

UNIVERSITY OF SWAZILAND

FACULTY OF HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCE

RE-SIT EXAMINATION PAPER JANUARY 2019

TITLE OF PAPER : BUILDING CONSTRUCTION
TECHNOLOGY II

COURSE CODE : EHS 305

DURATION : 2 HOURS

MARKS : 100

INSTRUCTIONS : ANSWER ANY FOUR QUESTIONS

: EACH QUESTION CARRIES 25 MARKS

: 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) Outline building project activities that may be represented by the WBS links below:
- i. Finish to Finish, [2]
 - ii. Finish to Start, [2]
 - iii. Start to Start [2]
 - iv. Start to Finish [2]
- b) State three things to look for concerning toilets during scrutinization of building plans [3]
- c) Scale is very important in working drawings. Why is that the case? [4]
- d) Concerning sections in construction drawing raise four points to explain their functions. [6]
- e) Illustrate the following lines and line work used in a drawing office when producing working drawings:
- i. Outlines [1]
 - ii. drain and pipe lines [1]
 - iii. hidden detail lines [1]
 - iv. break lines [1]

QUESTION TWO

- a) Define the following terms;
- i. Project Management [2]
 - ii. Task duration [2]
 - iii. Work man hours [2]
 - iv. Tasks [2]
 - v. Work break down structure [2]
- b) Illustrate with the aid of a sketch the following types of symbols used in a drawing office: [10]
- i. Door
 - ii. Bed
 - iii. Gulley

- iv. Vent pipe
 - v. Single door swing
 - vi. Double door swing
 - vii. Folding doors
 - viii. Reinforced concrete
 - ix. Water closet
 - x. Sink
- c) Give five reasons for including sections in structural drawings [5]

QUESTION THREE

- a) Discuss five issues which are examples of the application of control over the building process in Swaziland. [10]
- b) Explain the purpose of the following CAD commands: [3]
- i. Zoom previous
 - ii. Zoom real-time
 - iii. Zoom window
- c) Calculate the width of a strip foundation when the load bearing wall is transmitting a load of 25kN/m and the soil-bearing capacity of the subsoil is 75kN/m² [1]
- d) Concerning AutoCAD
- i. Outline the AutoCAD opening sequence. [1]
 - ii. Complete the matrix below indicating 10 toolbars under each category in CAD. [10]

DRAW TOOL BARS	MODIFY TOOLBARS
1	1
2	2
3	3
4	4
5	5
6	6
7	7

8	9
10	10

QUESTION FOUR

- a) Name at least six members of a building project team in government [6]
- i. Define their roles in the design process. [6]
 - ii. Are government building project teams the same with municipalities? Please state the differences [2]

b) Name and draw sketches to demonstrate the process of using the following command? [5]

- i. 
- ii. 
- iii. 
- iv. 
- v. 

c) Name the two CAD symbols shown below and explain differences between them. [2]



d) Name the two CAD symbols shown below and explain differences between them [2]

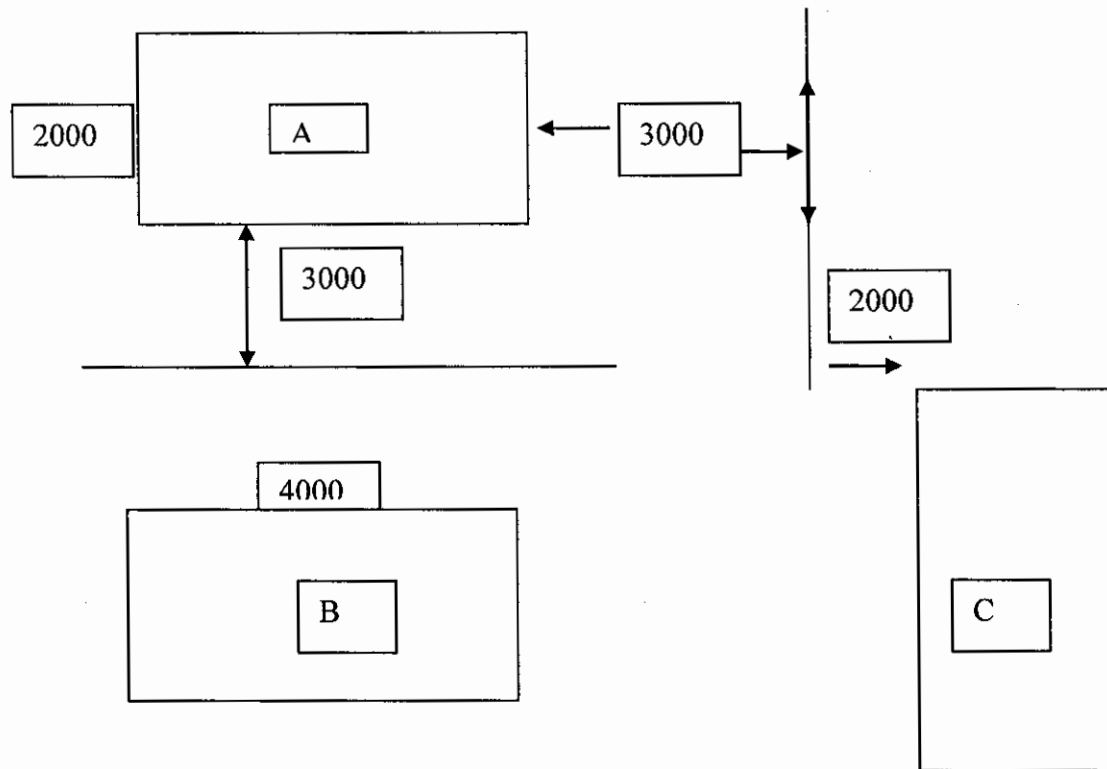


e) Name these two CAD symbols and explain the utility thereof [2]



QUESTION FIVE

- (a) Below is a rectangle A, B, and C with similar dimensions. Assuming you are starting with drawing rectangle A describe the CAD process for reaching rectangle C. [10]
- (b) To come up with many A rectangles 3000 meters apart what command would you use [5]



c) Outline five main issues on each of the following architects drawings which you expect to see; [8]

- i. Floor plans
- ii. Site plans
- iii. Location Plans
- iv. Elevations

d) What is the name of the point around which objects are rotated in CAD? [2]