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CSC 322

Blender Activity 4 – Advanced Rendering

1.)

1.) Diffuse:
   a) Direct: In this rendering, the image is showing black and white only, without any color. This is because the image is not taking direct light.
   b) Indirect: In this rendering, the image has some color but the lighting inside the room seems to be dark. Also, both spheres are completely black and not reflecting light. This is cause by the indirect, global illumination.
   c) Color: In this rendering, the image looks as if its completely rendered in 2D. This is because there aren't the color changes needed to give out the illusion of a 3D image on a 2D screen.

2.) Glossy:
   a.) Direct: In this rendering, one can only see the direct light that is shinning off the two spheres; they look like to white spots.
   b.) Indirect: In this rendering, one can only see the two spheres reflecting their surroundings. This is because the global illumination is bouncing off the other objects and into the sphere, which reflect off light due to their material composition.
   c.) Color: In this rendering, the effect is the same as that of Glossy-Indirect but the spheres are only reflecting off white/black colors because the light of colors is disabled but there is still light that is reflecting off objects and into the reflective spheres.

3.) Transmission:
   a.) Direct: In this rendering, there is only a plain, black image.
   b.) Indirect: In this rendering, only the glass sphere is reflecting it's surrounding with color while everything else is pitch black.
   c.) Color: In this rendering, we can only see the glass sphere, just like in Transmission-Indirect but, although the glass sphere is reflecting it's surroundings, it is not reflecting with color, only in white.

2.)

With the effect of motion blur, one can see the movement of the cube from frame 1 to frame 3 with a realistic view of a fast movement, almost how one sees a car move when in high speed.

3.)

Here, the depth of field effect seems to focus the camera on the cube while other objects get blurrier the farther they are from the cube. This effect can enhance the scene's realism as when the ordinary human eye focuses on certain objects, its surroundings are not seen as clear and the farther the objects in the surrounding area are, the less our eye focuses on them while looking at a fixed point.

4.)

In this case, the effect of volumetric absorption gives a sort of blurriness and the light that is illuminating the surroundings is only coming from the main light source that is on the ceiling of the room.