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**B.E (Full Time) End Semester DEGREE EXAMINATION, NOV / DEC 2011**

Fifth Semester

Manufacturing Engineering

**MN 374 – COMPUTER AIDED DESIGN**

(Regulation 2004)

Time : 3 Hours

Answer ALL Questions

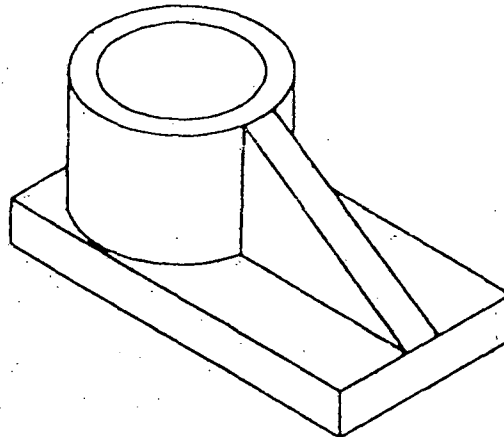
Max. Marks 100

**PART-A (10 x 2 = 20 Marks)**

1. What is meant by geometric modeling?
2. Write any four output devices used in CAD?
3. What is homogeneous co-ordinate system?
4. Translate the point (2,6) 2 units in x and 3 units in y axis.
5. List the limitations of wire frame modeling.
6. Write the properties of solid model.
7. Why the CAD standard are important in CAD environment?
8. Where the DMIS standard is used?
9. Write any four 2-D elements used in FEA?
10. Why the polynomial expressions are generally used in FEA?

**Part – B ( 5 x 16 = 80 marks)**

11. a) How do you construct the fig.A in CSG and B-rep techniques in solid modeling? (16)  
Wire the step by step construction product.



12. a) How the CAD / CAM overlid on product cycle? Explain with neat diagram. (16)

OR

:2:

- b) i) What are the common network topologies used in CAD environment? Explain in detail. (10)  
ii) Discuss the various geometric modeling capabilities of CAD software. (6)

13. a) i) Write a short notes on (10)  
    i) Orthographic projection  
    ii) Isometric projection  
ii) With the example, explain the process of clipping. (6)

OR

- b) i) Mirror the triangle whose points are (1,1), (3,1) and (2,3) in x-axis, y-axis and x, y axis. (8)  
ii) What is hidden line and surface removal? Explain with simple example. (8)

14. a) Write a short notes on (16)  
    i) Programmes Hierarchical interface for graphics (PHIGS)  
    ii) Drawing Exchange Format (DXF)

OR

- b) i) What are the features available in drafting module in CAD system? Explain with suitable sketches. (12)  
ii) What are the sections in IGES? (4)

15. a) i) With the suitable example, explain the various steps in FEA procedure. (16)

OR

- b) i) How the CAD is interface to FEA software. (4)  
ii) What are the functions available in pre processing & post processing in FEA software? Explain. (12)