Day 5.

Question 1. What is spectral clustering? What is the input and output? What are affinities. How can spectral clustering be applied to computer vision?

Question 2. What is the probability formulation used in region competition? Why is it a more realistic model of images than the weak smoothness models? How is inference done by region competition? How can this approach be extended to multiple image models?

Question 3. What is the Lambertian lighting model? How can it be verified by taking images of an objects under different lighting conditions? How can Singular Value Decomposition be tused to estimate the shape of the object. What ambiguity is there in this estimation of the object shape?

Question 4. What are AAMs? How do they model the shape and appearance variations of objects? What are the limitations of AAMs? What types of objects are they not good for? How can use systems like FORMs to model objects which have parts that can move relative to each other? How can the medial axis be used to decompose an object into its parts?

Question 5. What is a deformable template? How does it represent objects? What inference algorithm can be used for it?