

Candidate's examination number.....

**SMZ**

**ZANZIBAR EXAMINATIONS COUNCIL**

**FORM THREE ENTRANCE EXAMINATION**

**055**

**BUILDING CONSTRUCTION**

**TIME: 2:30 HOURS**

**FRIDAY, 07<sup>TH</sup> DECEMBER 2018 pm**

**INSTRUCTIONS TO CANDIDATES**

1. This paper consists of sections A, B and C.
2. Answer ALL questions in sections A, B and any two (2) questions from section C.
3. ALL answers must be written in the space provided.
4. Write your examination number on every page of this booklet.
5. Calculators and cellular phones are not allowed in the examination room.

<b>FOR EXAMINER'S USE ONLY</b>					
<b>QUESTION NUMBER</b>	<b>MARKS</b>	<b>SIGNATURE</b>	<b>QUESTION NUMBER</b>	<b>MARKS</b>	<b>SIGNATURE</b>
<b>1</b>			<b>9</b>		
<b>2</b>			<b>10</b>		
<b>3</b>			<b>11</b>		
<b>4</b>			<b>12</b>		
<b>5</b>			<b>13</b>		
<b>6</b>			<b>14</b>		
<b>7</b>			<b>15</b>		
<b>8</b>					
<b>TOTAL</b>					

This paper consist of 12 printed pages

**SECTION A: (20 marks)**

Answer ALL questions

1. Choose the letter of the correct answer and write it below the item number in the table below.
- |      |   |                                 |                  |
|------|---|---------------------------------|------------------|
| i)   | The type of bond that consist of alternate bricks laid as headers and stretches in each course is called      |                                 |                  |
|      | A. Flemish bond   | B. English bond                 |                  |
|      | C. Stretcher bond   | D. English garden wall bond     |                  |
|      | E. Flemish garden wall bond   |                                 |                  |
| ii)  | Fine aggregate is that which passes through a   |                                 |                  |
|      | A. 3mm sieve  | B. 5mm sieve                    | C. 7mm sieve     |
|      | D.8mm sieve   | E. 9mm sieve                    |                  |
| iii) | The shores that provide a clear working space   |                                 |                  |
|      | A. racking shores   | B. Dead shores                  | C. Putlog shores |
|      | D.Fying shores  | E. Testle shores                |                  |
| iv)  | Reducing the moisture content of timber to a level consistent with the humidity of air is                     |                                 |                  |
|      | A. Warping  | B. Sawing                       | C. seasoning     |
|      | D. Cupping  | E. Bowing                       |                  |
| v)   | The first task to be accomplished when setting out foundation on a building site is to                        |                                 |                  |
|      | A. Obtain a datum level   | B. Set profile board            |                  |
|      | C. Set right angle  | D. Establishing a building line |                  |
|      | E. Measure the size of a building   |                                 |                  |
| vi)  | The equipment used to measure the accurate amount of materials in the preparation of concrete batch is called |                                 |                  |
|      | A. wheel barrow   | B. Gauge box                    | C. Shovel        |
|      | D. Spirit level   | E. Trough                       |                  |

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- vii) The wall separating adjoining building to different owners is known as  
A. Party wall                      B. Feader wall                      C. Serpentine wall  
D. Curtain wall                      E. Ordinary wall
- viii) Concrete is cured in order to  
A. Achieve higher strength      B. Avoid cracking                      C. Remain wet  
D. Remove dust                      E. Avoid bleeding
- ix) The following are functional requirements of a floor except  
A. Strength                      B. Durability  
C. Fire resistance                      D. transmission of sound  
E. Exclusion of wind and rain
- x) Which one among the following is a binding agent in mortar and concrete?  
A. Sand      B. Aggregate      C. Paint      D. Cement      E. Sand stone

**ANSWERS**

Item number	i	ii	iii	iv	v	vi	vii	viii	ix	x

2. Match the items in **list B** with response in **list A** by writing the letter of the correct ITEM below the response number in a table provided.

<b>LIST A</b>	<b>LIST B</b>
i. The horizontal distance between the vertical joints of successive brick courses	A. Header
ii. The lower surface of brick when laid flat	B. Stretcher
iii. A triangular position of a brick through its width and making an angle of 45° - 60°	C. Arris
iv. indentation in the face of a brick to form a key for holding the motor	D. Closer
v. A triangular position of a brick such that half a header and half a length are obtained on the adjoining cut faces.	E. Bed
vi. The corner or external angle of the face side of a wall.	F. Bull nose
vii. A piece of brick cut across the width.	G. bed
viii. An imaginary vertical line which include the vertical joint separating two adjoining bricks.	H. Bat
ix. The edge of a brick	I. Quoin
x. A shorter face of the brick as seen in the elevation of the wall.	J. Queen closer
	K. Frog
	L. King closer
	M. Beveled closer
	N. Lap
	O Perpend
	P. Mitred close.

**ANSWERS**

i	ii	iii	iv	v	vi	vii	viii	ix	x

**SECTION B: (40 marks)**

Answer ALL questions in this section

3. Why the study of building construction is important?

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4. a) Define the term "timber seasoning".

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- b) State the function of cement in making concrete.

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5. a) List down three (3) types of sub-soil.

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b) Mention the main poles used in a putlog scaffold.

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6. State the common methods for timber conversion.

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7. Outline the composition of motor as a building material.

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8. Differentiate between Collapse Slump and Shear Slump.

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9. Enumerates four (4) temporary services which are important at a site during construction work.

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10. With the help of sketch, state three (3) methods of site leveling.

11. Select any one (1) type of foundation and briefly explain it.

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12. Identify any two (2) essential requirements for a good formwork.

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**SECTION C: (40 marks)**

Answer any two (2) questions

13. a) In relation to building construction, define the term "foundation".

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- b) Identify the factors that should be considered when selecting a suitable type of foundation.

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c) What are the purposes for sub-soil exploration for a new structure?

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14. a) what is the difference between a wall and foundation?

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- b) Mention four (4) methods which are used to improve the bearing capacity of soil.

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- c) Briefly explain four (4) methods of curing of concrete.

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15. a) Why slump test is important?

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- b) What are the Limitations of the slump test?

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- c) Draw a neat diagram to show the following

- i) Strip foundation

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ii) Side strip foundation

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