



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DIPLOMA IN ENVIRONMENTAL HEALTH

FINAL EXAMINATION PAPER 2008

TITLE OF PAPER	:	BUILDING CONSTRUCTION
COURSE CODE	:	EHS 210
DURATION	:	2 HOURS
MARKS	:	75
INSTRUCTIONS	:	READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
	:	ANSWER ANY THREE (3) 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

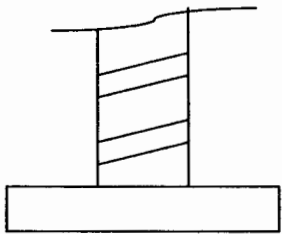
DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR

QUESTION ONE

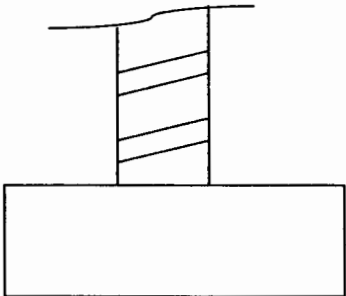
A) This section is a multiple choice question. Choose the correct answer.

1. The main method used by the architect to communicate ideas and designs to the builder is
 - a. telephone messages
 - b. drawings, plans, & details
 - c. manufactures information sheets
 - d. video tapes
2. The wall thickness and foundation widths when setting out a building are marked on
 - a. the ground floor
 - b. the concrete slab
 - c. the profile board
 - d. the four stout pegs
3. Reasons for removing vegetable soil are:
 - a. to avoid growth of plants, shrubs or trees
 - b. to have a firm base to cast concrete slab
 - c. to minimize dampness under floors
 - d. to act as dpc
4. Batching refers to
 - a. stacking of building materials
 - b. stumping base in preparation for putting foundation
 - c. producing fresh concrete
 - d. non of the above
5. The term *COURSE* in brick or block wall construction means
 - a. The number of bricks or blocks in a line of bricks or blocks.
 - b. A line of brick or blocks in the height of a wall
 - c. The pattern of laying the bricks or blocks
 - d. The number of lines of vertical and horizontal mortar joints
6. The term *BUILT ENVIRONMENT* can be defined as
 - a. Gods creation
 - b. rivers, and seas
 - c. Created by man with or without the aid of the natural environment
 - d. Surroundings which can be natural

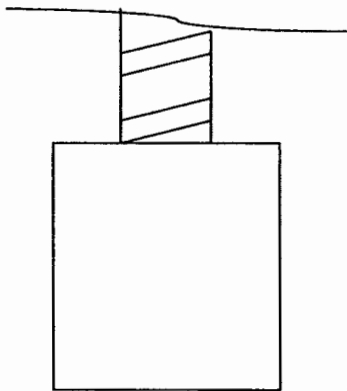
7. Which sketch illustrates a deep strip foundation?



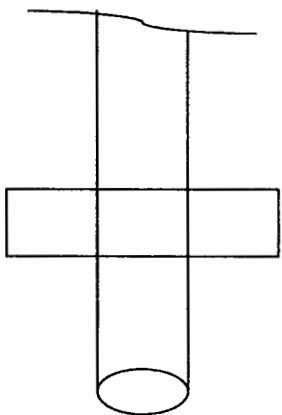
a.



b.

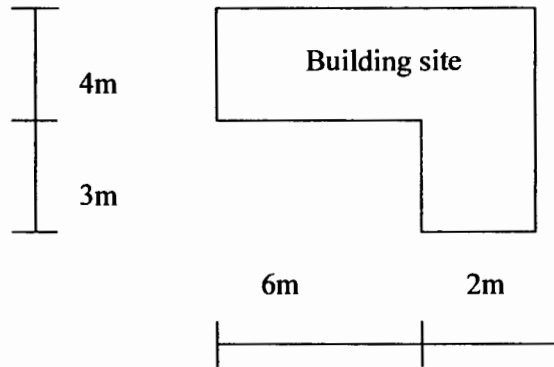


c.



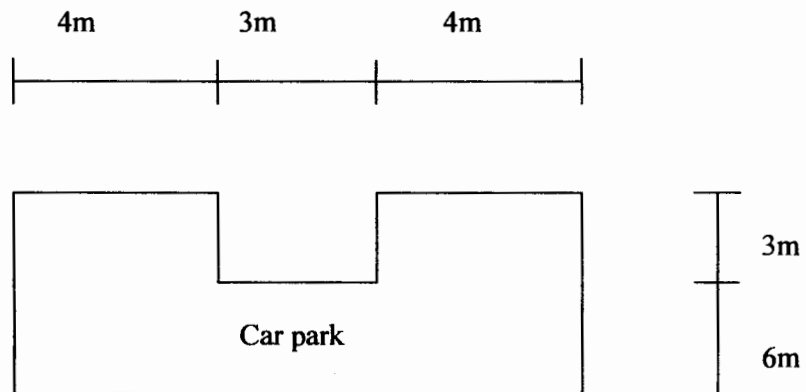
d.

8. What is the area for the soil stripping in the following building site?



- a. 37m^2
- b. 56m^2
- c. 38m^2
- d. 52m^2

9. What is the area of the paving for the car park?



- a. 90m^2
- b. 72m^2
- c. 99m^2
- d. 97m^2

10. Which of the following must a dpm not be?

- a. Impermeable to water
- b. Tough enough to remain undamaged when laying the concrete slab
- c. Continuous with the dpc in adjoining walls
- d. Permeable to water

[10]

B) Contrast the Built Environment with the Natural Environment and briefly explain why this analysis is important [5]

C) Duvan Construction Company has had difficulties constructing foundations in some of its projects. If asked to account for this before the Duvan Board of Directors what could the site engineer say? [5]

D) List three non renewable resources used in the building construction industry. State what each is used for and how its depletion can be avoided [5]

QUESTION TWO

A) List four methods for testing the compressive strength of concrete. Of these outline the procedures followed in carrying out the slump test. [15]

B) Argue convincingly why there is need to train Environmental Health Officers in Building Construction Technology [5]

C) With sketches show how curing of concrete is undertaken under three concrete conditions [5]

QUESTION THREE

A) With the aid of a sketch show the procedures involved in the setting out of a building [10]

B) State why it is essential to strip the vegetable top soil prior to the construction operation? [3]

- C)
- (i) What are hoardings [1]
 - (ii) Where do you normally require the use of hoardings? [1]
 - (iii) What are the three qualities for hoardings? [3]
 - (iv) Outline the procedures involved in the process of putting in Hoardings [2]

D) Describe how the concept of recycling may be put to use in the building construction sector [5]

QUESTION FOUR

A) Describe and differentiate between the three types of contracts in a building project [10]

[10]

B) Discuss how temperature, wind, and precipitation can result in poor indoor climate affecting comfort, health and efficiency of the building [10]

C) Write notes on the type of foundation indicated below [5]

