Lecture 7 Name:

**Short questions (1p each, answer not longer than 50 words + figure)**

1. What is the total head? How to calculate the volume of water passing through the body in given time?

2. What factors influence the seepage velocity in soil?

3. How does the pH of pore water affect permeability?

4. What is the coefficient of consolidation cv?

5. How does the seepage affect the effective stress in soil?

6. What is the quick sand condition? How does it differ from liquefaction?

7. What is the Laplace equation for seepage / flow?

**Long question (6x1p, 30-50 words per each assumption)**

The assumptions for flow net calculations are below:

1. Flow lines cross equipotential lines at right-angles
2. Flow lines cannot cross other flow lines.
3. Equipotential lines cannot intersect other equipotential lines.
4. Impermeable boundaries and lines of symmetry are flow lines
5. Bodies of water such as reservoir are equipotential lines
6. We usually construct the flow net such that each element be a curvilinear square.

Discuss the reasons / meaning for each of the assumptions (1-6)