



EF-3793

Third Year B. C. A. (Sem. VI) (CBCS) Examination
October/November – 2016
601 : Computer Graphics

Time : 3 Hours]

[Total Marks : 70

Instruction :

नीचे दशांशविक निशानावाणी विगतो उत्तरपत्री पर अवश्य लपनी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="THIRD YEAR B. C. A. (SEM. VI) (CBCS)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="601 : COMPUTER GRAPHICS"/>	<input type="text"/>
Subject Code No. : <input type="text" value="3"/> <input type="text" value="7"/> <input type="text" value="9"/> <input type="text" value="3"/>	Section No. (1, 2,.....) : <input type="text" value="Nil"/>
	Student's Signature

1 Answer the following in short : (any seven) 14

1. What is Anti-aliasing ?
2. Write advantage and disadvantage of DVST.
3. List out various graphic standards.
4. What is a polygon ?
5. Define Frame Buffer.
6. Explain different line caps.
7. Explain Bitmap graphics.
8. What is homogenous coordinate ?
9. Write various properties of circle.

2 Answer following questions in detail : 14

(a) Write note on Application of computer graphics. 8

OR

(a) Write note on Random scan display.

(b) Write note on Refresh CRT. 6

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[Contd...

3 (a) Explain VECGEN's line drawing algorithm. 8

OR

- (a) Explain Bresenham's line drawing algorithm.
(b) What is slope ? Explain various types of slope. 6

4 Answer following questions in detail : (Any Two) 14

- (a) Explain Even-odd method.
(b) Explain any one polygon filling method.
(c) Discuss boundary fill method providing appropriate example.

5 Do as directed : 14

- (a) Write a note on scaling and translation Transformation. 6

OR

- (a) Explain Shearing transformation.
(b) Attempt the following with example : (Any two) 8

- (i) Derive single matrix for following operation :
(a) Shift image 5-unit up
(b) Triple its width and 1/2 its height.
(ii) Consider a triangle having vertices P1 (1, 1), P2 (4, 4), P3 (10, 10). Scale the object at 200% of original size and perform rotation of 90° in anticlockwise direction about the origin.
(iii) Give single matrix to Scale the object twice as large in x-direction then rotate it clockwise 30°.