B.Sc(Hons) SIXTH SEMESTER EXAMINATIONS, 2022

Subject: Computer Science **Course ID: 61512**

Course Title: Computer Graphics **Course Code: SH/CSC/602/C-14**

Full Marks: 25 **Time: 1 Hr 15 min**

The figures in the margin indicate full marks

Answer the question(s) unit-wise as instructed

UNIT I

1. **Answer any five of the following questions:** **(1× 5 = 5)**
   a. State an objective of studying computer graphics
   b. Name some hardware devices commonly used to support computer graphics
   c. Name a polygon filling algorithm
   d. Name a hidden surface removal algorithm
   e. What is projection?
   f. What do you mean by vanishing point?
   g. Name some issues in geometric modelling
   h. Name a software which is commonly used to support animation

UNIT-II

2. **Answer any two of the following questions:** **(2× 5 = 10)**
   a. Describe typical scan displays, random and raster.
   b. Describe parallel and perspective projections in brief.
   c. Write and explain an algorithm used for hidden surface removal.
   d. Describe the basic colour model used in surface rendering in brief

UNIT-III

3. **Answer any one of the following questions:** **(1× 10 = 10)**
   a. Name three basic geometric transformations. Describe every such transformation for 3D objects.
   b. Write Bresenham's circle drawing algorithm and use it to compute 4 points on any quadrant of the circle $X^2 + Y^2 = 16$.