

ACADEMIA INTERNATIONAL COLLEGE

(Affiliated to Tribhuvan University)

E N D T E R M E X A M I N A T I O N - 2 0 7 0

CLASS: B.Sc. CSIT FOURTH SEMESTER
SUBJECT: COMPUTER GRAPHICS/ CSC-254
TIME: 3 HOURS

FULL MARKS: 60
PASS MARKS: 24

Attempt any **TEN** questions. Each question carries equal marks.

SET A

1. What are the differences between computer graphics and image processing? Explain use of graphics in different field of information technology.
2. What is refresh rate? Explain random display processor.
3. What are the symmetric properties of circle? Devise the mid-point circle drawing algorithms.
4. What do you mean by window to viewport transformation? Derive the transformation matrix for window to viewport transformation.
5. What are the importances of homogeneous co-ordinate representation? Write short notes on
 - a) 2D fixed point rotation.
 - b) 2D shear.
6. What is the wireframe representation of solid object? Explain about Spline curve.
7. How can a 3D object be represented by polygon table and polygon meshes? Create the geometric table for an object with six vertices, eight edges and three surfaces.
8. What is the difference between image space method and object space method for hidden surface removal? Explain scan line algorithms.
9. What is the meaning of illumination? Write brief notes on any one lighting model.
10. What is the Diffuse reflection? Differentiate between Phong Shading model and fast Phong Shading model.
11. Write short notes(any two)
 - a) Computer animation.
 - b) 3D viewing pipe line.
 - c) 3D Rotation about arbitrary.