

**OBAFEMI AWOLOWO UNIVERSITY, ILE-IFE**  
**FACULTY OF ENVIRONMENTAL DESIGN AND MANAGEMENT**  
**DEPARTMENT OF BUILDING**

**HARMATTAN SEMESTER EXAMINATION 2018/2019 SESSION**

B.Sc. Building

BLD 101: INTRODUCTION TO BUILDING

JULY 2019

TIME ALLOWED: 2HOURS

**Instructions:** Answer **ALL** questions. Answer parts A and B by filling in the gaps on the question paper. Answer part C in the separate answer booklet provided.

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Registration Number:.....

Name:.....

Department:.....

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**PART A**

Tick the appropriate options in this section. Wrong choice attracts negative mark of -1/4

1. Cast-in-situ piles
  - (a) are cast in position inside the ground
  - (b) need not be reinforced in ordinary cases
  - (c) are not subjected to handling or driving stresses
  - (d) all of the above
2. The most important purpose of frog in a brick is to
  - (a) emboss manufacture's name
  - (b) reduce the weight of brick
  - (c) form keyed joint between brick and mortar
  - (d) improve insulation by providing 'hollows'
3. Coping is defined as a
  - (a) horizontal course of masonry projecting from the face of the wall
  - (b) horizontal moulded projection provided near the top of a building
  - (c) covering placed on the exposed top of an external wall
  - (d) triangular shaped portion of masonry at the end of a sloped roof
4. In a stretcher bond
  - (a) all the brick are laid as headers
  - (b) all the bricks are laid as stretchers
  - (c) the arrangement of bricks is similar to English bond
  - (d) the bonding are laid at any angle other than zero or ninety degrees.
5. A stretcher bond is usually used for
  - (a) half brick wall
  - (b) one brick wall
  - (c) one and half brick wall
  - (d) footings in foundations
6. The most commonly used bond for all wall thicknesses is
  - (a) English bond
  - (b) Flemish bond
  - (c) stretcher bond
  - (d) header bond
7. A partition wall may be
  - (a) Folding
  - (b) collapsible
  - (c) fixed
  - (d) any one of these
8. Plain brick type of partition wall is constructed by
  - (a) laying bricks as stretchers in cement mortar
  - (b) laying bricks as headers in cement mortar
  - (c) reinforcing the brick wall with iron straps
  - (d) brick work built within a frame-work of wooden members

9. The lowest part of a structure which transmits the load to the soil is known as  
(a) super-structure (b) plinth (c) foundation (d) basement
10. The foundation in a building is provided to  
(a) distribute the load over a large area (b) increase overall stability of the structure  
(c) transmit load to the bearing surface (sub soil) at a uniform rate (d) all of the above
11. The minimum load which will cause failure of a foundation is called ..... of the soil.  
(a) ultimate tensile strength (b) nominal strength (c) ultimate bearing power  
(d) ultimate compressive strength.
12. When the foundation is placed immediately beneath the lowest part of the super-structure, it is called ..... foundation.  
(a) deep (b) shallow (c) both a and b (d) neither a nor b
13. A foundation consisting of thick reinforced concrete slab covering the entire area of the bottom of the structure, is known as  
(a) pile foundation (b) pier foundation (c) raft foundation (d) machine foundation
14. Pile foundation is generally used when the soil is  
(a) compressible (b) water-logged (c) made-up type (d) all of these
15. A combined footing is commonly used  
(a) when two columns are spaced close to each other (b) under a set of walls  
(b) when two columns are spaced far apart (d) under a set of columns
16. The damp proof course  
(a) may be horizontal or vertical (b) should be continuous  
(b) should be of good impervious material (d) all of the above
17. A horizontal layer of bricks laid in mortar is known as  
(a) course (b) stretcher (c) header (d) closer
18. The brick laid with its length parallel to the face of the wall is called a  
(a) course (b) stretcher (c) header (d) closer
19. Frog is defined as a  
(a) depression on the top face of a brick (b) topmost course of plinth  
(c) brick whose one end is cut splayed or mitred for the full width  
(d) brick used for the corner of a wall
20. The brick laid with its length perpendicular to the face of the wall is called  
(a) course (b) stretcher (c) header (d) closer
21. The frog of the brick must be kept ..... while laying bricks in a wall.  
(a) downward (b) sideway (c) upward (d) all of the above
22. The header bond is usually used for  
(a) half brick wall (b) one brick wall (c) one and half brick wall (d) two brick wall

### PART B

1. The full meaning of NIOB is .....
2. The parts of a building below and above the normal ground level are respectively called ..... and .....
3. The acronym "CORBON" stands for .....
4. The name of cement commonly used in Nigeria is .....
5. The timberwork or steel work constructed to hold wet concrete is called .....
6. Concrete is made up of three major components namely: (i) .....  
(ii) ..... (iii) .....

7. According to their purpose buildings may be classified as (i) .....  
(ii) ..... (iii) ..... (iv) .....
8. List the professionals involved in the construction industry (i) .....  
(ii) ..... (iii) ..... (iv) .....  
(v) ..... (vi) ..... (vii) .....
9. List the two common reinforcement bars (i) .....  
(ii) .....
10. What factors determine the type of doors: ..... and .....
11. List two types of flush doors: ..... and .....
12. What is the purpose of a window in a building.....
13. Windows are classified as: ..... and .....
14. List three roof terms you know (i) ..... (ii) ..... (iii) .....

Answer **TRUE** or **FALSE** (Questions 15 – 23)

15. Concrete is reinforced to improve its strength in tension .....
16. Beams are used to carry higher super imposed loads than lintel .....
17. Windows are classified according to the way they are opened .....
18. A lintel is a beam .....
19. Columns are tension members .....
20. Flat roof is always inclined at a slope greater than  $10^\circ$  .....
21. A steel column is called stanchion .....
22. A horizontal beam that provides support to the wall above an opening is called lintel ..
23. An architect is always the head of the construction team .....
24. Services in the building industry are divided into: (i) .....  
and (ii) .....
25. A ..... wall is the extension of the external wall above the  
roof level.
26. Aggregates are divided into: (i) ..... and (ii) .....
27. Two main constituents of a mortar are: (i) ..... and (ii) .....
28. Two common sizes of sandcrete blocks used in Nigeria are (i) .....  
and (ii) .....
29. A pillar as commonly called by laymen is technically called .....
30. Laymen call it iron rods but technically it is called .....
31. The group of professionals who act on behalf of the client in a building project are  
collectively called .....
32. Name the consultant responsible for the design of structural stability of a building  
.....
33. The load in a building is transmitted through the: (i) .....  
(ii) ..... (iii) ..... and  
finally to the (iv).....

Give the titles of the professional or person expected to carry out the following duties in the construction industry (Questions 34 – 38).

34. Translate clients requirement into drawings .....
35. Advises on the best method of construction .....
36. Controls construction costs .....
37. Designs and prepares the structural details of the building .....
38. Estimates the quantity of materials and cost of a building .....
39. A reinforced concrete means .....
40. A mass or plain concrete means .....

## PART C

### Question 1

By the use of sketch diagrams distinguish between these types of roofs (a) lean-to-roof (b) monopitch (c) butterfly roof.

### Question 2

- a) Who is a professional builder?
- b) How can you be registered as a professional builder in Nigeria?
- c) What are your responsibilities as a builder in a building project?

### Question 2

- a) List the specializations in the building industry.
- b) What are the functions of each of them in a building project?
- c) What are building elements?

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**HARMATTAN SEMESTER EXAMINATION  
2017/2018 SESSION**

**FACULTY OF ENVIRONMENTAL DESIGN AND MANAGEMENT  
DEPARTMENT OF BUILDING**

**B.SC. BUILDING**

**JULY 2018**

**BLD 101: INTRODUCTION TO BUILDING AND ENVIRONMENT I**

**INSTRUCTIONS**

**TIME ALLOWED: 2HOURS**

Answer **ALL** Questions.

Registration Number:.....

Name:.....

Department:.....

SECTION A

Tick the appropriate options in this section. Wrong choice attracts negative marking of  $\frac{1}{4}$

1. The most commonly used bond for all wall thicknesses is  
(a) English bond (b) Flemish bond (c) stretcher bond (d) header bond
2. The most important purpose of frog in a brick is to  
(a) emboss manufacture's name (b) reduce the weight of brick (c) form keyed joint between brick and mortar (d) improve insulation by providing 'hollows'
3. A partition wall may be  
(a) Folding (b) collapsible (c) fixed (d) any one of these
4. Plain brick type of partition wall is constructed by  
(a) laying bricks as stretchers in cement mortar  
(b) laying bricks as headers in cement mortar  
(c) reinforcing the brick wall with iron straps  
(d) brick work built within a frame-work of wooden members
5. Coping is defined as a  
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9. The foundation in a building is provided to  
(a) distribute the load over a large area (b) increase overall stability of the structure  
(c) transmit load to the bearing surface (sub soil) at a uniform rate (d) all of the above
10. The minimum load which will cause failure of a foundation is called ..... of the soil.  
(a) ultimate tensile strength (b) nominal strength (c) ultimate bearing power  
(d) ultimate compressive strength.
11. When the foundation is placed immediately beneath the lowest part of the super-structure, it is called ..... foundation.  
(a) deep (b) shallow (c) both a and b (d) neither a nor b
12. A foundation consisting of thick reinforced concrete slab covering the entire area of the bottom of the structure, is known as  
(a) pile foundation (b) pier foundation (c) raft foundation (d) machine foundation
13. Pile foundation is generally used when the soil is  
(a) compressible (b) water-logged (c) made-up type (d) all of these
14. A combined footing is commonly used  
(a) when two columns are spaced close to each other (b) under a set of walls  
(b) when two columns are spaced far apart (d) under a set of columns
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(a) may be horizontal or vertical (b) should be continuous  
(b) should be of good impervious material (d) all of the above
17. A horizontal layer of bricks laid in mortar is known as  
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(a) depression on the top face of a brick (b) topmost course of plinth  
(c) brick whose one end is cut splayed or mitred for the full width  
(d) brick used for the corner of a wall
20. The brick laid with its length perpendicular to the face of the wall is called  
(a) course (b) stretcher (c) header (d) closer
21. The frog of the brick must be kept ..... while laying bricks in a wall.  
(a) downward (b) sideways (c) upward (d) all of the above

### SECTION B

Fill in the gaps in this section

1. The inclined members of roof structures are referred to as .....
2. The seven professionals in the construction industries are: (i).....  
(ii) ..... (iii) ..... (iv) .....  
(v) ..... (vi) ..... (vii) .....
3. Services in a building are divided into .....and.....
4. Name four functional requirements of a building (i).....  
(ii) ..... (iii) ..... (iv) .....
5. According to their purposes, buildings may be classified as: (i) .....  
(ii) ..... (iii) .....(iv) .....

Give the titles of the professionals or persons expected to carry out the following duties in a construction team. (Questions 6 -10).

6. Translate clients requirements into drawings .....
7. Advise on the best method of construction .....
8. Control costs of construction .....
9. Design the structural details of the building .....
10. Estimate the quantity of materials requires for a building .....
11. The strong base for the oversite concrete is called .....
12. The type of foundation under a column is called .....
13. Construction work is generally divided into ....., .....and.....
14. Concrete is made up of three major components namely: (i).....  
(ii).....(iii).....
15. The timberwork or steelwork constructed to hold wet concrete is called.....
16. .... is used to join block units together in walls.
17. The full meaning of DPM is.....

BLD101 EXAMINATION, 2017/2018 SESSION

18. The name of cement commonly used in Nigeria is .....
19. .... are major functional parts of a building.
20. The parts of a building below and above the normal ground level are respectively called ..... and.....
21. The type of foundation commonly used for bungalows in Nigeria is called.....
22. The two main constituents of mortar are ..... and.....
23. .... is a vertical structural member of a framed building
24. The common mix for a reinforced concrete is .....
25. Aggregates are divided into .....and..... aggregates.
26. The metric size of a standard brick is .....
27. A building unit greater than the size of a brick is called .....
28. ....and..... are used for preventing moisture movement in wall and floor respectively.
29. The pointed edge of a brick is called .....
30. The common sizes of sandcrete blocks used in Nigeria are:  
(i)..... (ii).....
31. A horizontal beam that provides support to the wall above an opening is called a.....
32. A..... wall is the extension of the external wall above the roof level.
33. Two faces of a brick that can be exposed when laid are called:  
(i).....(ii).....
34. The indentation on a brick is called .....
35. Spread foundations are also known as.....foundations.
36. A double-leaf wall is known as .....
37. A "pillar" (as commonly called by laymen) that is made of masonry units is technically known as a .....
38. Another name for mass concrete is .....
39. List three roof terms you know (i) ..... (ii)..... (iii).....
40. A steel column is also known as a.....

Answer TRUE or FALSE (Questions 44-52).

41. Beams and columns are structural elements in framed structures.....
42. The external walls in a framed structure are load bearing.....
43. Flat roof is always inclined at a slope greater than  $10^\circ$ .....
44. A lintel is a beam.....
45. Concrete is reinforced to improve its strength in tension .....
46. Lintel is needed at the base of opening in wall.....
47. Every structure is a building .....
48. A steel column is referred to as stanchion .....
49. The minimum number of main reinforcement required in circular columns is four.....
50. Falsework supports formwork .....
51. Centering is also a formwork .....
52. Strip foundations are always reinforced .....



DEPARTMENT OF BUILDING  
FACULTY OF ENVIRONMENTAL DESIGN AND MANAGEMENT  
BLD 102: INTRODUCTION TO BUILDING AND ENVIRONMENT II  
2019/2020 RAIN SEMESTER TEST

SEPTEMBER 2021

TIME ALLOWED: 45 minutes

1. (a) Produce the isometric view of figure A and B (use scale 1:50)

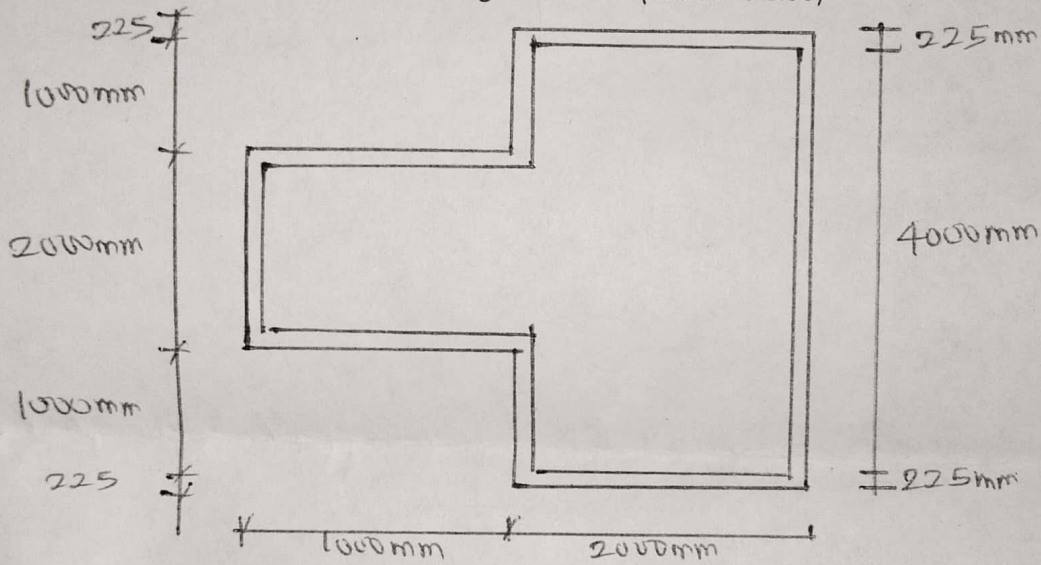


FIGURE A

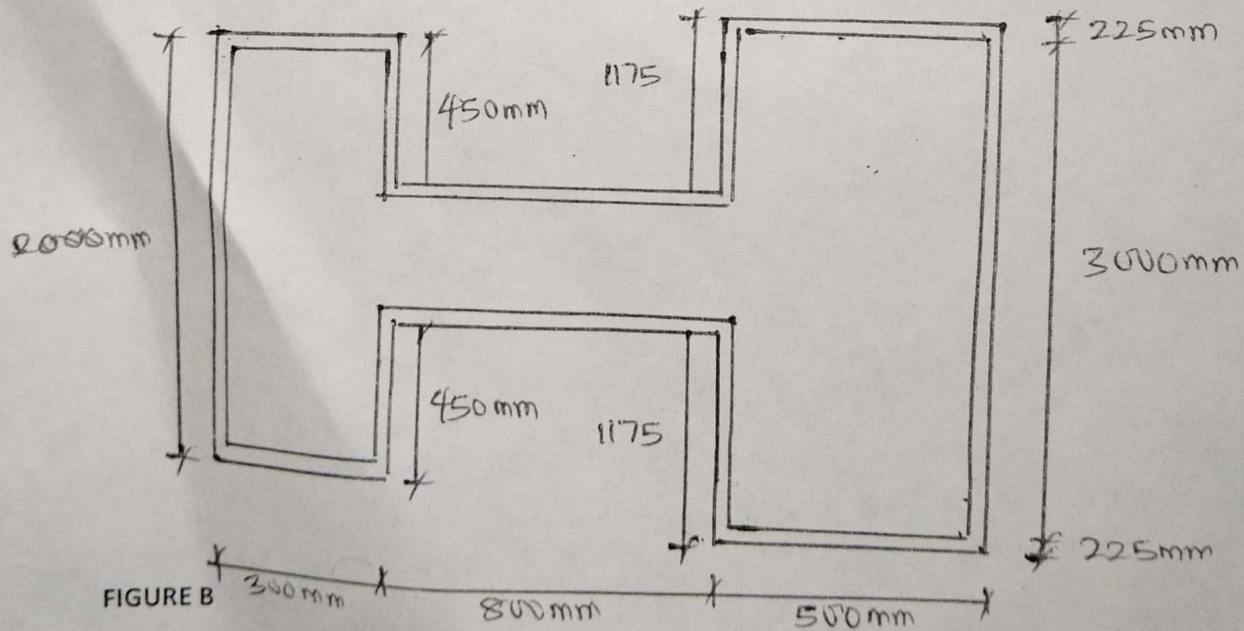


FIGURE B