

**Tribhuvan University  
Institute of Science and Technology**

**2069**

Bachelor Level/ First Year/ First Semester/ Science

**Computer Science and Information Technology (CSc. 254)**

(Computer Graphics)

Full Marks: 60

Pass Marks: 24

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

The figures in the margin indicate full marks.

**Attempt all the questions.**

1. Explain the random scan display with its advantages and disadvantages.
2. Why homogeneous coordinates are used for transformation computations in computer graphics.
3. Differentiate between window port and view port. How are lines grouped into visible, invisible and partially visible categories in 2D clipping? Explain.
4. Define polygon. What are the different types of polygons? Explain with example.
5. Differentiate between periodic B spline curves with non-periodic B – spline curves.
6. Explain Z – buffer algorithm for removing hidden faces?
7. Differentiate between incremental algorithms over DDA with example.
8. Define the following terms( any two)
  - a) Video controller
  - b) 3D viewing
  - c) Raster graphics
  - d) List priority
9. Explain simple illumination model with example.

**OR**

Explain the simple illumination model with example

10. Explain the virtual reality and its application in the computer graphics.