

UNIVERSITY OF SWAZILAND
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCE
MAIN EXAMINATION PAPER DEC 2016

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

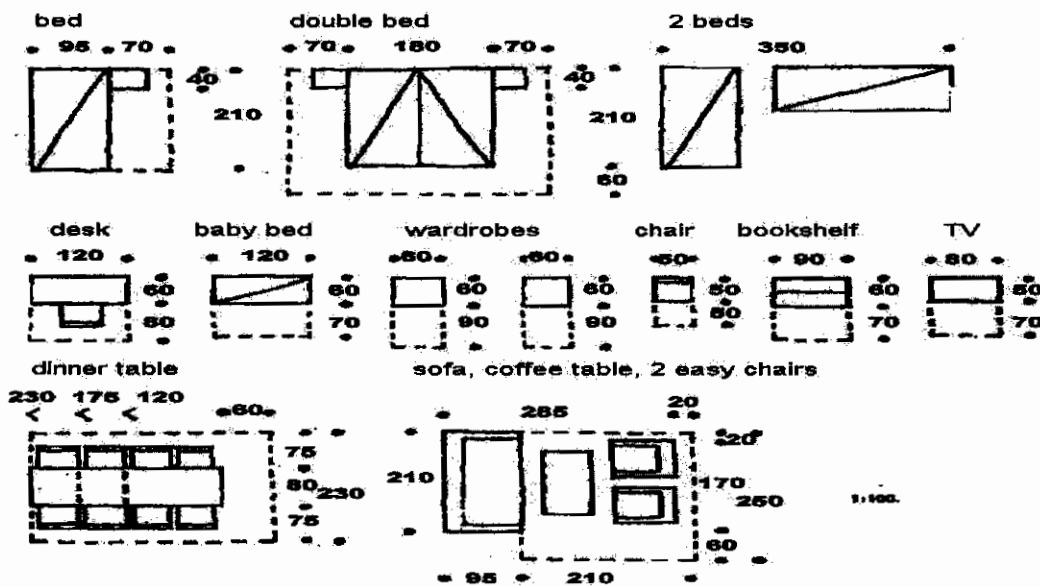
a) Draw symbols which identify the following building materials and fixtures as commonly used in structural drawings [5]

- i. Mass Concrete
- ii. Timber
- iii. Light fitting
- iv. Top hung windows
- v. Double door swing

b) Sketch out an imaginary ganth chart to demonstrate your understanding of the three main issues in a ganth chart at a construction site [5]

c) Describe clearly the role of an EHO during the three Quality Management operations in construction activities [10]

d) Write notes based on the following figure below and state the significance thereof in building design [5]



QUESTION TWO

a) Define the following terms as applied in Project Management [5]

- i. Project
- ii. Task duration
- iii. Man Hours

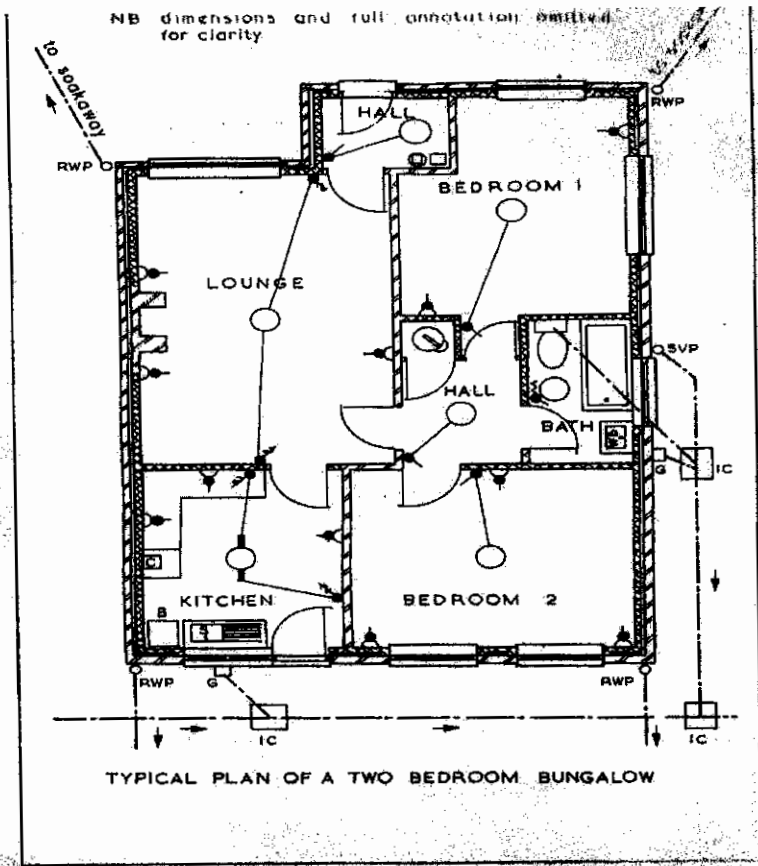
- iv. Event
- v. Work Break Down Structure
- b) Outline the health and safety standards applicable in a building site [5]
- c) Outline the things you look for in interpreting, approving, and scrutinizing drawings and building plans [10]
- d) 2mm is the size of a road drive leading to a building site. On a scale 1:1000, what is the size of the road in meters? [1]
- e) Calculate the width of a strip foundation when the load bearing wall is transmitting a load of 25kn/m and the self-bearing capacity of the subsoil is 75kn/m² [2]
- f) What are standards for drainage layout in working drawings [2]

QUESTION THREE

- a) Differentiate between a block Plan and a Site Plan. [5]
- b) Give five functions of elevations on drawings. [5]
- c) What common features need to appear on floor plans [10]
- d) Draw a sketch to illustrate the point “walls in footings are to be centered on the strip foundation” [5]

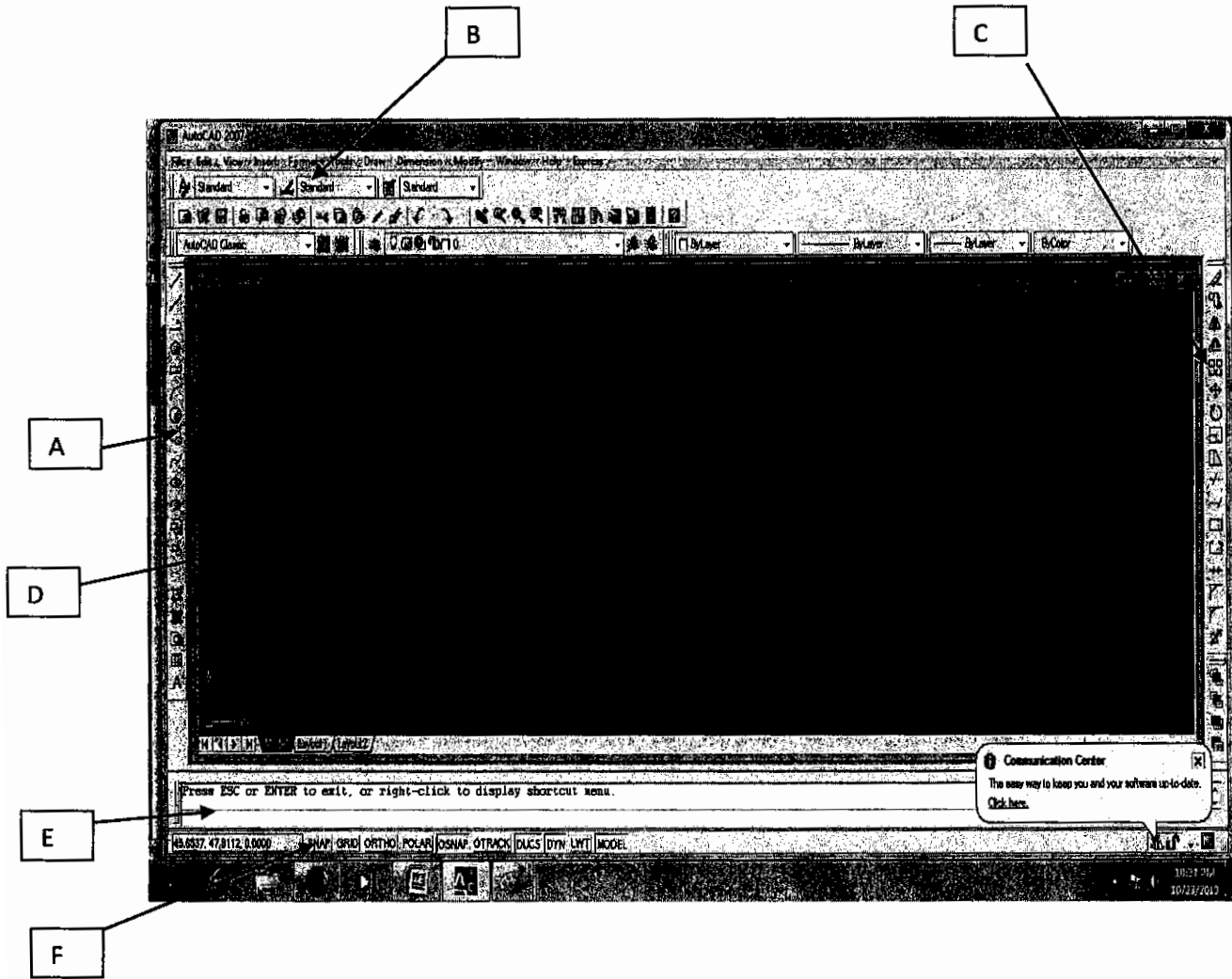
QUESTION FOUR

- a) Give advantages for using CAD instead of traditional methods of drawing? [6]
- b) Explain the utility of the North Point on drawings. Sketch out to show how the North Point is normally depicted on drawings? [8]
- c) Evaluate the following drawing using norms for scrutinization of plans. [11]



QUESTION FIVE

a) Label and state functions of each of the following CAD screen components [12]



- b) Outline required steps to take in order to get building structural drawings approved as stated in Part II of the Standard Building Regulations of 1969. [6]
- c) Differentiate between the copy and mirror command in AutoCAD [1]
- d) A construction project has many actors. List them and state functions of each [6]