



# KENYATTA UNIVERSITY

## UNIVERSITY EXAMINATIONS 2011/2012

### SECOND SEMESTER EXAMINATION FOR THE DEGREE OF SCIENCE (COASTAL AND MARINE RESOURCE MANAGEMENT)

#### SMR 204: INTRODUCTION TO CHEMICAL OCEANOGRAPHY

DATE: Wednesday 28<sup>th</sup> March 2012

TIME: 4.30p.m – 6.30p.m

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#### INSTRUCTIONS

Answer ALL questions from Section A and any ONE Question from Section B. Within a section all questions carry equal marks. Illustrate your answers with diagrams and give examples wherever appropriate.

#### Section A: Answer ALL questions – (40 marks)

1. Explain salinity in oceans and the conditions that influence it.
2. Describe briefly the role of biological processes in the distribution of carbondioxide oxygen in seawater.
3. Describe briefly the different chemical constituents found in the ocean.
4. Discuss briefly residence time of sea water and its importance.
5. Discuss briefly factors influencing solubility of gases in seawater.
6. Describe the input processes for major dissolved chemical constituents in seawater.
7. Describe briefly the management interventions for control of the anoxic conditions in marine ecosystems.
8. Explain processes used to extract salt and freshwater from seawater.

#### SECTION B: Answer any ONE question (30 marks each)

9. Discuss ocean acidification.
10. Discuss the factors that influence nutrients concentration in the sea.
11. Discuss marine pollution and possible intervention measures.