

Quiz 1 solution

19th September 2006

1 Multiple Choice

1. a
2. b
Points on infinity plane are in the form of $X = (x, y, z, 0)^T$ satisfying the equation

$$L^T X = 0$$

,where L represents the plane at infinity and the homogeneous representation will be $(0, 0, 0, 1)^T$.

3. c
4. bd
a is valid for general perspective camera. In c, say a cube with 90 degree corner, the angle will not be preserved.
5. a
Radiance traveling in vacuum(no occluders) will stay the same.
6. c
7. b

2 Short Questions

1. shrimp(Frank hopes you could be in class and happen to remember it.)
2. Definition keywords: subtended by a patch at a point.
Hemisphere 2π .
3. $B = a \cdot N$, where N is the surface norm(a unit vector) and a is the albedo which is a scalar. So $a = \|B\|, N = \frac{B}{\|B\|}$.

3 Extra

key words:

$$B_i = E_i + \rho_i \sum_j F_{ij} B_j$$