

UNIVERSITY OF SWAZILAND
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCE
MAIN EXAMINATION [DEC 2014]

COURSE TITLE	-	ENVIRONMENTAL ASSESSMENT
COURSE CODE	-	EHS 550
ACADEMIC YEAR	-	2014/2015
TIME ALLOCATED	-	2 HOURS

INSTRUCTIONS

1. ANSWER ANY THREE QUESTIONS

2. BEGIN YOUR ANSWERS TO EACH QUESTION ON A NEW PAGE OF THE ANSWER BOOKLET. ENSURE THAT YOU HAVE NUMBERED YOUR PAGES CORRECTLY.

3. MARKS WILL BE DEDUCTED FOR UNTIDY WORK

4. NO PAPER SHOULD BE BROUGHT INTO THE EXAMINATION ROOM.

5. BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER.

SPECIAL REQUIREMENTS: NONE

DO NOT OPEN THE QUESTION PAPER UNTIL INSTRUCTED TO DO SO BY THE INVIGILATOR.

QUESTION 1 : 25 MARKS

1. Environmental Pollution results from the interaction between human beings and the ecosystems in pursuit of economic development. The interaction is driven by certain forces that put pressure on the available resources resulting to a changed environment.
 - a. Give **one example** of the driving forces referred to in the paragraph [1]
 - b. Discuss the resultant impacts of these drivers to water resources [4]
 - c. State **two** possible response mechanisms that can be put in place to control the situation and give on example of each [4]
 - d. Distinguish between environmental **pollution** and **waste** [1]
2. It has been proven that the global climate system is changing. Though changes in climate are expected naturally, the quest for economic growth has exacerbated the situation over the years.
 - a. Identify **two** sectors that contribute significantly to Climate Change and describe their impacts [8]
 - b. What are the two internationally binding instruments for Climate Change [2]
3. Most urban areas of developing countries are characterized by overpopulation and shortage of social services. Briefly describe how these factors can result to Health Care Risk problems [5]

QUESTION 2 : 25 MARKS

1. The National Solid Waste Management Strategy (NSWMS) identifies key leading institutions for the management of waste. These institutions have to ensure the proper management of the waste without assuming the legal responsibilities set out in the Waste Regulations, 2000.

Copy and complete the table below; [4]

INSTITUTION	RESPONSIBILITY
	General Waste in Urban Areas
Ministry of Health (MoH)	
	Rural and peri-urban areas
Swaziland Environment Authority (SEA)	

2. Segregation is important in waste management and can be done according to the risk exposure level to the waste. Give **two** examples of the type of waste that fall within the categories listed below;
 - a. Low Risk Waste [2]
 - b. Medium Risk Waste [2]
 - c. High Risk Waste [2]
3. State **three** non-burning methods for rendering Health Care Risk Waste non-infectious [3]
4. Identify and discuss **three** major Municipal Waste Management challenges facing developing countries [6]
5. Water use is a function of availability and quality. Explain how water availability is important in both development and water pollution issues [6]

QUESTION 3 : 25 MARKS

1. Most Greenhouse Gases (GHGs) are naturally present in the atmosphere. However, there has been an observed increase in the GHGs concentration in the atmosphere due to certain anthropogenic activities resulting to global warming.
 - a. Identify the major Greenhouse Gases responsible for global warming and their primary sources[10]
 - b. Discuss the effects of global warming to human health [5]
 - c. Give **two** examples of Air Pollution Control Systems that can be used by industry to control the emission of GHGs[2]
2. Global warming is also a result of the release of synthetic chemicals used in production processes. They are collectively referred to as Ozone Depleting Substances (ODS).
 - a. Identify one of the Ozone Depleting Substances used in manufacturing and describe its uses [5]
 - b. How has Swaziland responded to the international obligation of controlling the use of ODS [3]

QUESTION 4 : 25 MARKS

1. Resource extraction and processing to meet human needs can result to serious environmental pollution.
 - a. Discuss the pollution effects (impacts) associated with Mining of minerals. [10]
 - b. Draw up an Environmental Management Plan for each of the impacts identified [10]

2. Some chemicals, particularly those used in agriculture and pharmaceuticals have been banned internationally due to their chronic effects
 - a. What class of chemicals is referred to by the statement [2]
 - b. What are the common characteristics of this category of chemicals [3]