



MAASAI MARA UNIVERSITY
UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR
THIRD YEAR SECOND SEMESTER
SCHOOL OF TOURISM AND NATURAL RESOURCE
MANAGEMENT
MASTERS IN ENVIRONMENTAL PLANNING AND
MANAGEMENT

COURSE CODE: SES 805

COURSE TITLE: ENVIRONMENTAL IMPACT ASSESSMENT AND AUDIT

DATE: 23/04/2019

TIME: 8.30 -11.30 AM

INSTRUCTIONS TO CANDIDATES

Section A is compulsory

Answer any **THREE** questions in section B

This paper consists of 2 printed pages. Please turn over

SECTION A: ANSWER ALL QUESTIONS (25 marks)

1. Write short notes on:

- a) Consumption & pollution audit. [2 marks]
- b) Matrices method of impact assessment. [2 marks]
- c) Pre and post audit activities [2marks]

2. Describe and explain why the following steps are needed as part of the EIA

- process a. Screening [3 marks]
- b. Scoping [2marks]
- c. Mitigation [2marks]
- d. Environmental management plan [3 marks]
- e. EIA report/ Statement [2 marks]

3. Explain the role of the following in EIA

- process a. Public participation [2 marks]
- b. Project proponent [2marks]
- c. NEMA [2 marks]
- d. Interviews [2 marks]
- e. EIA experts [2 marks]

SECTION B: ANSWER ANY THREE QUESTIONS (45 marks)

Question 4

- a) Discuss the importance of Environmental Impact Assessment (EIA) in sustainable environmental management and highlight any five characteristics of EIA best practice **[7 marks]**
- b) Discuss any four widely recognized deficiencies of Strategic Environmental Assessment (SEA) and EIA as tools used for environmental assessment

[8 marks]

Question 5

- a) Explain the rationale and importance of consultation and public participation (CPP) in environmental management **[7 marks]**
- b) Discuss any four methods you would use to undertake CPP during the EIA process and indicate the strengths and limitations of each of the methods

[8 marks]

Question 6

- a) Using a named proposed project of your choice, describe the key potential impacts that would result from the implementation of the project **[7 marks]**
- b) Describe any four methods used for impact analysis clearly indicating the strengths and limitations of each of the methods

[8marks]

QUESTION 7

- a) Discuss the key principles and criteria used by a Regulatory Authority to make informed decisions regarding the environmental viability of a proposed project based on the EIA Report **[7 marks]**

- b) For a proposed tea processing plant in Kericho County, describe the socio- economic impacts that will be associated with the implementation of the project and develop an appropriate social impact assessment management plan (SIAMP) to ensure proper mitigation of the adverse impacts **[8 marks]**

SECTION B (CHOOSE THREE QUESTION ONLY)

11. a) With the aid of a well labeled diagram explain the main features of a typical infrared photometer used in detection of CO in the air and mention any two inherent molecules in this analysis [5 marks]

b) In your own words , briefly explain the following terms

- Phytoremediation [1.5 marks]
- BOD [1.5 marks]
- Water hardness [1.5 marks]
- Acid rain [1.5 marks]
- Fuel cell [1.5 marks]
- Environmental chemistry [1 marks]
- Photochemical Smog [1.5 marks]

12. Explain the various methods of secondary treatment of sewage , and explain the purpose of each secondary treatment stage [15 marks]

13. Discuss the following physical-chemical component / indicator of water quality with explanations how they are measured

(a) Turbidity[3 marks]

(b) Dissolved oxygen[3 marks]

(c) Electrical Conductivity(EC) [3 marks] (d) Chemical Oxygen

Demand[3 marks] (e) Total dissolved solids (TDS) [3 marks]

14. The COD of a water sample is 25 mg of O₂ per litre. What volume of 0.0010 mol L⁻¹

Na₂Cr₂O₇ solution is required to titrate a 40 mL sample to end-point? { Hint: The dichromate ion oxidizes 1.5 times the material that molecular oxygen does } [15 marks]