feature based modeling .                              | CO5- U | (10) |
|    |     | (ii) Explain Behavioural modeling.                                | CO5- U | (10) |
|    |     | Or  |        |      |
|    | (b) | (i) Explain the capabilities of any one of the modeling software. | CO5- U | (16) |
|    |     | (ii) Enumerate various CAD softwares and their features.          | CO5- U | (4)  |