CSE252A: Computer Vision I Sample types of questions

Example Short Answer type questions:

Expected that you could answer in a few sentences.

- 1. (3 pts.) What type of filter would you use to remove impulse (salt and pepper) noise?
- 2. (4 pts.) Consider a real pinhole camera with an ideal diameter. Consider changing the diameter. As the diameter is increased, the image degrades. Likewise, when the diameter is shrunk, the image also degrades. Why is this?
- 3. (4 pts.) How is hysteresis thresholding used in the Canny Edge detector?

Examples longer answer type of question; If necessary, explain your answer and assumption

4. (8 pts.) You should be familiar with the idea of region matching in stereo. Show that the sum of squared differences (SSD) metric, when normalized by image variance, is equivalent to normalized cross-correlation.