

Mid-West University  
**Examinations Management Office**

Semester End Examination 2080

Bachelor level/ B. Sc. (CSIT)/ 4<sup>th</sup> Semester

Time: 3 hours

Subject: Computer Graphics (COM444)

Full Marks: 60

Pass Marks: 30

*Candidates are required to give their answers in their own words as far as practicable. Figures in the margins indicate marks.*

**Group A**

**Very short answer questions (attempt all). [8x2 = 16]**

1. What is project planning?
2. Write short notes on Light Pen and Track Ball.
3. Define Resolution.
4. Write any two advantages of DDA line drawing algorithm.
5. Define Specular Reflection.
6. What do you mean by Uniform Scaling?
7. How can you define Visible Surface Detection?
8. Write any two applications of computer graphics. Explain shortly.

**Group B**

**Short answer questions (attempt any five). [5x4 = 20]**

9. Differentiate between Gouraud and Phong Shading.
10. What do you mean by three-dimensional transformation? Explain 2D Rotation.
11. Describe Polygon Meshes. illustrate its advantages.
12. Explain Constant Intensity Shading. Also illustrates its disadvantages.
13. How Computer Graphics differs from Image Processing. Explain.
14. Explain Cathode Ray Tube (CRT) with appropriate diagram.

**Group C**

**Long answer questions (attempt any three). [3x8 = 24]**

15. Explain Bresenham's Line Drawing Algorithm. Trace the BSA algorithm for line end points (10,15), and (15,18).
16. Explain the need of machine independent Graphical Languages.
17. Describe the architecture of Raster Scan System and Vector Scan System with necessary Diagram.
18. Explain the key elements that should be included in a project description.

**The End**