Student's Assessment Number.....

THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL OF TANZANIA

FORM TWO NATIONAL ASSESSMENT

071 BUILDING CONSTRUCTIONS

Time: 2:30 Hours **Year: 2023**

Instructions

1. This paper consists of sections **A, B** and **C** with a total of **ten (10)** questions**.**
2. Answer **all** questions.
3. Section **A** and **C** carry **fifteen (15)** marks each, section **B** carries **seventy (70)** marks.
4. Cellular phones and any unathorized materials are **not** allowed in the assessmenmt room.
5. Write your **Assessment Number** at the top right hand corner of every page.

FOR ASSESSOR'S USE ONLY		
QUESTION NUMBER	**SCORE**	**ASSESSOR'S INITIALS**
1		
2		
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TOTAL		
CHECKER'S INITIALS		

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SECTION A (15 MARKS)

Answer **all** questions in this section

1. Choose the correct answer from the given alternatives and write its letter in the box provided.

(i) Suppose a client have finished preparing building drawings, specifications and bills of quantities. Whom is to enter into contract with for the constructions?

A. General contractor

B. Main contractor

C. Sub-contactors

D. Labourers

(ii) What is the disadvantages of using tubular scaffolding in contruction of building?

A. Takes less space when stored

B. It is more rapidly erected

C. Has high initial cost

D. It is used for multi-storey building.

(iii) A village committee chose to use plastic pipes for contructions of a water supply system. Why do you think they made the best choice to use plastic puipes?

A. They are durable than metal

B. They are not affected with hard water

C. They are heavy in weight

D. They can be installed with ordinary tools.

(iv) You have neen rquested to prepare cost valuations and bill of quantities for the construction of students' toilte at yoyr school. Which profession are you supposed to possess for the work?

A. Quantity surveying

B. Accountancy

C. Structural engineering

D. Architecture

(v) A hospital building is to be constructed in a black cotton soil. Whic set of deep foundation should be used?

A. Raft and mat foundation

B. Mat and spread footing foundation

C. Combined footing and strap footing foundation.

D. File and pier nfoundation.

(vi) What is the lower half portion between the crown and skew back of a circular arch used to bridge a door opening?

A. Haunch

B. Spandril

C. Rise

D. Centre of an arch

(vii) What is the mortar mix ratio is recommended to be used for making blocks for fence wall constructions.

A. $1:1\frac{1}{2}$

B. 1:4

C. 1:6

D. 1:9

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(viii) Which terminoloies stands for the termination of a wall in a stepped fashion?

A. Toothing

B. Perpend

C. Racking back

D. Frog

(ix) What make the timbering system stable in deep foundation trench?

A. Screwing members together

B. Nailing the members together

C. Using wedges to secure the members

D. Placing timbers in position to the sides of trnches.

(x) Which tool is uded in bricks laying for lifting , spreading mortar and forming joint?

A. Scratch

B. Square

C. Bolster

D. Trowel

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2. Match the items (i-v) in **List A** with the corresponding correct response in **List B** by writing a letter of the correct response in the table provided.

LIST A	**LIST B**
(i) Roles fixed diagonally to stiffen the scaffold by forming a triangle. (ii) Corss pieces that have one end built into the wall of building. (iii) Horizontal pole that are fixed above the working platform to stop workers falling off. (iv) The horizontal poles that connect the standard and are parallel to the bulding. (v) Timber boards that support the base plate on soft or uneven ground.	A. Base boards B. Bridles C. Ledgers D. Base plate E. Guard rails F. Standards G. Put logs H. Brace

List A	(i)	(ii)	(iii)	(iv)	(v)
List B					

SECTION B (70 MARKS)

Answer **all** questions from this section

3. (a) Why is it neccessary to conduct site analysis before starting constructions?

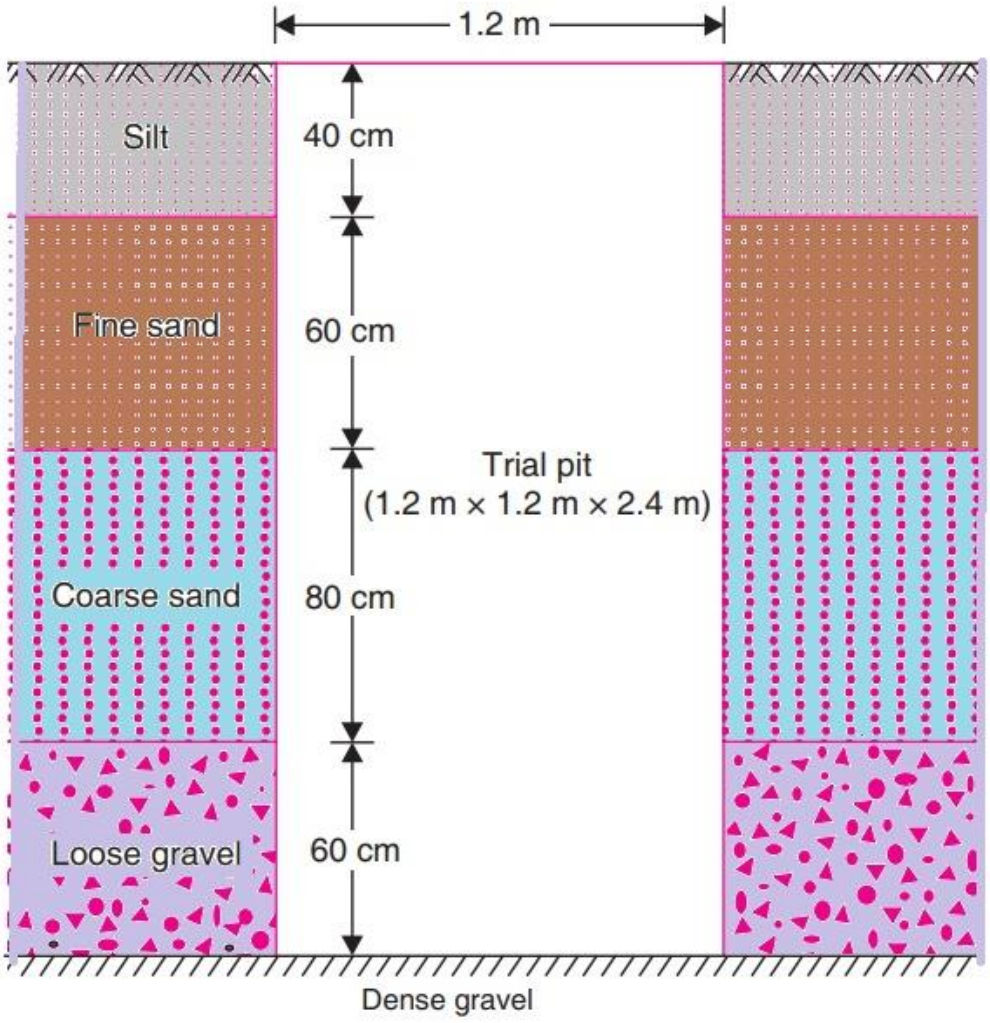
(i) .....

(ii) .....

(iii) .....

(iv) .....

(b) An open excavation is used for the site analysis and the results obtained were as indicated in Figure 1. I f the area of as trial pit is 1.2m x 1.2m, determine the excavated volume of each layer of the soil.



4. (a) Suppose you are planning to visit a plastic pipe manufacturing industry: what are the five raw materials you expert to observe during preparation of moulding composition of plastic?

(i) .....

(ii) .....

(iii) .....

(iv) .....

(v) .....

(b) Identify materials made from plastic that can be used in the following building components:

(i) Floor

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(ii) Furniture

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(iii) Roof

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(iv) Decorations

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(v) Fittings and fixtures

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5. Suppose youa re appointed to be a supervisor of the cement morts plastering work of a new constructed residential building:

   (a) Identify two tools that can be used for the work,

      (i) .....

      (ii) .....

   (b) Briefly describe the procedures that will be followed in doing the work,

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   (c) Identify two defects that might occur in the finished work.

      (i) .....

      (ii) .....

6. (a) Suppose you have been assigned to inspect a formwork of one storey building slab, what are the key issues you will observe before allowing pouring of the concrete to proceed?

(i) .....

(ii) .....

(iii) .....

(iv) .....

(v) .....

(vi) .....

(b) Examine four types of loads that may be carried out by the formwork

(i) .....

(ii) .....

(iii) .....

(iv) .....

7. With the aid of an elevation sketch, briefly describe the given brick bonds:

(a) Strtcher bond

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(b) Header bond

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(c) English bond

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(d) Single flemish bond

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8. Suppose the village infrastructure committe plans to use timbe as a main condtruction material for all public structures in the village:
   (a) Support their idea by explaining five usefulness of timber in condtruction industry.
      (i) .....
      (ii) .....
      (iii) .....
      (iv) .....
      (v) .....
   (b) What are the five obstacles that they might encounter for their choice of using timber?
      (i) .....
      (ii) .....
      (iii) .....
      (iv) .....
      (v) .....

9. (a) What are the five indicators that show the improper curing of concrete?
   (i) .....
   (ii) .....
   (iii) .....
   (iv) .....
   (v) .....
   (b) With examples, give five properties of a hardened concrete.
   (i) .....
   (ii) .....
   (iii) .....
   (iv) .....
   (v) .....

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SECTION C (15 MARKS)

Answer **all** questions from this section

10. (a) Differentiate rendering from stucco as used in finishing a block work partition wall.

(i) .....

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(ii) .....

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(b) Give three importance of a wall for house.

(i) .....

(ii) .....

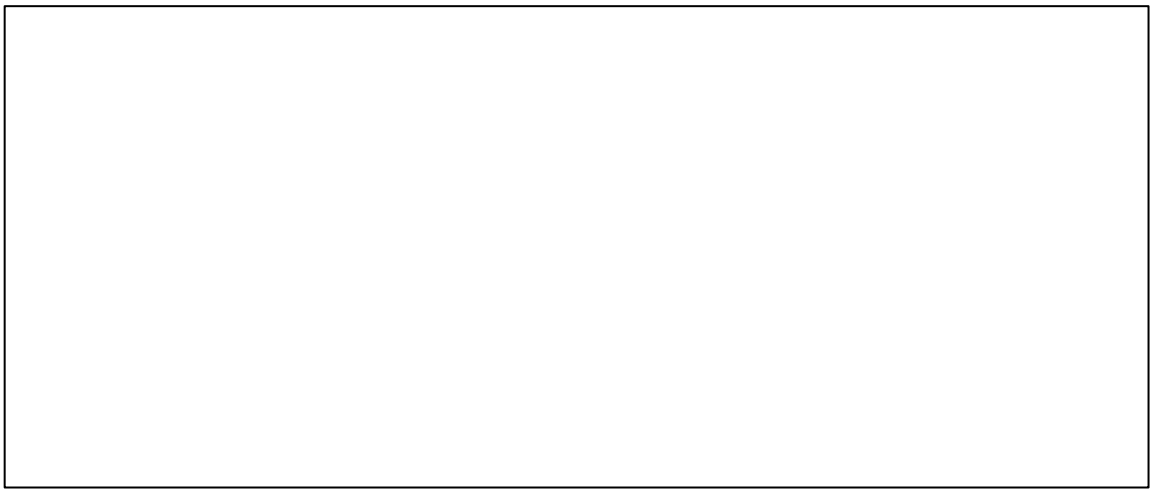
(iii) .....

(c) With aid of labeled sketches, differentiate the following types of load bearing walls:

(i) Solid and cavity wall

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(ii) Faced and veneered wall.

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