



'সমানো মন্ত্র: সমিতি: সমানী'

**UNIVERSITY OF NORTH BENGAL**

B.Sc. Honours 6th Semester Examination, 2022

**CC14-COMPUTER SCIENCE (62)**

**COMPUTER GRAPHICS**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.*

**GROUP-A**

**Answer any five questions**

1×5 = 5

1. Define aspect ratio. 1
2. Define Frame Buffer. 1
3. What do you mean by Resolution? 1
4. Define Digitizer. 1
5. What are homogenous coordinates? Explain their use. 1
6. State the difference between printer and plotter. 1
7. What is raster scan? 1
8. What is the function of frame buffer? 1

**GROUP-B**

**Answer any three questions**

5×3 = 15

9. What is projection? Differentiate between parallel and perspective projection. 5
10. Differentiate between random scan and raster scan. 5
11. Write down DDA line drawing algorithm. 5
12. What is clipping? Explain the method of Cohen Sutherland line Clipping in detail. 5
13. Explain 2D rotation with the help of an example. 5

**GROUP-C**

**Answer any *two* questions**

10×2 = 20

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| 14. | Explain 2D geometric transformation. Derive the various transformation matrix regarding 2D-geometric transformation. | 10 |
| 15. | Discuss midpoint circle generation algorithm with example.   | 10 |
| 16. | Explain Bresenham's line drawing algorithm with example.   | 10 |
| 17. | Discuss different applications of Computer Graphics.   | 10 |

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