

Paper Code : 21321

F-421

B.C.A. (Fifth Semester)

Examination, 2022-23

(New Course)

Paper-BCA-501-N

COMPUTER GRAPHICS AND ANIMATION

Time : Three Hours] [Maximum Marks : 70

Note : Attempt any five questions. All questions carry equal marks. Symbols used have their usual meanings.

1. (a) What is development of computer graphics? Explain it in details. 7
(b) Describe in details color display techniques. 7
2. (a) Explain the frame buffer and bit operations concepts in raster graphics. 7

- (b) Differentiate between : 7
 - (i) Storags displays and display processors
 - (ii) Raster scan and Random scan graphics.

3. (a) What is line drawing algorithms? Explain it with an example. 7
(b) What is conic section generation? Describe it in details. 7
4. (a) Differentiate between ellipse generation and polygon filling. 7
(b) What is two-dimensional viewing? Explain it with an example. 7
5. (a) Explain in details interactive picture construction techniques. 7

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(2)

- (b) What is 2-D and 3-D transformation?
Explain it with an example. 7
6. (a) What are Bezier curves? State the mathematical expression of Bezier curve. 7
- (b) What is 3-D viewing? Explain it in details. 7
7. (a) Describe the algorithms for 3-D volumes spline curves and Surfaces in details. 7
- (b) How many types of animation? Explain it in details. 7
8. Explain the following : 14
- (i) GKS primitive
 - (ii) Multimedia application
 - (iii) Morphing
 - (iv) Tweaking