



K23P 0061

Reg. No. :

Name :

III Semester M.C.A. Degree (C.B.S.S. – Reg./Supple./Imp.)

Examination, November 2022

(2020 Admission Onwards)

MCA3C03 : COMPUTER GRAPHICS WITH OPENGL

Time : 3 Hours

Max. Marks : 60

SECTION – A

Answer **all** questions. **Each** question carries **two** marks.

1. Briefly explain the working of raster scan systems.
2. What is OpenGL ?
3. Define window and viewport.
4. What is antialiasing ?
5. What do you mean by composite transformation ?
6. Write a short note on 3D translation.
7. Briefly explain about 3D clipping algorithm.
8. Write a short note on region codes.
9. What is spline ?
10. What do you mean by diffuse reflection ?

(10×2=20)

SECTION – B

Answer **all** questions. **Each** question carries **eight** marks.

11. A) Explain DDA line drawing algorithm in detail.

OR

- B) Explain midpoint circle generating algorithm in detail.

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12. A) Explain Cohen-Sutherland line clipping algorithm.

OR

B) Differentiate between boundary fill and flood fill algorithm.

13. A) Explain 2D reflection and shear in detail.

OR

B) Explain 3D rotation and scaling in detail.

14. A) Explain different types of 3D projections.

OR

B) Explain 3D viewing pipeline in detail.

15. A) Explain different types of polygon rendering methods.

OR

B) Explain basic ray tracing algorithm.

(5×8=40)

