Computer Graphics I Course Points for Lab Assignments

Part I - Whitted-style Ray Tracer (max. 29 points)

Excercise	*Points*
Pin hole camera	2
Normal shader	1
Lambert shader	1
Phong/Whitted shader	3
Hard shadows	1
Textures with bilinear interpolation	1
Reflections	3
Refractions	5
Environmental map (cube map or spherical map)	2
Gamma correction	1
Super sampling	2
Depth of field	1
BVH (construction and traversal)	4
SAH	2

Part II - Path Tracer (max. 23 points)

Excercise	*Points*
Mirror BRDF *	1
Lambert BRDF *	2
Modified Phong BRDF (energy-conserved) *, **	3
Modified Phong BRDF (energy-normalized) *, **	4
PBR with Cook-Torrance BRDF *, **	5
Next event estimation (direct light sampling)	4
Image-based lighting (with and w/o importance sampling)	2
Russian roulette	2

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Notes:
* Use of importance sampling is expected.
** Furnace test should be provided for all scenes used during handover.