

# CE 381 : Engineering Properties of Soils and their measurements

## Homework#2

1. The following information is obtained from a sieve analysis:

U.S. sieve no	Mass of soil retained (g)
4	11
10	40
20	58
40	88
60	140
80	120
100	207
200	56
Pan	10

Plot the grain-size distribution curve.

Determine the effective size, the uniformity coefficient, the coefficient of gradation.

Is this a poorly graded or well-graded soil?

2. Classify the following soils according to the AASHTO classification system:

Soil	<u>Sieve analysis. (% finer)</u>			L.L.	P.L.
	No.10	No.40	No.200		
A	92	81	51	29	16
B	61	44	22	--	NP
C	100	84	71	55	21
D	95	69	30	42	24

3. Classify the following soils according to the Unified classification system:

Soil	<u>Sieve analysis. (% finer)</u>							L.L.	P.L.
	No. 4	No. 10	No. 20	No. 40	No. 60	No. 100	No. 200		
E	94	63	21	10	7	5	3	---	NP
F	100	100	100	94	82	66	45	36	14
G	100	100	100	99	95	90	86	55	27