

PARUL UNIVERSITY
FACULTY OF IT & COMPUTER SCIENCE
BCA Summer 200-23 Examination

Semester: 4**Subject Code: 05101301****Subject Name: Computer Graphics****Date: 31/03/2023****Time: 10.30am to 1.00pm****Total Marks: 60****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Answer the followings.**A. Define the following****(05)**

1. Reflection
2. Resolution
3. Image Noise
4. Quantization
5. Computer Graphics

B. Multiple choice type questions/ Give the sentence true or false. (Each of 01 marks)**(10)**

1. In graphical system, the array of pixels in the picture are stored in _____.
 - a) Memory
 - b) Frame Buffer
 - c) Processor
 - d) None
2. _____ stores the picture information as a charge distribution behind the phosphor-coated screen.
 - a) Cathode ray tube
 - b) Direct-view storage tube
 - c) Flat panel displays
 - d) 3D viewing device
3. The primary output device in a graphics system is _____.
 - a) Scanner
 - b) Video monitor
 - c) Neither a nor b
 - d) Printer
4. A translation is applied to an object by repositioning it along with straight line path from one location to another. (True/False)
5. Shearing is also termed as _____.
 - a) Selecting
 - b) Sorting
 - c) Scaling
 - d) skewing
6. A continuous image is digitized at _____ points.
 - a) random
 - b) vertex
 - c) contour
 - d) sampling
7. The process of selecting and viewing the picture from different views is called _____.
 - a. Windowing
 - b. Clipping
 - c. Projection
 - d. both a and b
8. The centre region of the screen and the window can be represented as _____.
 - a) 0000
 - b) 1111
 - c) 0110
 - d) 1001

9. Which is first fundamental step in image processing
 - A. filtration
 - B. image acquisition
 - C. image enhancement
 - D. image restoration
10. You can draw and edit objects in one layer without affecting objects in another layer in Flash. (True/False)

Q.2 Answer the followings. (2 or 3 Mark Questions.) (Three Q- 2 marks & Two Q-3 marks.) (15)

1. What is clipping? List out various types of clipping. Explain point clipping in detail. (03)
2. Explain the different types of polygon . (03)
3. List and explain the steps of window to viewport mapping. (03)
4. What is Digitization? (02)
5. What is Frame and Keyframe? (02)
6. What is the role of a frame buffer? (02)

Q.3 Answer the following. (Any three) (15)

1. Draw and explain Mid-Point Circle generating algorithm.
2. List and explain the different MPEG formats.
3. What is Tween?. List and explain different types of tween that can be given to object in Flash?
4. Explain the steps of Digital Image Processing.

Q.4 Answer the following.

- A. Calculate the points between the starting point (5, 6) and the ending point (8,12) using DDA (05)
Algorithm.
- B. What is CRT? Draw and explain the construction and working of CRT. Write its advantages and (10)
disadvantages.

OR

- B. Draw and explain Boundary Value analysis along with its advantages and disadvantages. (10)