

UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DIPLOMA IN ENVIRONMENTAL HEALTH SCIENCE

SUPPLEMENTARY EXAMINATION PAPER 2012

TITLE OF PAPER	:	EXCRETA AND SEWAGE MANAGEMENT
COURSE CODE	:	EHS 204
DURATION	:	2 HOURS
MARKS	:	100 MARK
INSTRUCTIONS	:	READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
	:	ANSWER ALL FOUR QUESTIONS
	:	EACH QUESTION CARRIES 25 MARKS
	:	WRITE NEATLY & CLEARLY
	:	NO PAPER SHOULD BE BROUGHT INTO NOR OUT OF THE EXAMINATION ROOM
	:	BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER

DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR

QUESTION ONE

1. Using a sketch show the following.
 - a. Drain layout
 - b. Branch drain
 - c. Sewer line
 - d. Point where a drain can be disconnected from the sewer line.

(20 marks)
2. When do we say a drain is disconnected from the sewer line?

(5 marks)

QUESTION TWO

1. You are a Health Inspector employed by the City Council of Mbabane and you are asked to inspect a newly constructed drainage works in a semi-developed urban homestead. List ten (10) items that you will inspect and say for what importance are they in drainage works.

(20 marks)
2. What are five effects of indiscriminate sewage disposal?

[5 marks]

QUESTION THREE

- a) Explain how floating and sand material (minus organic) suspended in sewage can be removed in the primary treatment of sewage. Indicate how the screenings can be disposed.

(10 marks)
- b) What do you understand by sedimentation in sewage treatment and mention three areas in the sewage treatment plant where sedimentation takes place. How is the residue of sedimentation disposed?

(15 marks)

QUESTION FOUR

- a) Sketch the different types of joints used to connect different pipes made of different material.

(10 marks)
- b) With an aid of diagrams show (in each) the different types of:
 - i. traps
 - ii. depth of seal in the drainage works
 - iii. water holding the seals
 - iv. situation when a seal is broken

(10 marks)
- c) Using a sketch, show five places where inspection chambers are placed in drainage of a house.

(5 marks)