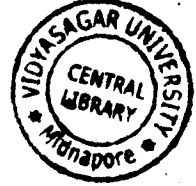


**2015**

**M.Sc.**



**1st Semester Examination**

**COMPUTER SCIENCE**

**PAPER—COS-106**

**(PRACTICAL)**

*Full Marks : 50*

*Time : 2 Hours*

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

*All notations have their usual meaning.*

**Graphics Lab**

**Answer any two questions**

**20×2**

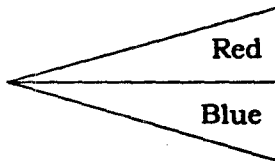
- 1. Write a program using C to translate a rectangle.**
- 2. Write a program to draw a circle using mid-point circle drawing algorithm.**

*(Turn Over)*

3. Write a program to draw a polygon using Bresenham's line drawing algorithm
4. Write a program to fill the below figure with appropriate colours using any filling algorithm —

White	Blue
Cyan	Red

5. Write a program to draw the following figure using any standard line drawing algorithm —



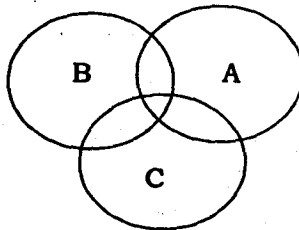
6. A mirror is placed vertically such that it passes through the point (20, 20) and (0, 20). Find the reflected view of a triangle ABC with arbitrary co-ordinates.
7. Write a program to draw a ellipse using ellipse drawing algorithm.
8. Write a program that illustrate the translation property of graphics such that shearing of a rectangle with respect to X-axis.
9. Write a program that clipping of a line segment.

**[Internal Assessment — 10 Marks]**

**Multimedia Lab**Answer any *one* (on lottery basis)

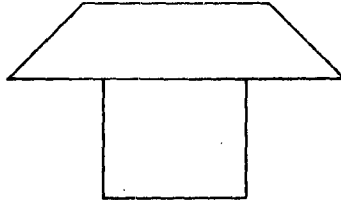
40

10. Write a program which first takes input of  $45^\circ$  rotation of a line w.r. to origin and then reflect that resultant line. w.r. to X-axis.
11. Write a program to draw a Bezier Curve having 4 control points.
12. Draw a circle using mid-point circle drawing algorithm. The draw circle as mention figure below :



13. Write a program to implement mid-point ellipse drawing algorithm.
14. Write a program to draw a B-spline curve having 4 control points.
15. Write a program to draw a Bezier Curve with 3 control points.

16. Write a program to draw the following figure using any line drawing algorithm.



17. Write a program to draw a circle using Bresenham's circle drawing algorithm

***PNB*** — ***05***

***Viva*** — ***05***

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