TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR BACHELOR OF SCIENCE IN CIVIL ENGINEERING (BSCE)

ECE 2503: WATER RESOURCES ENGINEERING I

END OF SEMESTER EXAMINATION
SERIES: AUGUST 2013
TIME ALLOWED: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions.
Answer question **ONE (COMPULSORY)** in section **A** and any other **TWO** questions from section **B**
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

SECTION A

Question One (Compulsory)

a) Compute the discharge over an ogee weir with $C_w = 1.9$ at a head of 1.5m **(4 marks)**
The weir length is 60m, the weir crest is 3m above the bottom of the approach channel, and the approach channel is 60m wide.

b) Give the main reasons why provision for scour protection is less important in discharge through sluice ways than that over spillways. **(2 marks)**

c) Describe the term "overflow spillway" **(5 marks)**

d) Describe the sediment transport by streams in great details **(19 marks)**

SECTION B (Attempt any TWO questions)

Question Two

Describe in greater detail how to control Reservoir sedimentation. **(20 marks)**

Question Three

Outline the reasons for the control and regulation of water **(20 marks)**

Question Four

Describe the organizational structure for water planning in the country. **(20 marks)**

Question Five

Describe in great detail the steps to be followed in planning of water resources projects. **(20 marks)**