

## UNIT IV (RENDERING)

2Marks

### 1. What do you mean by shading of objects?(nov/dec 2011)

A shading model dictates how light is scattered or reflected from a surface. The shading models described here focuses on achromatic light. **Achromatic light** has brightness and no color; it is a shade of gray so it is described by a single value its intensity.

A shading model uses two types of light source to illuminate the objects in a scene :

**point light sources** and **ambient light**.

### 2. What is texture?( nov/dec 2011)

The realism of an image is greatly enhanced by adding surface texture to various faces of a mesh object. The basic technique begins with some texture function, **texture(s,t)** in **texture space** , which has two parameters s and t. The function texture(s,t) produces a color or intensity value for each value of s and t between 0(dark)and 1(light).

### 3. What do you mean by sliding the camera?(nov/dec 2012)

Sliding the camera means to move it along one of its own axes that is, in the u, v and n direction without rotating it. Since the camera is looking along the negative n axis, movement along n is forward or back. Movement along u is left or right and along v is up or down.

### 4. What are the types of reflection of incident light?(nov/dec 2013)

There are two different types of reflection of incident light

- Diffuse scattering
- Specular reflections

### 5. Define rendering (may/june 2013)

**Rendering** is the process of generating an image from a model (or models in what collectively could be called a *scene*file), by means of computer programs. Also, the results of such a model can be called a rendering

### 6. Differentiate flat and smooth shading (may/june 2013)

The main distinction is between a shading method that accentuates the individual polygons (**flat shading**) and a method that blends the faces to de-emphasize the edges between them (**smooth shading**).

### 7. Define shading (may/june 2012)

**Shading** is a process used in drawing for depicting levels of darkness on paper by applying media more densely or with a darker shade for darker areas, and less densely or with a lighter shade for lighter areas.

### 8. What is a shadow? (nov/dec 2012)

Shadows make an image more realistic. The way one object casts a shadow on another object gives important visual clues as to how the two objects are positioned with respect to each other. Shadows conveys lot of information as such, you are getting a second look at the object from the view point of the light source.

### 9. What are two methods for computing shadows?

Shadows as Texture

Creating shadows with the use of a shadow buffer

### 10. Write any two Drawbacks of Phong Shading

Relatively slow in speed

More computation is required per pixel

### 11. What are the two common sources of textures?

- Bitmap Textures
- Procedural Textures

**12. Write two types of smooth shading**

- Gouraud shading
- Phong shading