

CBCS Scheme

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16MCM13

First Semester M.Tech. Degree Examination, Dec.2016/Jan.2017

Computer Aided Design

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. Briefly explain benefits of CAD/CAM. (06 Marks)
b. Explain the applications of computer to the design process with a block diagram. (10 Marks)

OR

- 2 a. Explain in detail the function of graphic package in CAD. (10 Marks)
b. List and explain various types of graphics input devices. (06 Marks)

Module-2

- 3 a. A triangle is defined in a two dimensional ICG system by its vertices (0, 2) and (0, 3) and (1, 2). Perform the following transformation on this triangle and draw it as a graph.
i) Translate triangle in space by 2-units in the X-direction and 5-units in the Y-direction.
ii) Scale the original triangle by a factor 1.5
iii) Scale the original triangle by a factor of 1.5 in the X-direction and 3 in the Y-direction.
iv) Rotate the original triangle by 45° (CCW) about the origin (12 Marks)
b. List the different types of solid modelling approaches. (04 Marks)

OR

- 4 a. Derive an expression for homogeneous co-ordinate and translations. (10 Marks)
b. Derive an expression for overall scaling about an arbitrary scaling point. (06 Marks)

Module-3

- 5 a. List the modelling facilities and explain. (08 Marks)
b. Write a brief note on features of "STEP"? (08 Marks)

OR

- 6 a. Derive the expression for parametric representation of circle. (08 Marks)
b. Generate a circle of radius '2' with center located at (2, 2). (08 Marks)

Module-4

- 7 Write short notes on :
a. Drawing exchange format (DXF) (08 Marks)
b. Dimension measurement interface specification (DMIS). (08 Marks)

OR

- 8 a. Explain how an assembly model is created, with a block diagram. (08 Marks)
b. Explain briefly precedence diagram with an example. (08 Marks)

Module-5

- 9 a. List the basic methodology for current Rapid prototype techniques. (04 Marks)
b. Explain the schematic of stereolithography device. (12 Marks)

OR

- 10 a. Explain the schematic of selective Laser sintering device. (08 Marks)
b. Explain the schematic of Laminated object manufacturing device. (08 Marks)

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1. On completing your answers, compare your original answers with the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8=50, will be treated as malpractice.