

Roll No.

Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (CE/CSE/ME) (Sem.-6)

COMPUTER AIDED DESIGN

Subject Code : BTME-613-18

M.Code : 79658

Date of Examination : 12-07-22

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Write briefly :

- 1) Define CAD.
- 2) What are the different curve primitives?
- 3) Differentiate between implicit and explicit functions. Give examples.
- 4) Define parametric representation of circle.
- 5) What is sweep representation?
- 6) Define shape function.
- 7) Define the concept of constructive solid geometry in brief.
- 8) Why 2D transformations can be performed by using 3D matrix only?
- 9) What is raster scan graphics system?
- 10) Explain the details of polygon clipping.

SECTION-B

- 11) Find the equation of a Bezier curve which is defined by four control points as (80,30,0), (100,100,0),(200,100,0) and (250,30,0).
- 12) A square having end points A (1,1), B (5,1), C (5,5), D (1,5) is rotated 45° in clockwise direction keeping the point B fixed. Find its final co-ordinate.
- 13) Explain in detail the various analytical properties associated with assembly design.
- 14) Explain in detail the representation of synthetic surfaces in CAD?
- 15) a) Describe how the data base is organized when building a solid model from the graphic primitives.
b) What is geometric modelling? What are its advantages?

SECTION-C

- 16) What are the ruled surfaces? Explain it with diagram.
- 17) Write a short note on the following :
 - a) Difference between translation and panning.
 - b) Euler-Poincare formula used in solid modelling.
- 18) a) Differentiate between wire frame modeling and surface frame modeling.
b) Define NURBS curve and various properties of NURBS curve in details.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.