

OR

Code No. OR-NRB5201

JAWAHARLAL NEHRU TECHNOLOGY UNIVERSITY, HYDERABAD
M .Tech. II Semester Supplementary Examinations, March – 2009
COMPUTER AIDED DESIGN
(Design for Manufacturing)

Time: 3 hours

Max. Marks.60

Answer any Five questions
All questions carry equal marks

- 1.a) What are the general requirements for a CAD work station.
b) Explain the criteria for evaluation of CAD/CAM system.
- 2.a) Explain the wire frame modeling technique. What are its advantages and limitations?
b) Briefly explain model building by extrusion method.
- 3.a) Derive the equation of bicubic surface (defined by four points).
b) Derive the parametric equations of the ellipsoid, a form and a circular cone.
- 4.a) What are the three Boolean operations used in solid modeling. Explain with neat sketches showing the effect of these operators on any two basic primitives.
b) How can you generate forms using other natural quadrics?
5. Derive the functional Π for a plane stress problem over the rectangular domain shown in figure 1. The concentrated loads P_1 and P_2 are applied at the centre distances in the X and Y directions.

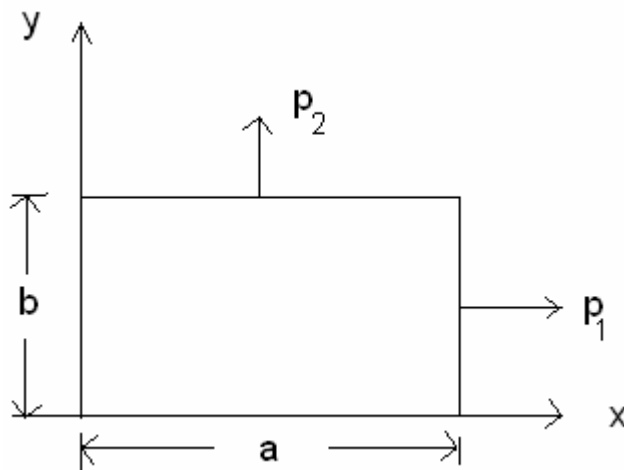


Fig.1

Contd...2

- 6.a) What is the difference between collaborative design and traditional design.
- b) Explain different approaches in collaborative engineering.

- 7.a) Explain in detail 1 GES file structure.
- b) Describe the STEP methodology.

- 8. Write short notes on the following:
 - a) Post processing in F.E Analysis
 - b) Hermite Bi Cubic surface
 - c) Surface of revolution
 - d) Mechanical tolerances.
