

**FOURTH SEMESTER UG DEGREE EXAMINATION, APRIL 2025**  
**(Regular/Improvement/Supplementary)**

**BCA**

**GBCA4C08T: COMPUTER GRAPHICS**

**Time: 2 Hours**

**Maximum Marks: 60**

**SECTION A: Answer the following questions. Each carries *two* marks.**  
**(Ceiling 20 marks)**

1. Comment on differential scaling.
2. What does GIMP stand for?
3. Define translation.
4. What are the 5 parts of GIMP?
5. Give an account on RGB color system.
6. Define trivial acceptance of a line segment.
7. Mention the types of clipping.
8. What is meant by resolution?
9. State the advantages of LED.
10. What are the different techniques of polygon filling?
11. Write a note on frame buffer.
12. List down the types of color models.

**SECTION B: Answer the following questions. Each carries *five* marks.**  
**(Ceiling 30 marks)**

13. Scale the polygon with coordinates (3, 4), (8, 7) and (6, 9) by 2 points in x-direction and 3 points in the y-direction. Find the new coordinate points.
14. Discuss Flood Fill Algorithm.
15. Differentiate between CYMK, RGB and YIQ.
16. Explain Nonzero Winding Number Rule.
17. Explain the working of Shadow-Mask CRT.
18. Draw and explain 2D viewing pipeline.
19. What are the different color models? Explain.

**SECTION C: Answer any *one* question. The question carries *ten* marks.**

20. A triangle ABC with coordinates A(0,0), B(4,3), C(4,0) is scaled with scaling factors  $S_x = 2$  and  $S_y = 3$  about the vertex C(4,0). Find the transformed coordinate points.
21. Explain Sutherland-Hodgeman Polygon Clipping algorithm.

**(1 x 10 = 10 Marks)**