

## C1-R4 : ADVANCED COMPUTER GRAPHICS

**NOTE :**

1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

**Time : 3 Hours**

**Total Marks : 100**

1. (a) What is Key frame system used in Animation ?  
(b) Explain the CMYK Color model. Where it is used ?  
(c) What is three point perspective projections ?  
(d) What is Anti aliasing ?  
(e) Convert RGB files to the color model used in JPEG images.  
(f) In HSV color model, what is S and V and what are their values.  
(g) What is dithering ? Briefly explain with some diagrams. (7x4)
2. (a) Explain HLS color model. How it is different from RGB color model ?  
(b) What is the Octree representation to represent the solid model ? (9+9)
3. (a) Solid objects are usually modelled by *polyhedrain* a computer representation. Explain with suitable example.  
(b) What is Non-Uniform Non rational B Spline ? Explain with examples. (9+9)
4. (a) For what purpose in graphics, the sweep are used ?  
(b) There are 12 standard principles of animation. Discuss Anticipation and staging (9+9)
5. (a) Discuss the Gouraud versus phong shading.  
(b) In Computer Graphics, we want to determine whether a polygon of a object is visible or not. Which algorithm you will use ? (9+9)
6. (a) In Computer vision applications, for what purpose the appel's algorithm is used.  
(b) For solid object modelling, discuss the advantages of Binary space partitioning tree. (9+9)
7. (a) What is warn model and where it is used ? (9+9)  
(b) What are the disadvantages of ray tracing algorithm ?

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