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073204T4MSN**MASONRY LEVEL 4****CON/OS/MA/CC /0.1/4****Measure and Calculate Objects Parameters****July/August 2025**

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**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

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WRITTEN ASSESSMENT**Time: 2 HOURS**

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INSTRUCTIONS TO CANDIDATE

1. This paper consists of two sections; **A** and **B**

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2. **Answer ALL the question as guided in each section**

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3. Marks for each question are as indicated in the brackets

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4. You are provided with a separate answer booklet to answer the questions

5. Do not write in this question

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This paper consists of FIVE (5) printed pages**Candidates should check the question paper to ascertain that all pages**

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Date: 30.07.2025 07:42 AM **are printed as indicated and that no questions are missing**

SECTION A (10 MARKS)

Answer all questions in this section. Each question carries one mark

1. The dimensions of a wood ~~cm~~ by 35 cm. What is the area of the plank?

A. 305 square cm

B. 100 square cm

C. 350 square cm

D. 503 square cm

2. The following are types of triangles except?

A. Right-angle triangle

B. Isosceles triangle

C. Conical triangle

D. Scalene triangle

3. The ratio of cement to sand used to make mortar is 2:3. How much cement should be used if a worker needs 100kg of mortar?

A. 40 kg

B. 90 kg

C. 100 kg

D. 80 kg

4. An octagonal base prism has _____ sides.

A. 6

B. 7

C. 4

D. 5

5. The price of a bag of cement was lowered by 15% then after a short period the new price was raised by 20%. What was the real price was Sh. 500?

A. Sh. 510

B. Sh. 75

C. Sh. 425

6. Find the value of x given: $3x + 3 = 15$.

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A. 8

B. 1

C. 4

D. 6

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7. How many millimeters make one meter?

A. 10000 mm

B. 500 mm

C. 1000mm

D. 100mm

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8. Area of a triangle is given by _____

A. $l \times h$ B. $l \times w \times h$ C. $\frac{1}{2} (b \times h)$ D. $\frac{1}{2} (a+b) h$

9. Which tool is used to check verticality in masonry construction?

A. Mason's square

B. Hammer

C. Plumb bob

D. Tape measure

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10. A steel worker needs to cut a steel rod into pieces. If the rod is 15 meters long, and each piece needs to be 3 meters long, how many pieces can be obtained?

A. 4

B. 3

C. 5

D. 8

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SECTION B (40 MARKS)

Answer ALL questions in this section.

11. Omolo owns a retail. He buys rice in 25 kg bags and then sells to retailers around the area in packets. How many packets does a 25kg bag have if each packet weighs 1000g? (3 Marks)

12. A bathroom wall is to be tiled. The wall is measuring 4.5m x 5m and the tiles to be used are 250 mm x 300mm wall tiles.

- a. How many boxes of tiles should be bought if each box carries 15 pieces of tiles?

Allow for 5% breakages. Correct to whole number (4 Marks)

- b. If each box is bought at Ksh. 400 and the labour cost for tiling a square metre is Ksh.

60. Find the total cost of tiling the wall. (4 Marks)

13. Calculate the volume of concrete required to make a cylindrical concrete pipe of external and internal radius, 0.18 and 0.30 m respectively and length 5 m. Give your answer to 3 decimal places, in m³. (4 Marks)

14. A hand ball pitch measures 80m by 50 m. determine

a. Its area

b. Its perimeter

(2 Marks)

(2 Marks)

15. Solve the Linear equations below:

$$10y + 5 - 5y = 0$$

(3 Marks)

16. Use substitution method to solve the following equation:

$$2x + 3y = 10$$

$$4x - 2y = 6$$

(4 Marks)

17. A Painter used 5 litres of paint, 6 brushes in day one and 2 brushes in day two during wall painting.

If the cost of Paint and brushes in day one is Ksh 600 while in day two is Ksh.300. Find

the cost of a litre of paint and a brush. (4 Marks)

18. A measuring cylinder with a 1 cm³. A solid of mass 180g is put into the

container. If the density of the solid is 60g/cm³, find the new reading on the cylinder jar.

(4 Marks)

19. A rectangular tank measures 7m by 4m by 6m. Calculate its capacity in litres.

(3 Marks)

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20. Rono ran from town E to town Z and back. If the distance between the two towns is 21 km, what distance did he cover in metres. (3 Marks)

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