

THE UNITED REPUBLIC OF TANZANIA NATIONAL EXAMINATIONS COUNCIL CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

072

ARCHITECTURAL DRAUGHTING

(For Both School and Private Candidates)

TIME: 3 Hours

Tuesday morning 30/10/2007

Instructions

- This paper consists of sections A, B and C.
- 2. Answer all questions in sections A and B, and two (2) questions from section C.
- Cellular phones are not allowed in the examination room.
- Electronic calculators are not allowed in the examination room.
- 5. Write your Examination Number on every page of your answer booklet(s).

This paper consists of 5 printed pages.

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SECTION A (20 marks)

Answer all questions in this section.

- For each of the items (i) (x), choose the correct answer from among the given alternatives and write its letter beside the item number.
 - The underground tank filled with stones to allow liquid to percolate into the surrounding subsoil in the drainage system is known as
 - A septic tank
 - B man hole
 - C cesspool
 - D intercepting chamber
 - E soak away pit.
 - (ii) Drawing is a
 - A language for the introverts
 - B means of communication by lines
 - C subject for the dull pupils
 - D military language
 - E subject for technicians.
 - (iii) A tee square is used to draw
 - A horizontal lines
 - B vertical lines
 - C inclined lines
 - D centre lines
 - E short thin dash lines.
 - (iv) A decorative moulding fixed or cut around doors to emphasise the opening is the
 - A skirting
 - B architrave
 - C threshold
 - D head
 - E wood plug.
 - The type of drawing which shows the true picture of the building materials is the
 - A ground plan
 - B rear elevation
 - C drainage layout
 - D section drawing
 - E vertical section drawing.

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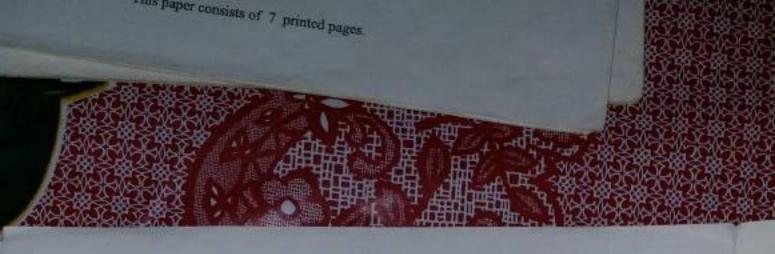
- (vi) The following are terminologies concerning the stairs, except
 - pitch line
 - B going
 - C riser
 - D voussoir
 - tapered step.
- (vii) A full size scale means
 - 1:12 A
 - B 2:1
 - C
 - D 1:3
 - E 3:1.
- As far as roof design is concerned a span is
 - horizontal distance between two walls of a building
 - vertical distance between the inclined part of the pitched roof B
 - inclined distance between two walls of building where the roof is C placed
 - horizontal distance between outer edge of the wall plates D
 - horizontal distance between inner edges of the wall plates
- A flue is define as a (ix)
 - void through which products of combustion enter
 - fire place where heating takes place B
 - space through which smoke enters C
 - space through which gases from fireplace are kept D
 - space through which smoke and gases pass
- Dead loads are loads caused by (x)
 - a moving wind
 - resting equipment B
 - moving bodies C
 - the static and non moving bodies D
 - non living things.
- Match the items in list A with the correct responses in list B by writing the letter of the response beside the item number.

List A

- The front view of the object (i)
- ISO metric size of A2 drawing paper (ii)
- Basic functions of building (iii) specifications
- Casement windows

List B

- The part of the building foundation which rest on the ground and constructed first
- Waste water B
- Geometric, open well, circular and C straight flight stair
- Pivoted window D



- Sewage line (v)
- A slope of roof usually expressed as (vi)
- The strip on the door jambs against (vii) which the door closes
- Footing (viii)
- Types of stair cases (ix)
- Block plan (x)

- A drawing which shows various plots
- To maximize privacy at the living room
- Pitch G
- 297m x 420mm H
- Door stop ī
- Section 1
- K Elevation
- Heads and sills always extend across L the full width of the frame
- 594 mm x 420 mm M
- Roof over hang
- O , Legal documents with written instructions used basically for estimating materials and costing
- Assembly drawings P
- Hinged window Q
- Empirial measurement R
- Drainage disposal system
- Detail of stair and ground plan

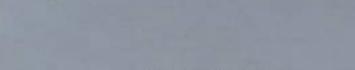
SECTION B (40 marks)

Answer all questions in this section.

- What is the purpose of North point on a drawing? 3.
- Mention two most common types of pictorial drawings. 4.
- Name two styles of lettering used in Architecture. 5.
- Draw a simple sketch of a bird's mouth and label it fully. 6.
- Name a suitable grade of pencil for the use in making freehand drawing 7-
- Draw a simple plan of a double-bed room. 8.
- What are working drawings? 9
- What is meant by 10.
 - (a) reducing scale?
 - (b) enlarging scale?
- Write in long form the following terms: 11.
 - (a) H.L.
- (b)
- (c)

- Define the following terms: 12
 - An elevation (a)
- A cross-section. (b)

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 Explain what should be shown in the following drawings and a suitable scale one each for

SECTION C (40 marks)

Answer two (2) questions from this section.

(a) Location drawing

(b) Floor plans

(b) Sections

(d) Component drawings

(e) Assembly drawing

- 14. (a) To a scale 1:20, draw a segmental arch spanning over 3500 mm opening. The rise of the arch is 1/8 of span and the height of the arch is 450 mm.
 - (b) From the figure drawn above (question 14 (a) show the following:

(i) Extrados

(ii) Skew back

(iii) Key brick

(iv) Springing line

15. The figure below is a floor plan of a two bed roomed semi-urban residential house. The scale used is 1:100. Copy the drawing by using a scale of 1:50. All necessary dimensions should be clearly shown.

