TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean
2014

Full Marks: 40
Time: 2 hrs.

BIM/ Fifth Semester/ITC 221: Computer Graphics

Candidates are required to answer the questions in their own words as far as practicable

Group "A"

1. Brief *Answers Questions:* **[10×1=10]**

a. Write advantages of using computer graphics in office automation.
b. Define aspect ratio.
c. What are the different methods to display color in CRT?
d. Write initial decision parameter value when slope is greater than I in Bresenham's line drawing algorithm.
e. What are the advantages of PHIGS over GKS?
f. How can you represent 2D Rotation in homogenous coordinate system?
g. What is 2d viewing Pipeline?
h. Define Key frame.
i. Write limitation of constant shading.
j. Differentiate between image space and object space and object space method.

Group "B"

Short answer questions: **[5 x 3 = 15]**

2. Describe how touch panel works with their types.
3. Digitize the given line endpoints (5, 10) and (10,7) using Bresenhams line drawing algorithm.
4. How composite transformation is advantageous? Prove two successive rotation is additive.
5. Describe the HSV and RGB color models with their geometrical representation.
6. How region code is calculated in Cohen- Sutherland line clipping algorithm? Show necessary steps. Explain inside outside test in Sutherland – Hodgeman polygon clipping algorithm.

Group "C"

Long answer questions: **[3×5 =15]**

7. Draw circle of radius 4 with center (2,3).
8. Compare visible surface detection methods. Explain scan method.
9. Write short notes on:
   a. Design of animation sequence
   b. Gouraud Shading
   c. 3D rotation