## Isfahan University of Technology (IUT)Department of Civil EngineeringErosion and Sediment Engineering1402-1403Term IIAssignment #3Bed-Suspended, Total LoadsDue: 16/02/1403

1 The students are asked to form 2-person groups and using the following data and the data from the samples obtained in Project 1, calculate the bed-load discharge using the methods proposed by Schoklitsch and Meyer-Peter et al. Then, find a software and compute the bed-load discharge. Each group should compare the results of the software with their own results and comment on the software capabilities and faults.

D = 0.5 m;  $S_0 = 0.00144$ ; B = 21 m; V = 1.0 m/s

2 Given the following data, compute the suspended load weight discharge using Brooks method.

$q = 9 \text{ m}^{3}/\text{s/m}$	;	n = 0.02	;	R = D = 5  m ; $S = 0.00$	01
$d_{50} = 0.2 \text{ mm}$	;	a = 0.25  m	;	$C_a = 0.0001$ by dry weight	

3 Given the following data, compute the Total load using Einstein method.  $Q = 40 \text{ m}^3/\text{s}$ ;  $S_0 = 0.0008$ ; B = 5 m

Sieve Anarysis Results.				
Size group	Percentage of material			
(mm)	available			
0.062-0.125	40			
0.125-0.250	45			
0.250-0.500	15			

Sieve Analysis Results: