



NATIONAL OPEN UNIVERSITY OF NIGERIA

14/16, Ahmadu Bello Way, Victoria Island

SCHOOL OF SCIENCE AND TECHNOLOGY

October, 2013 Examination

Course Code: ESM 431

Time Allowed: 2 Hours

Course Title: Environmental Health and Safety

INSTRUCTION: Answer any four Questions

Question 1A

- i. Effective environmental control requires standards, Discuss
(2 marks)
- ii. A national policy on the environment was promulgated in 1998, list the 5 goals of the policy.
(5 marks)

Question 1B

- i. Define Environmental Management System.
(1 mark)
- ii. List and discuss the four main elements of Environmental Management Systems.
(4marks)

Question 1C

- i. Explain the ISO 14001
(2marks)
- ii. List seven elements of ISO 14001
(3½ marks)

Question 2A

- i. Define and explain the term Environmental Impact Assessment.
(2 marks)
- ii. List and Discuss 5 processes of Environmental Impact Assessment.
(5 marks)

Question 2B

- i. List 5 challenges to Environmental Impact Assessment in Nigeria.
(2½ marks)
- ii. In a tabular form explain 8 relationships between Environmental impact assessment and Strategic environmental assessment.
(4 marks)

Question 2C

- i. In a tabular form compare the Environmental Impact Assessment (EIA) and Strategic Environmental Aspect (SEA) processes.
(3 marks)
- ii. Define Strategic Environmental Assessment by Therivel.
(1 mark)

Question 3A

- i. Define Environmental Audit.
(1 mark)

- ii. Discuss the three broad classes of Environmental Audits. (3 marks)
- iii. List 5 benefits of Environmental Audits. (2½ marks)

Question 3B

- i. Define Cost Benefit Analysis. (1 mark)
- ii. List the 3 main stages of Cost Benefit Analysis. (1½ mark)
- iii. Draw the Cost Benefit Analysis Framework. (3½ marks)

Question 3C

Discuss extensively the three groups of valuation techniques used in assessing Costs and Benefits. (5 marks)

Question 4A

- i. According to the Society for Environmental Toxicology and Chemistry (SETAC), Define the Life Cycle Assessment (LCA). (2 marks)
- ii. List and discuss the 4 key steps to the Life Cycle Assessment as defined by ISO 14000. (4marks)

Question 4B

- i. List 5 Internal and External uses respectively of Life Cycle Assessment. (5 marks)
- ii. Define the following terms: Clean technology, Cleaner technology, and Cleaner production. (3 marks)

Question 4C

List the 7 uses of Clean Technology in Environmental Management System. (3½ marks)

Question 5A

- i. Define the following terms: Risk Management, Risk Assessment. (2 marks)
- ii. List and discuss the 6 stages of Risk Assessment. (6 marks)
- iii. List the four stages in Risk Management. (4 marks)

Question 5B

- i. What is Sustainable Development as defined by the UK Department of the Environment, Transport and Regions (1998)? (1½ mark)
- ii. The agreement which supports Sustainable Development covers several areas, in a tabular form; list these agreements, the sectors and drafting agency. (4 marks)

Question 6A

- i. Define the following terms: Occupational Health and Safety, Occupational Health and Safety Management System, Occupational Health and Safety Policy.
(3 marks)
- ii. List the 8 essential elements of Occupational Health and Safety policy.
(4 marks)

Question 6B

- i. List and briefly describe the 4 elements of the Occupational Health and Safety Management System. (4 marks)
- ii. Briefly explain 7 strategies of Occupational Health and Safety policy.
(3½ marks)

Question 6C

- i. Define Accidents according to ILO and WHO.
(1 mark)
- ii. List and discuss the 2 groups of causes of accidents.
(2 marks)