

# S-743

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Roll No. -----

## BCA-17

### Interactive Computer Graphics

Bachelor of Computer Application (BCA)

5<sup>th</sup> Semester, Examination 2022(Dec.)

Time: 2 Hours

Max. Marks: 70

Note : This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

### Section – A

(Long Answer – type questions)

Note: Section 'A' contains Five (05) long-answer-type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

[2 x 19 = 38]

P.T.O.

- Q.1. Explain Midpoint circle Algorithm with their derivations.
- Q.2. Explain with an example the Cohen Sutherland algorithm for line clipping.
- Q.3. What are the important applications of Computer Graphics? Explain the working of Flat Panel Display, Plasma Panel Display and LCD in detail.
- Q.4. What is difference between window port and view port? Demonstrate window-to-viewport transformations.
- Q.5. Difference between parallel and perspective projections. Which one gives a more realistic effect and why?

## Section – B

### (Short-answer-type questions)

Note: Section 'B' contains Eight (08) short-answer-type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only.

[4 x 8 = 32]

- Q.1. What is the difference between interactive and passive computer graphics?
- Q.2. Difference between Raster Scan displays and Random Scan displays.
- Q.3. Define the following terms:
- (i) Frames
  - (ii) Key frames
  - (iii) Frame Rate
  - (iv) Morphing
- Q.4. Explain DDA line drawing algorithm.

P.T.O.

- Q.5. Explain Shadow mask and beam penetration method.
- Q.6. Explain RGB, CMYK, HSV color model.
- Q.7. Discuss the various geometric transformation in 2-D graphics.
- Q.8. What is an animation? Explain type of animation.

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