Code No: 11583/CBCS

FACULTY OF ENGINEERING

BE VI – Semester (CBCS) (A.E) (Main) Examination, May/ June 2019

Subject: COMPUTER AIDED DESIGN ANALYSIS & MANUFACTURING

Time: 3 Hours **Max.Marks:70**

Note: Answer All Questions From Part-A, & any Five Questions From Part-B.

PART – A (20 Marks)

1) What is meant by Turnkey CAD/CAM system?
2) What are properties of Splines?
3) Differentiate wire-frame, surface and solid modelling.
4) Write transformation matrices for rotation and scaling.
5) Write note on Mass property calculations.
6) What is finite element modelling?
7) Define canned cycle in CNC programming.
8) Explain tool length compensation.
9) Sketch polar configuration of robot.
10) What are the advantages of rapid prototyping?

PART – B (50 Marks)

11. (a) Explain with neat sketch role of CAD/CAM in product life cycle.

(b) What are the characteristics of B-spline curves? Explain with sketches?

12. (a) Explain surface modeling through analytic surface and enumerate their advantages.
(b) Rotate the rectangle (0,0), (2,0),(2,2) and (0,2) shown in fig.1 30^0 CCW about its centroid and find new coordinate of rectangle.

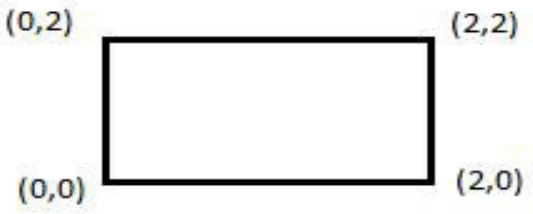

Fig.1

13. Explain PDES format and their applications.
14. Describe the various features and elements of NC and CNC.

15. (a) Explain SCARA Robot configuration.

(b) What is CAQC? Explain various methods of CAQC.

16. (a) What are the advantages of parametric representation of entities?
(b) What are principal functions of production planning and control?

17. Write short note on following.

a) NURBS curves.
b) FMS.
c) Adaptive control system.

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