R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year II Semester Examinations, February/March - 2022
CAD AND CAM
(Mechanical Engineering)

Time: 3 Hours   **Max. Marks: 75**

Answer any five questions
All questions carry equal marks
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1.a) Give classification of the different surfaces that can be used in geometric modeling applications.
  b) Why is it important to remove hidden lines and surfaces from 3D geometry?   [7+8]

2.a) Explain different types of geometric modeling methods used in CAD. Give a comparative application of each of them.
  b) Discuss the advantages and disadvantages of CAD/CAM.   [8+7]

3.a) Describe the importance of curve and surface modeling in computer-aided graphics and design.
  b) Discuss the important properties of Bezier surfaces.   [8+7]

4.a) What is meant by sweep? Discuss in detail the various types of sweep techniques available for 3D geometric construction.
  b) What are the limitations in utilizing the sweep method for geometric construction?[7+8]

5.a) Give the advantages and disadvantages of numerical control of machine tools.
  b) What are the following G Functions for a machining centre?   [7+8]
        G17, G30, G81, G99

6.a) List the advantages of AC servomotors over DC servomotors.
  b) Describe the principle of working of two analog transducers.   [7+8]

7.a) Discuss the principle and advantages of group technology coding.
  b) Describe any one computer aided process planning software.   [8+7]

8.a) Discuss the role of CAPP in CIM in detail.
  b) Sketch the layout of a typical FMS and explain the important subsystems.   [7+8]

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