

VI Semester B.A./B.Sc. Examination, May 2016

(Semester Scheme) (Repeaters)

COMPUTER SCIENCE – VII

Interactive Computer Graphics

(70 Marks – 2013-14 and Onwards/60 Marks – Prior to 2013-14)

Time : 3 Hours

Max. Marks : 60/70

- Instructions :** 1) Repeaters 2013-14 and onwards students attend Sections A, B, C and D – 70 Marks.  
2) Repeaters prior to 2013-14 students should attend Section A, B and C only – 60 Marks.

SECTION – A

Answer any ten questions. Each carry one mark.

(10×1=10)

1. What is the usage of frame buffer in display devices ?
2. What are the applications of interactive computer graphics ?
3. Define pixel.
4. What is persistence ?
5. Mention different character attributes.
6. What is vector display ?
7. What do you mean by segment files ?
8. What is meant by composite transformation ?
9. Define viewport.
10. What do you mean by staircase effect ?
11. What are world co-ordinates ?
12. What is meant by order of continuity ?



## SECTION - B

Answer **any five** questions. **Each** carry **three** marks.

(5×3=15)

13. Explain the working of Raster scan monitor.
14. Illustrate the DDA line algorithm for a line with end points (20, 10) and (30, 18).
15. Differentiate between window and viewport.
16. Explain gravity field effect.
17. Describe reflection in 2D.
18. Explain sketching.
19. Explain different types of sweep representation.

## SECTION - C

Answer **any five** questions. **Each** carry **seven** marks.

(5×7=35)

20. Explain the working of CRT monitor.
21. Explain Bresenham's circle drawing algorithm.
22. Explain scan-line algorithm of area fill in detail.
23. Explain 3D transformation scaling.
24. What are Octrees ? How are they used to represent 3D objects ?
25. Explain the construction of self-similar fractals with examples.
26. Explain Sutherland Hodgeman polygon clipping algorithm.
27. Explain Bezier curves in detail with neat diagram.

## SECTION - D

(Only for 2013-14 and Onwards)

Answer **any one** question. **Each** question carry **ten** marks.

(1×10=10)

28. a) Explain various methods of string clipping. 4
- b) What are polygon surfaces and polygon tables ? Explain. 6
29. a) Explain any three interactive input techniques. 5
- b) Explain plasma panel display. 5