



**NATIONAL OPEN UNIVERSITY OF NIGERIA  
14-16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS  
SCHOOL OF SCIENCE AND TECHNOLOGY  
JANUARY/FEBRUARY 2013 EXAMINATION**

**PROGRAMME:** Environmental Science and Resource Management  
**COURSE CODE:** ESM 322  
**COURSE TITLE:** WATER AND WASTE WATER MANAGEMENT  
**COURSE UNIT:** 2 units.  
**TIME:** 2hours 30 minutes.  
**INSTRUCTION:** Answer any 4 questions.

1. Explain why recycling and reuse of waste water can be supplementary to existing water sources. (18 marks)
2. Explain briefly each of these parameters in relation to a water body:
  - (a) Alkalinity (6 marks)
  - (b) Turbidity (6 marks)
  - (c) Temperature (6 marks)
3. Discuss the importance of organic matter in the cycling of nutrients in aquatic systems. (18 marks)
4. Discuss 5 main pollutants of freshwater (18 marks)
5. List and describe the main techniques for treating waste water. (18 marks)
6. List the various types of waste waters and briefly describe any 2 of them. (18 marks)