

Nov-Dec-2012

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Seat No.	
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[4262]-208

S.E. (Computer) (II Sem.) EXAMINATION, 2012

COMPUTER GRAPHICS

(2008 PATTERN)

Time : Three Hours

Maximum Marks : 100

- N.B. :—
- (i) All questions are compulsory.
 - (ii) Answers to the two Sections should be written in separate answer-books.
 - (iii) Neat diagrams must be drawn wherever necessary.
 - (iv) Figures to the right indicate full marks.
 - (v) Use of electronic pocket calculator is allowed.
 - (vi) Assume suitable data, if necessary.



SECTION I

1. (a) Explain Bresenham's line drawing algorithm. (Do not give Pseudo-code) [6]
- (b) What is frame buffer ? Explain the importance of it. [4]
- (c) What is vector generation ? Explain the problem of vector generation. [6]

P.T.O.

Or

- (a) Find the amount of memory required by an 8 plane frame buffer each of red, green, blue having resolution of 1024×768 . [4]
- (b) Write a short note on Display File Interpreter. [4]
- (c) Explain Bresenham's Circle Drawing Algorithm. (Do not give Pseudo-code) [8]
2. (a) Compare different polygon filling algorithm. [4]
- (b) Explain generalized clipping. [4]
- (c) What is windowing and clipping ? What is interior and exterior clipping ? [8]

Or

- (a) Explain how a polygon is filled with pattern. [4]
- (b) Explain even-odd method to determine polygon interior points. [4]
- (c) Use Cohen-Sutherland outcode algorithm to clip two lines $P_1(40, 15) - P_2(75, 45)$ and $P_3(75, 45) - P_4(100, 10)$ against a window $A(50, 10), B(80, 10), C(80, 40), D(50, 40)$. [8]
3. (a) What is the need of homogeneous coordinate system ? Give homogeneous representation of scaling, rotation and translation matrices. [6]

