

**TRIBHUVAN UNIVERSITY**  
**FACULTY OF MANAGEMENT**  
Office of the Dean  
2015

Full Marks: 40  
Time: 2 hrs

**BIM / Fifth Semester / ITC 221: Computer Graphics**

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

**Group "A"**

**Brief Answer Questions:**

[10 × 1 = 10]

1. Write any three applications of computer graphics.
2. How many colors are displayed by using shadow mask method?
3. Define horizontal retrace.
4. Differentiate between ambient light and specular highlight.
5. What is the advantage of GKS?
6. What is the reason to implement homogeneous coordinate system in transformation?
7. List different types of parallel projection.
8. How hidden surface is removed in object space method.
9. What is the role of clipping in graphical package?
10. Define animation.

**Group "B"**

**Short Answer Questions:**

[5 × 3 = 15]

11. Describe any three output devices.
12. Digitize the given line with endpoints (2, 10) and (6, 5) using DDA.
13. Find the region code of vertex P(2, 4), Q(10, 14) and R(7, 5) against clipping boundary A(4, 4), B(4, 12), C(7, 4) and D(7, 12).
14. Describe the HSV and RGB color models with their geometrical representation.
15. What is polygon table? Explain.

**Group "C"**

**Long Answer Questions:**

[3 × 5 = 15]

16. Explain shading models.
17. Digitize circle with center (0, 0) and radius = 6 units.
18. Write short notes on:
  - a. A-buffer method
  - b. 3D Reflection

