UNIVERSITY OF SWAZILAND

FACULTY OF HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCE

RE_SIT EXAMINATION PAPER JULY 2017

TITLE OF PAPER :   BUILDING CONSTRUCTION
                         TECHNOLOGY II

COURSE CODE :   EHM 305

DURATION   :   2 HOURS

MARKS   :   100
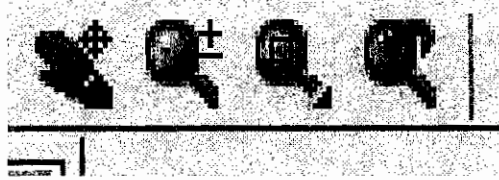
INSTRUCTIONS   : ANSWER ANY FOUR QUESTIONS

                     : 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) Name the following CAD commands and state their function.

    a   b   c   d   [4]

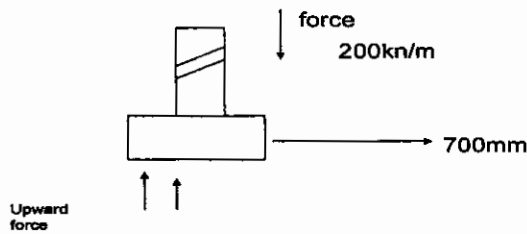b) Given the following CAD functions state the utility thereof

                                                                    [14]

c) Outline the planning application procedures & requirements in Swaziland as outlined in the Building Standards Regulations of 1969 [4]

d) Outline the main issues on the schedules document at the construction site?[3]

QUESTION TWO

A) A bathroom must have a minimum area of $3.7m^2$ with the least dimension of 1520. Give the dimension of the other side? [5]

B) AutoCAD uses various cursor modes in trying to execute certain functions. Draw sketches of four of these and indicate the use and meaning thereof. [5]

C) Draw a sketch to illustrate the point "walls in footings are to be centred on the strip foundation" [10]

D) What is the value of Base point and Osnap in CAD? [5]

QUESTION THREE

a) Outline planning steps followed in government construction projects   **[5]**

b) Given plans for scrutiny what exactly do you look for?   **[5]**

c) List all the types of architect's drawings you know, their utility and appropriate scales thereof   **[5]**

d) Given the following figure representing a house exerting a force of $200kn/m^2$ calculate for the required soil bearing capacity of the soil   **[2]**
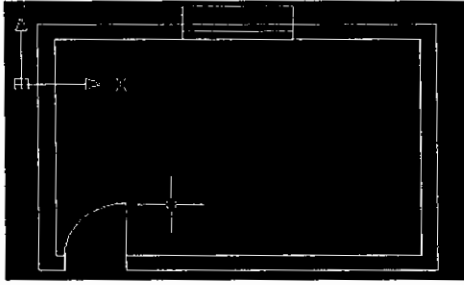

e) 10mm is the size of a roads driveway leading to a building site. On a scale 1:1000 what is the size of the road?   **[4]**

f) Give the appropriate titles to indicate the differences between the following CAD commands   **[4]**

LINES and CIRCLES	ERASE, COPY, MIRROR, OFFSET, MOVE, ROTATE, STRETCH

QUESTION FOUR

(a) Given the following profile of a one room house plan, lean-to roof, Outline the CAD sequence followed to come up with the elevations, sections and roof thereof. Dimension 2000*1000, door 850, window 1500, roof pitch 10 °   **[10]**

b) Name these two CAD symbols and explain differences thereof

[2]

c) Name these two CAD symbols and explain the difference thereof
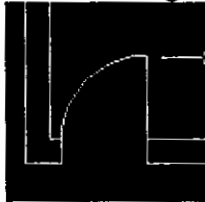
[2]

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

e). Given the following representing a door dimension 850. Outline how you go about drawing this in a floor plan.   [4]

f) Which five CAD commands require that you have the object first before executing it?   [5]

QUESTION FIVE

a) Outline the likely expenditure profile (cost) you should plan for in a building project   [15]

b) Below is a graphic representing the three project management constraints?
Discuss in detail how understanding these is required for a successful
construction project.   [10]

Project Management Triangle
Triple Constraints

TIME

SCOPE

COST