

073204T4MSN

MASONRY LEVEL 4

CON/OS/MA/CC/01/4 Measure and Calculate

Parameters November/December 2025

Printed By: Technical And Vocational College Date: 21.11.2025

07:18 AM



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

**WRITTEN ASSESSMENT**

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**TIME: 2 HOURS**

**INSTRUCTIONS TO CANDIDATE**

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1. This paper consists of **TWO** sections **A** and **B**.

2. Answer the questions in each section

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

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

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5. Do not write on the question paper.

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**This paper consists of FOUR (4) printed pages.**

**Candidate should check the question paper to ascertain that all pages  
are printed as indicated and that no questions are missing.**

**SECTION A (10 MARKS)**

**Answer ALL the questions in this section. Each question carries one mark**

1. A rectangular prism is which geometric shape? (1 mark)

A. Cube  
B. Cuboid  
C. Cylinder

D. Prism

2. The radius of a circular column is an example of: (1 mark)

A. Object parameter  
B. Job specification  
C. Measurement error  
D. Workplace policy

3. Which tool is best for checking the vertical alignment of a wall? (1 mark)

A. Vernier caliper

B. Spirit level  
C. T-square  
D. Measuring tape

4. A measuring tape is marked in centimeters but the job requires meters. What should you do? (1 mark)

A. Add 10

B. Multiply by 100  
C. Divide by 100  
D. Subtract 100

5. To confirm that a digital carat is before use, you should

A. Shake it  
B. Test it against a known standard  
C. Drop it  
D. Check its color

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6. If a beam length is measured as 2.6 m but mistakenly recorded as 26 m, the error is due to: (1 mark)

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- A. Wrong tool
- B. Wrong system of measurement
- C. Recording error
- D. Incorrect conversion

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7. Which formula is used to calculate the volume of a cylinder? (1 mark)

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- A.  $V = \pi r^2 h$
- B.  $V = 2\pi r h$
- C.  $V = 4\pi r^2$
- D.  $V = \pi r^3$

8. A mason rechecks his calculations after completing them. This action shows: (1 mark)

A. Time wasting

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- B. Compliance with policy
- C. Self-checking computations
- D. Tool maintenance

9. Specifications for measurement are mainly obtained (1 mark)

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A. Drawings and job specifications

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- B. CEs only
- C. Friend's advice
- D. Shop catalogues

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10. Which PPE should be worn when taking measurements on site? (1 mark)

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- A. Gloves, safety boots, helmet
- B. Sunglasses and cap
- C. Tie and jacket
- D. Safety glasses

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**SECTION B (40 MARKS)*****Attempt ALL Questions in This Section***

11. A wall has a length of 3 m, a height of 0.25 m, and a thickness of 0.25 m. Calculate the amount of concrete (in cubic meters) required to build this wall. (3 marks)
12. A round pillar has a diameter of 0.4 m and a height of 2.5 m. Find its volume in cubic meters. (3 marks)
13. A mason recorded the length of a beam as 350 cm. The job card requires the measurement in meters. State the correct value. (2 marks)
14. You are given a steel tape and a spirit level for site measurements. Explain how you would check one of these tools for accuracy before starting work. (4 marks)
15. During measurement work on site, you are issued with a steel tape and a plumb line. Describe how you would care for these tools to keep them in good condition. (4 marks)
16. A mason measured the length of a lintel as 450 cm, but the supervisor required the measurement in meters. Rewrite the measurement correctly and explain why such conversions are important. (3 marks)
17. A floor slab measures 4 m by 2.5 m. Calculate its surface area in square meters. (2 marks)
18. A student measured a wall and calculated its area as 12 m<sup>2</sup>, but on rechecking, the correct answer was 15 m<sup>2</sup>. Explain what went wrong and why it is important to always recheck calculations. (4 marks)
19. On a construction site, measurement results are often written down in a record book. Explain FOUR good practices for documenting these results correctly. (4 marks)
20. A water tank has a radius of 1.4 m and a height of 4 m. Work out its capacity in liters. (3 marks)
21. Systems of measurement (metric and imperial) must be identified and converted according to job requirements. Differentiate between the metric and imperial systems of measurement, giving one example. (4 marks)
22. Measuring and calculation instruments are maintained according to manufacturer's instructions. Outline TWO ways of maintaining measuring instruments. (4 marks)