

VI Semester B.A./B.Sc. Examination, May 2017
 (Semester Scheme) (Repeaters)
 (2013 – 14 and Onwards) (Prior to 2015 – 16)
COMPUTER SCIENCE – VII
Interactive Computer Graphics

Time : 3 Hours

Max. Marks : 60/70

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

SECTION – A

Answer any ten questions. Each carries 1 mark.

(10×1=10)

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|--|---|
| 1. Define interactive computer graphics. | 1 |
| 2. Define pixel. | 1 |
| 3. What is meant by resolution ? | 1 |
| 4. What are the attributes of character ? | 1 |
| 5. Mention any one property of a line. | 1 |
| 6. What is meant by rotation ? | 1 |
| 7. What is reflection ? | 1 |
| 8. What is the meaning of composite transformation ? | 1 |
| 9. Define viewport. | 1 |
| 10. What are world co-ordinates ? | 1 |
| 11. Define an octree. | 1 |
| 12. What is RGB model ? | 1 |



SECTION - B

Answer **any five** questions. **Each** carries **3** marks.

(5×3=15)

13. Explain working of raster scan monitor in detail.
14. What are the different attributes of a line ?
15. Explain 2D translation with example.
16. What are the different types of clippings ?
17. Explain various methods of string clipping.
18. Explain parallel projection.
19. Explain 3D scaling.

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SECTION - C

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

(5×7=35)

20. Explain the applications of interactive computer graphics.
21. With a neat diagram explain the working of CRT.
22. Explain DDA line algorithm with end points (15, 5) and (25, 13).
23. Explain window-to-viewport transformation.
24. Explain sutherland Hodgeman polygon (area) clipping algorithm.
25. What are different types of 3D transformations ? Explain them.
26. What are polygon surfaces and polygon tables ? Explain.
27. What is meant by sweep representation ? What are the different types of sweep representations ?

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SECTION - D

Answer **any one** questions. **Each** carries **10** marks.

(10×1=10)

28. a) What are octrees ? How to use to represent a 3D object ?
- b) Explain sketching.
29. a) Define segment. What are the attributes of segment ?
- b) Explain interactive input techniques.

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