LEVEL 4

DEMONSTRATE NUMERACY SKILLS

July/ August 2024

TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATIONCOUNCIL

(TVET CDACC)

WRITTEN ASSESSMENT

2 HOURS

INSTRUCTIONS TO CANDIDATE:

1. This paper consists of **TWO** sections: **A** and **B**.
2. Answer **ALL** questions in sections **A** and **B** in the answer booklet provided.
3. Marks for each question are indicated in brackets.
4. Do not write on this question paper.
5. Answer all questions in **English.**

This paper consists of FIVE (5) printed pages.

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

SECTION A (10 MARKS)

*Answer **ALL** the questions in this section.*

1. Express 15 mm as percentage of 101 mm is;

   A. 1.49

   B. 1.5

   C. 14.85

   D. 0.1485

2. A box contains 24 packets of flour, Mueni took $\frac{1}{3}$ of them, how many packets did she take?

   A. 8

   B. 12

   C. 16

   D. 6

3. Solve; $50 + 25 \div (9 - 4) - 3 \times 4 + 5$

   A. 8

   B. -15

   C. 48

   D. 108

4. Round off 89.995 to two decimal places

   A. 90.00

   B. 89.99

   C. 89.90

   D. 9

5. A rectangle table top has a length of 5 cm and a width of 3 cm, determine its area.

   A. 8 cm^2

   B. 16 cm^2

   C. 10 cm^2

   D. 15 cm^2

6. The base of a right-angled triangle is 5 cm and the hypotenuse is 13 cm, calculate its height.
   A. 5
   B. 18
   C. 12
   D. 13
7. The interior angles of a rectangle sum up to:
   A. 180
   B. 360
   C. 1080
   D. 450
8. Determine the mode of the following numbers; $2, 3, 7, 5, 5, 13, 1, 7, 4, 8, 3, 4, 3$.
   A. 5
   B. 4
   C. 3
   D. 7
9. The scale on a map is$1: 250000$. A railway line measures 8.3cm on the map, find its actual length in kilometers.
   A. $2075000\ km$
   B. $20.75\ km$
   C. $20750\ km$
   D. $2.075\ km$
10. A tailor buys clothes in lengths of 80 m, 60 m, and 40 m. find the greatest common divisor of the measurements.
   A. 15
   B. 20
   C. 40
   D. 450

SECTION B (40 MARKS)

*Answer **ALL** the questions in this section.*

11. Evaluate without using calculators; $\frac{7}{6}\ of\ \left(3\frac{1}{2}-2\ \frac{1}{4}\right)+\ \frac{1}{8}$ (4 marks)

12. Using a pair of compass and ruler only, construct a square $ABCD$ of length $5.6\ cm$. Measure the diagonal AC. (4 marks)

13. Determine the average speed of a cyclist after 5 seconds if he covered a distance of 150m. (3 marks)

14. Table1 shows the profit earned by Wax enterprise for four years.

Table 1

Time (years)	1	2	3	4
Profit (shillings)	45000	50000	55000	60000

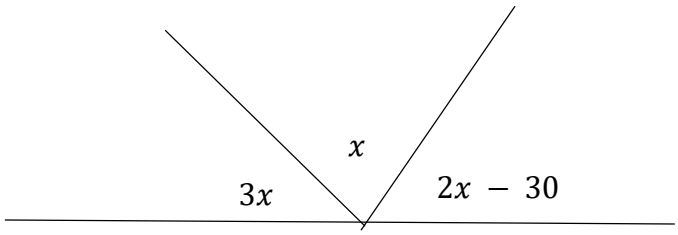
Using a suitable scale, plot a graph of profit against time. (4 marks)

15. A cylindrical container has a height of 40cm and a diameter of 0.28m. Calculate its volume in metres. (Take $\boldsymbol{\pi} = \frac{22}{7}$) (4 marks)

16. A straight line passes through the point $(8, -5)\ and\ (4, 8)$, calculate the gradient. (3 marks)

17. In figure 1, find the value of each of the angles. (4 marks)

Figure 1



18. Three bells ring at intervals of 30 seconds, 60 seconds and 90 seconds. After how many minutes will they ring together? (3 marks)

19. Table 2 shows marks scored in a mathematics test, find the mean. (4 marks)

Table 2

Grade	50 - 59	60 - 69	70 - 79	80 - 89	90 - 99	100 - 109	110 - 119
Frequency	7	8	19	31	21	8	6

20. Table 3 shows the amount of salary a company pays to its workers per hour.

Table 3

Activities	Salary per Hour in Kenyan Shillings
Office cleaner	250
Messenger	150
Sales person	300
Grounds man	200

Calculate the total amount of money paid to the workers if they all work for $2\frac{1}{2}\ hours$ per day.

(3 marks)

21. A minor segment is enclosed between a chord of length 10 cm and a segment of circle whose radius is 14 cm and the angle subtending it is 120°, calculate the area of the segment.(4 marks)

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