THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL OF TANZANIA

FORM TWO NATIONAL ASSESSMENT

071 **BUILDING CONSTRUCTION**

Time: 2:30 Hours. **Year: 2024**

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 carries **15** marks; section B carries **70** marks and section C carries **15** marks.
4. All writing must be in **black** or **blue** ink and drawings must be in **pencil**.
5. Cellular phones and unauthorized materials are **not allowed** in the examination room.
6. Write your **Assessment Number** at the top-right hand corner of every page.

FOR EXAMINER'S USE ONLY		
QUESTION NUMBER	**SCORE**	**EXAMINER'S INITIIALS**
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
TOTAL		
CHECKER'S INITIALS		

SECTION A (15 Marks)

Answer **all** questions from this section

1. For the item (i)-(x), Choose the correct answer from among the given alternatives and write its letter in the box provided.

(i) What is the moulded and ornamented brick inserted on a wall to support the joist truss and weather shed?

A Cornice B Frieze

C Jamb D Corbel

(ii) Suppose you are required to construct workshop building with the strongest stone which type of stone will you use?

A Granite B Slates

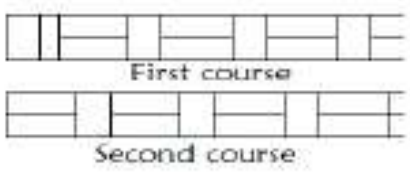
C Lime D Marble

(iii) Which of the following building element is part of the substructure?

A A roof B A door

C A foundation D A window

(iv) Study Figure below on the bricks arrangement in the two courses of a brick wall and identify the type of bond used:



A English B Flemish

C Stretcher D Header

(v) What member of scaffolds will you use to support a putlog where there is window opening in a wall to be constructed?

A Revel pin B Ledger

C Swivel coupler D Standard

(vi) Which building material is not formed naturally?

A Wood B Stones

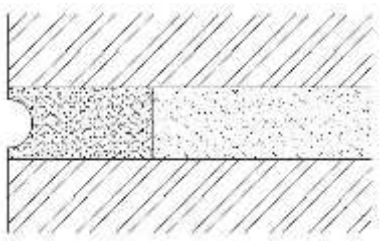
C Clay D Plastics

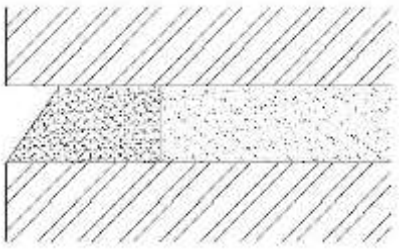
(vii) The background of uncoursed rubble masonry wall need to be plastered what type of plaster would you recommend?

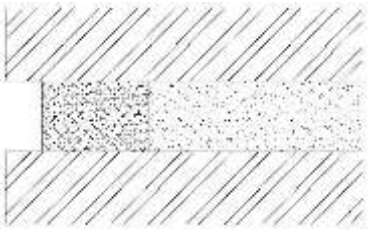
A Cement plastering B Stucco plastering

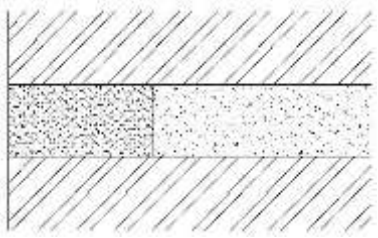
C Lime plastering D Barium plastering

(viii) Which sketch represents weathered pointing wall finish?

A 

B 

C 

D 

(ix) Which machines will you need for removing top soil and reducing the level on the large site?

A Mechanical auger and pneumatic drill

B Backacter and Pneumatic drill

C Dump truck and tipper truck

D Bulldozer and Mechanical shovels

(x) There is a danger of sides of a foundation trench to collapse. What temporary structure will you use to support it?

A Formwork B Timbering

C Shore D Scaffolding

2. Match the definition of brick portions in **List A** with correct terminology in **List B** by writing a letter of the corresponding response under the item number in the table provided.

List A		**List B**
(i)	A portion of brick with the cut made longitudinally.	A. Bevelled bat B. Bat
(ii)	A portion of brick which is obtained by cutting a brick into two parts lengthwise.	C. Queen closer D. Mitred closer
(iii)	A portion of brick obtained by cutting the triangular piece between the centre of one end and the centre of the side.	E. Closer F. King closer G. Bevelled closer
(iv)	A portion of brick whose one end is cut splayed for full width.	H. Full brick
(v)	A portion of brick obtained by cutting the brick crosswise.	

SEECTION B (70 Marks)

Answer **all** questions from this section.

3. Suppose you have been appointed as a school workshop supervisor:

(a) Differentiate hands from power tools.

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(b) Explain five ways of keeping the tools in good condition

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(c) Briefly explain the use of the given block work laying tools:

(i) Joint board

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(ii) Steel square

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4. Glass is a building material which is commonly used in modern buildings.

   (a) Outline five forms of commercial glasses available which are used in construction.

   (i) .....

   (ii) .....

   (iii) .....

   (iv) .....

   (v) .....

   (b) Identify the five uses of glasses in buildings?

   (i) .....

   (ii) .....

   (iii) .....

   (iv) .....

   (v) .....

   (vi) .....

5. Differentiate The qualities and properties of timber depend on the quality of tree from which it is obtained. Differentiate the softwood from hardwood by considering the factor shown in the following table.

Factor	Soft Wood	Hard wood
Annual ring		
Fire resistance		
Strength		
Structure		
Weight		

6. Briefly explain five dewatering methods which can be used in water logged site.

(a) .....

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(b) .....

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(c) .....

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(d) .....

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(e) .....

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7. Suppose you were assigned to plaster an external brick wall of a class room building.

   (a) Which tools will you need for the work? Identify three tools.

   (i) .....

   (ii) .....

   (iii) .....

   (b) Briefly explain seven steps that would be followed when plastering the wall.

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8. (a) Which service should be provided at a site before commencement of the construction work? Identify four services.

   (i) .....

   (ii) .....

   (iii) .....

   (b) Why is it important to do site investigantion before starting construction? Give six reasons.

   (i) .....

   (ii) .....

   (iii) .....

   (iv) .....

   (v) .....

   (vi) .....

9. (a) What are the four functions of the foundation in building?

(i) .....

(ii) .....

(iii).....

(iv).....

(b) With the aid of sketches, distinguish between pad foundation and raft foundation.

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A sketch of pad foundation.

SECTION C (15 Marks)

Answer question number **ten (10)**.

10. Suppose you are supervising pouring of concrete in a class room building.

(a) What are the four properties of aggregates to be used for the work?

(i) .....

(ii) .....

(iii) .....

(iv) .....

(b) What are the four factors that may affect the workability of a fresh concrete?

(i) .....

(ii) .....

(iii) .....

(iv) .....

(c) Briefly explain two methods of checking the strength of harden concrete.

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