aktuonline.com

Printed Pages : 3

EME-701

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : **140701**

Roll No.

B. Tech.

(SEM. VII) (ODD SEM.) THEORY EXAMINATION, 2014-15

CAD

Time : **3** Hours] [Total Marks : **100**

1 Attempt any FOUR parts : **5×4=20**

a) Mention the function of hard copy devices and list any two devices.

b) Write about the different coordinate systems for representation of a picture.

c) List the various graphics standards used in CAD.

d) Write the translation matrix for translation, scaling and rotation for 2D geometric transformations.

e) What are the three types of errors in performing numerical calculations?

f) Write the deflection equation of simply supported beam with point load at its centre and uniformly distributed load.

aktuonline.com

2 Attempt any TWO parts : **10×2=20**

a) Explain about any four input devices used for data input on graphics work station.

b) What is flat panel display? Explain its types.

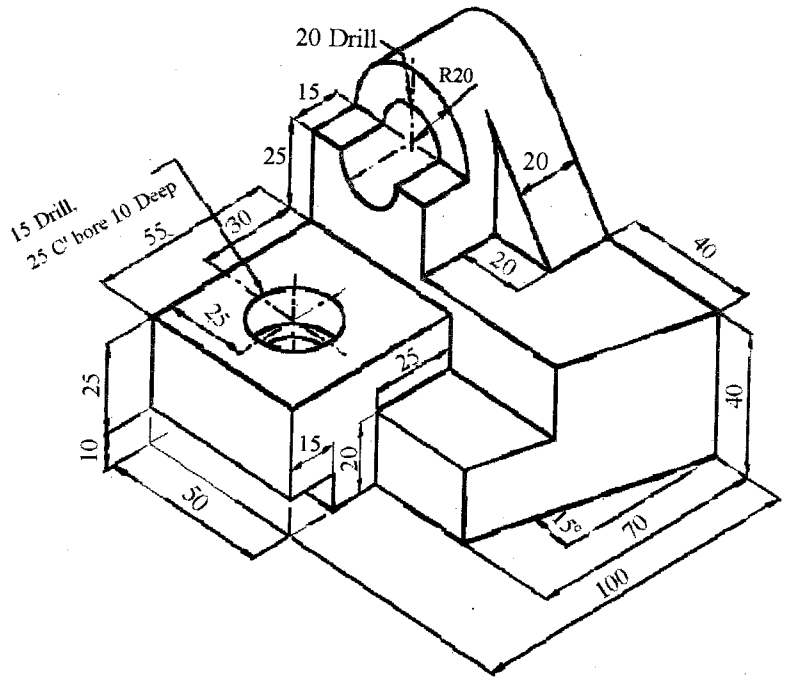
c) Write notes on the graphic functions used for creating and manipulating pictures.

3 Attempt any TWO parts : **10×2=20**

a) Draw a circle using Bresenham's midpoint circle algorithm with centre (-3, 8) and radius 12 units.

b) A point P (6, -4, -8) is rotated at 45° about x axis and then it rotated at 60° about Z axis. Find the final coordinate of the point P.

c) Construct the following model using CSG primitives and also to develop the history tree.

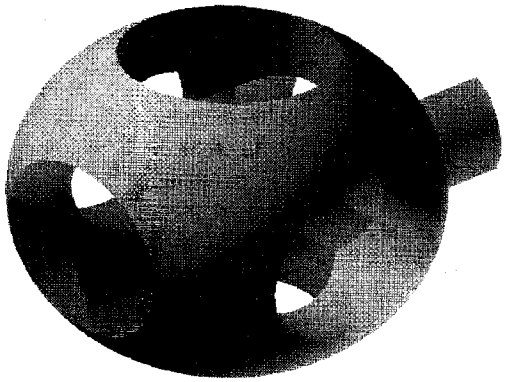


aktuonline.com

4 Attempt any TWO parts : **10×2=20**

a) Write the differences between interpolation and approximation.

b) List the procedure to create the solid model shown in figure using Pro-E software.



c) Explain about the various cubic spline interpolation methods.

5 Attempt any TWO parts : **10×2=20**

a) Draw and explain the two dimensional biezer curves generated from three, four and five control points.

b) With a suitable example explain the Newton raphson method

c) Explain RGB and HSV Color models with suitable diagram.
