



TECHNICAL UNIVERSITY OF MOMBASA
FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN MARINE RESOURCE MANAGEMENT

BSMR 15S/YEAR 3/ SEMESTER 1

AES 4315: COASTAL HYDROLOGY

SPECIAL/ SUPPLIMENTARY EXAMINATIONS

SERIES: SEPTEMBER 2018

TIME: 2 HOURS

Instructions to Candidates

This paper consists of FIVE questions

Answer question ONE (COMPULSORY) and any other TWO questions.

This paper consists of two printed pages.

Mobile phones are NOT allowed in the examination room

QUESTION ONE. (30 MARKS)

- a) Define the following terms. (5marks)
- i. Sublimation
 - ii. Precipitation
 - iii. Infiltration
 - iv. Streamflow
 - v. Groundwater discharge
- b) Explain the catchment theory of hydrology. (4marks)
- c) Illustrate in detail the hydrological cycle. (5marks)
- d) Enumerate environmental problems associated with urbanization and natural cycle of water. (4marks)
- e) Discuss briefly physical principles involved in water treatment. (5marks)
- f) Outline environmental problems of water supply distribution. (4marks)
- g) Mention THREE ways of protecting water catchment areas. (3marks)

QUESTION TWO. (20 MARKS)

Discuss effects of Climate Change on Hydrologic Cycle and Water Resources. (20marks)

QUESTION THREE. (20 MARKS)

Discuss factors affecting water supply at the coast. (20marks)

QUESTION FOUR. (20 MARKS)

Discuss various ways of protecting surface water including rivers, streams, lakes, ponds and storage reservoir. (20marks)

QUESTION FIVE. (20 MARKS)

- a. Describe theory of sanitation as given by Florence Nightingale. (12marks)
- b. Briefly describe applications of water to ensure sanitation. (8marks)