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**BO—26—2016**

**FACULTY OF COMPUTER STUDIES**  
**B.C.A. (Third Year) (Sixth Semester) EXAMINATION**  
**OCTOBER/NOVEMBER, 2016**  
**(Revised Course)**  
**COMPUTER APPLICATION**  
Paper S6.3  
(Computer Graphics)

**(Friday, 25-11-2016)**

**Time : 10.00 a.m. to 1.00 p.m.**

*Time—Three Hours*

*Maximum Marks—80*

*N.B. :— (i) Attempt All questions.*

*(ii) Figures to the right indicate full marks.*

*(iii) Draw diagrams wherever necessary.*

1. Attempt the following : 20

(i) Advantages of computer graphics

(ii) Rotation transformation

(iii) 2-D clipping

(iv) Windowing function

2. (a) Explain line segment and line drawing algorithm. 8

(b) Explain working of cathode ray tube and color CRT monitors. 7

*Or*

(c) Discuss functions for segmenting display file. 8

(d) Describe simple visibility algorithm. 7

3. (a) Explain following transformations with its matrix representation : 8

(i) Translation

(ii) Scaling.

(b) Explain refresh concurrent with reconstruction. 7

*Or*

(c) Discuss graphics primitives and windowing function. 8

(d) Explain midpoint subdivision algorithm. 7

P.T.O.

4. (a) Explain Sutherland-Hodgman algorithm. 8  
 (b) Describe display file structure. 7  
 Or  
 (c) Describe ground rules for graphics software design. 8  
 (d) Explain display code generator. 7
5. Write short notes on any *three* : 15  
 (i) Symbols and instances  
 (ii) Light pen and Joystick  
 (iii) Reflection transformation  
 (iv) Posting and unposting segments  
 (v) Applications of computer graphics.