Isfahan University of Technology (IUT) Department of Civil Engineering
Erosion and Sediment Engineering 1404-1405 Term II
Assignment #3 Sediemnt Loads Due: 27/02/1405

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1 The students are asked to calculate the bed-load discharge using the methods proposed by Schoklitsch, Meyer-Peter et al., and Meyer-Peter and Müller, using the following data and the data from the samples obtained from Zayandeh-Roud, Then, find a software and compute the bed-load discharge. Compare the results of the software with your 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.

$q = 9$ m^3/s/m ; $n = 0.02$; $R = D = 5$ m ; $S = 0.001$
$d_{50} = 0.2$ mm ; $a = 0.25$ m ; $C_a = 0.0001$ by dry weight

3 Given the following data and the data from the samples obtained from Zayandeh-Roud, compute the Total load discharge using Einstein method.

$Q = 55.5$ m^3/s ; $W = 41.0$ m ; $R = D = 2.0$ m ; $S = 0.000077$
$V = 0.69$ m/s