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(Printed Pages 4)

Roll No. _____

23/3198

B.C.A. (Fourth Semester) Examination, 2023

First Paper

**(Computer Graphics & Multimedia
Application)**

Time : 3:00 Hours] [Maximum Marks : 75

Note : Attempt any **five** questions. **All** ques-
tion carry equal marks.

Note : The answers to short questions should
not exceed **200** words and the answers
to long questions should not exceed **500**
words.

1. Explain with a clear diagram (any **two**):
 $7\frac{1}{2} \times 2 = 15$
 - (i) Mouse and its operation
 - (ii) Image Scanner
 - (iii) Graph Plotter

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2. (a) What are the benefits of Interactive
computer Graphics? Name a few areas
where it may be applied. $7\frac{1}{2} \times 2 = 15$
(b) Write the algorithm for scan conver-
sion of a circle and explain it.
- 3 Write and explain the Mid point Subdivi-
sions Algorithm and illustrate it with an ex-
ample. 15
4. Write a short note on: $7\frac{1}{2} \times 2 = 15$
 - (i) Sutherland Cohen A lgorithm
 - (ii) Matrix Representation of different 2D
transformations.
5. Explain how a solid surface in 3D may be
represented by: $7\frac{1}{2} \times 2 = 15$
 - (i) Polygon mesh Parametric
 - (ii) Cubic curve

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6. (i) What are the different types of 3-D transformations in computer Graphics? Explain each with its transformation matrix. 10+5
- (ii) Explain with diagram, the working of a random scan display device.
7. (i) Define=Multimedia, Animation, Morphing, MIDI, JPEG. 5+5+5
- (ii) What are the different from of a Animation explain how they are implemented in practice.
- (iii) Write about the uses / applications of Multimedia
8. Write a brief account of the hardware and software, required for sitting up an application involving multimedia features. 15

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9. Write short notes on (any **two**) $7\frac{1}{2} \times 2 = 15$

- (i) Scan conversion of Ellipse
- (ii) Dream weaver
- (iii) Concept of Solid Modelling

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