



UNIVERSITY OF SWAZILAND
Faculty of Health Science

Department of Environmental Health
Sciences

Main Examination 2011

Title of paper: Excreta and Sewage Management

Course code: EHS 204

Time allowed: 2 HOURS

Marks allocation: 100 Marks

Instructions:

- 1) Answer **Four** questions
- 2) Each question is weighted 25 marks
- 3) Write neatly and clearly
- 4) Begin each question in a separate sheet of paper

This paper is not to be opened until the invigilator has granted
permission

EHS 204 Excreta and Sewage Management Final Examination 2011

QUESTION ONE

- a) Mention four points where manholes are provided in a drainage system. **(8 marks)**
- b) Explain five defects that might occur in a trap for a sanitary fitting. **(10 marks)**
- c) Mention three methods that can be used for testing drain's efficiency **(3 marks)**
- d) With the use of a sketch, show the depth of a seal. **(4 marks)**

QUESTION TWO

- a) Name three types of sanitary fittings. **(3 marks)**
- b) Describe two ways by which a water closet (W/C) can flushed its content **(10 marks)**
- c) Mention three types of urinals that can be used in male toilets. **(6 marks)**
- d) Describe ways two way of ventilating drains and sewer lines. **(6 marks)**

QUESTION THREE

- a) Describe the algal bacteria symbiosis in sewage treatment. **(5 marks)**
- b) What is the normal cause of odour in the waste stabilization ponds, system of sewage treatment? How can this problem of ordour be minimized? **(5 marks)**
- c) Define the term secondary treatment in sewage treatment. **(5 marks)**
- d) Discuss the five objectives of sewage treatment. **(10 marks)**

QUESTION FOUR

- a) How do stabilization ponds treat sewage? **(15 marks)**
- b) What are the advantages and disadvantages of using stabilization ponds to treat sewage? **(10 marks)**