

DEPARTMENT OF CHEMISTRY  
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA  
FIRST SEMESTER EXAMINATION 2012/2013 SESSION

COURSE CODE: CH/M316

UNITS: 2

COURSE TITLE: ENVIRONMENTAL CHEMISTRY

TIME ALLOWED: 2 HOURS

INSTRUCTIONS: ANSWER ANY THREE (3) QUESTIONS

- Q1. (a) Define sampling, stating the things to note during sampling (8 Marks)
- (b) Name four chemical parameters in water quality monitoring and explain how the monitoring is done. (10 Marks)
- (c) What is Automatic Chemical Analysis? (2 Marks)
- Q2. (a) Define 'Global Warming' (2 Marks)
- (b) Describe how each of the following could lead to global warming:
- (i) Deforestation (ii) Depletion of ozone layer (8 Marks)
- (c) What are the consequent effects of global warming? (6 Marks)
- (d) List four green-house gasses and their respective sources (4 Marks)
- Q3. (a) State two processes that can
- (i) Increase atmospheric carbon dioxide (ii) Decrease atmospheric carbon dioxide (4 Marks)
- (b)(i) State three air pollutants and their sources (6 Marks)
- (ii) Describe three categories of Pollution effects (3 Marks)
- (c) List four chemical fluxes in the nitrogen cycle (4 Marks)
- (d) Describe three methods of waste disposal (3 Marks)
- Q4. (a) (i) Of what use are CFCs. put into, which encourages depletion of ozone layer (4 Marks)
- (ii) What are the qualities that make CFCs suitable for such uses (3 Marks)
- (b)(i) State three water pollutants and their respective health effects (6 Marks)
- (ii) What are the three stages of photochemical chain reactions (3 Marks)
- (c) In February 2013, an asteroid passed the earth at a distance of 28,000 km. In the same month there were falling fragments of meteors in Russia. What were the immediate environmental effects of each of these occurrences. (4 Marks)