



FACULTY OF ENGINEERING
END OF SEMESTER EXAMINATIONS - APRIL 2025

PROGRAMME: BACHELOR OF CIVIL ENGINEERING

YEAR/SEM: YEAR 2/SEMESTER 2

COURSE CODE: HUM2207

NAME: ENVIRONMENTAL ENGINEERING I

DATE: 2025-04-16

TIME: 9:00AM-12:00PM

INSTRUCTIONS TO CANDIDATES:

1. Read the instructions very carefully
2. The time allowed for this examination is STRICTLY three hours
3. Read each question carefully before you attempt and allocate your time equally between all the Sections
4. Write clearly and legibly. Illegible handwriting cannot be marked
5. Number the questions you have attempted
6. Use of appropriate workplace examples to illustrate your answers will earn you bonus marks
7. Any examination malpractice detected will lead to automatic disqualification.

DO NOT WRITE ANYTHING ON THE QUESTION PAPER

Section A Choose 3 Questions from this section

Question 1:

- a. a. Explain the four structured stage cycle that a company can use to implement ISO14001 (20 marks)

Question 2:

- a. a. Define sustainable development. (2marks)
b. b. In detail, describe the four sustainable Development measures under The National Environment Act. (4 marks)
c. c. The Water Act is one piece of Uganda's Environmental legislation with provisions to enhance sustainable Development of water resources. The key objective of protecting the environment and in turn ensuring all water resource-based development is sustainable. Explain the five important aspects in the Act. (10 marks)
d. d. The National Environment Act, provides for a variety of mechanisms to ensure that the law will be enforced, that go beyond the traditional, command and sanction approach of criminal law. Explain the mechanisms stated to ensure law enforcement. (9 marks)

Question 3:

- a. a. Define environmental Management Plan and state the main objective of carrying out EMP. (4marks)
b. b. Explain at least 10 long term objectives of carrying out environmental management plan. (10 marks)
c. c. List 3 environmental impacts of construction of new road and 3 mitigation measures. (6 marks)

Question 4:

- a. a. Discuss environmental Global problems. (10marks)
b. b. Discuss Green technology. In detail, discuss 10 examples of Green technology. (10marks)

Section B Choose 2 Questions from this section.

Question 1:

- a. a. Define Environmental management system and ISO14001. (2 marks)
b. b. Define certification and explain the major steps that are involved in certification process. (18 marks)

Question 2:

- a. a. List 2 mandates of National Environment Management Authority (NEMA) (4marks)
b. b. What are the functions of Executive Committee under the Local Government Act of 1995 in Uganda. (3 marks)
c. c. The Local Government Act prescribes the functions of the Act that the District council is responsible for. Clearly state those functions. (6marks)
d. d. In 1996, The Uganda wild life Act was enacted, this caused the repealing of The National Park Act and the Game (Preservation and control) Act. List down the purposes of this Act. (7 marks)

Question 3:

- a.** a. List at least 5 considerations and evaluations for carrying out investigations and management of water quality on water resources. **(5 marks)**
- b.** b. Describe the effects of organic materials on aquatic environment. **(15 marks)**

Question 4:

- a.** a. In detail explain the procedure to be followed in carrying out an Environmental Impact Assessment. **(20 marks)**