K20P 0555

Reg. No. : .....

Name : .....

II Semester M.C.A. Degree (C.B.S.S.-Reg./Suppl./Imp.) Examination, May 2020
(2014 Admission Onwards)
MCA2C12 : COMPUTER GRAPHICS

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **any ten** questions. **Each** question carries **three** marks. **(10×3=30)**

1. Define Computer Graphics.
2. What is a raster scan system ?
3. Define the term output primitive. Give example.
4. What do you mean by scan conversion ?
5. What is covering or exterior clipping ?
6. Give the expression in matrix form for basic transformation.
7. Give the sequence of operations for translate-rotate-translate.
8. Define B-Spline curve.
9. List some of the Basic 3D geometric transformations.
10. Differentiate between parallel and perspective projection.
11. List the types of 3D representations schemes.
12. Define Illumination model. Give the parameters used in illumination model.

SECTION – B

Answer **all** questions. **Each** question carries **ten** marks. **(5×10=50)**

13. a) Explain in detail about video display devices. **10**

OR

b) Explain in detail about Bresenham's line generating algorithm. Give example. **10**

P.T.O.

14. a) Compare Cohen-Sutherland line clipping algorithm and Liang-Barsky line clipping algorithm. **10**

OR

b) Explain in detail about window to viewport coordinate transformation. **10**

15. a) Explain in detail about the three dimensional composite transformations. **10**

OR

b) Explain the concept of 2D matrix representation with suitable example. **10**

16. a) What are oblique and orthogonal projections ? Give their transformation matrices. **10**

OR

b) Derive the equation of parallel projections onto the XY- plane in the direction of projection V=aI + bJ + cK. **10**

17. a) Explain Back face detection method and Depth buffer method. **10**

OR

b) Briefly explain about the basic transformations performed on three dimensional objects. **10**
