

**UNIVERSITY OF SWAZILAND  
FACULTY OF HEALTH SCIENCES**

**SUPPLEMENTARY EXAMINATION PAPER  
JULY 2014**

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**TITLE OF PAPER :** BUILDING CONSTRUCTION  
TECHNOLOGY I

**COURSE CODE :** EHM 201

**DURATION :** 2 HOURS

**MARKS :** 100

**INSTRUCTIONS :** ANSWER ANY FOUR QUESTIONS  
:  
: EACH QUESTION CARRIES 25 MARKS  
:  
: 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) Define the term “building” as cited by the Building Act, 1968 [2]  
(b) Write a few notes on the building material called ‘AGGREGATE’ then complete the following matrix related to its particle sizes [5]

NAME	SIZE OF PARTICLES
Coarse gravel	60.0-20.0mm
Fine gravels	
Coarse sand	2.0-0.6mm
	0.2-0.06mm
Course silt	0.06-0.02mm
	0.006-0.002mm
clay	

- (c) Draw and label the different types of roofs you know [10]  
(d) What is the utility of doors and windows in a building [4]  
(e) Drawing upon principles of floor types distinguish between *in situ* and *applied* floor finishes. [4]

### QUESTION TWO

- (a) Describe the important site lay out consideration for a successful construction project [10]  
(b) Consider the following methods used in excavation:

- Cut and fill
- Cut
- Fill

Draw sketches for each and state advantages and disadvantages of each. [10]

- (c) Draw and label fully all parts and dimensions of a brick. [5]

### QUESTION THREE

- (a) A restaurant has lodged a complaint arising out of logging and construction activities around town. Describe in detail the likely issues raised in the complaint. [15]  
(b) Write notes on timber flat roofs raising at least two advantages and disadvantages thereof [7]

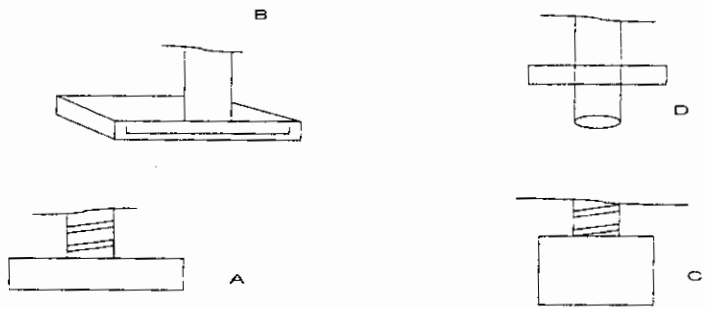
- (c) What are the three qualities of hoardings? [3]

#### **QUESTION FOUR**

- (a) With regards to concrete strength, time and water are important factors to consider. Explain in what way. [6]
- (b) Distinguish between Cement and Concrete. [4]
- (c) Raise nine points on causes, impacts and possible remedies of dampness in a building [9]
- (d) In building construction process, define the stage at which painting takes place. Indicate at least six roles of painting in construction. [6]

#### **QUESTION FIVE**

- (a) A building engineer is tasked with making a choice between several types of foundations for a big construction project. Discuss five factors that may help him come to a proper conclusion on his choices. [10]
- (b) Sketch out the following to demonstrate understanding of brickwork terminology [5]
- i. Tothing
  - ii. Raking back
  - iii. Cross joint
  - iv. Bed joint stretcher course
  - v. Quoin
- (c) Name the following types of foundations (A, B, C, D) and state under what conditions each type is used. [4]



(d) Label the following diagram [6]

