Demonstrate Numeracy Skills Level 3

2 Hours

March/April 2023

THE KENYA NATIONAL EXAMINATIONS COUNCIL

WRITTEN ASSESSMENT

Time: 2 hours

INSTRUCTIONS TO CANDIDATE

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

*Answer **ALL** questions in sections **A** and **B** in the answer booklet provided.*

Marks for each question are indicated in brackets.

You should have a non-programmable calculator.

Do not write on this question paper.

*Answer the questions in **English**.*

This paper consists of SEVEN (7) 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 (20 MARKS)

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

For question 1-10 indicate whether each of the following statement is TRUE or FALSE.

1. The product of two negative numbers is positive. *TRUE or FALSE?*   (1 Mark)
2. The standard form of 0.0000015 is 1.5×10^6. *TRUE or FALSE?*   (1 Mark)
3. If $x = 7$ then $x - 7 = 0$. *TRUE or FALSE?*   (1 Mark)
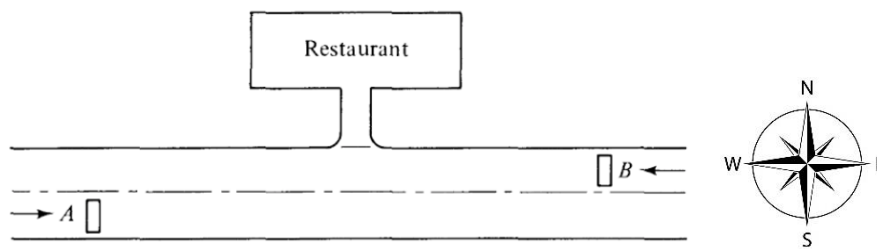4. In figure 1, Car B will turn West to enter the restaurant. *TRUE or FALSE?*   (1 Mark)

   Figure 1

5. The school lunch starts at 1PM. The clock face in figure 2 reads lunch has already started. *TRUE or FALSE?*   (1 Mark)

   Figure 2

6. If two triangles have the same perimeter, they must have the same area. *TRUE or FALSE?*

                    (1 Mark)

7. The volume of a cube of side 5cm is equal to 125cm^2 . *TRUE or FALSE?*   (1 Mark)
8. Figure 3 is an example of a polygon. *TRUE or FALSE?*   (1 Mark)
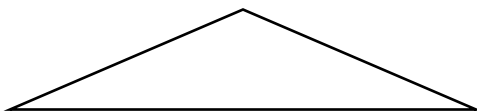

   Figure 3

9. There are eighty-six thousand four hundred and one seconds in a day. *TRUE or FALSE?*

(1 Mark)

10. Ten is a natural number. *TRUE or FALSE?* (1 Mark)

For question 11-20 choose the correct answer.

11. How many tiles of size 20cm by 30cm are required to cover a floor which is 4 metres by 4.5metres? (1 Mark)

   A. 100
   B. 200
   C. 300
   D. 400

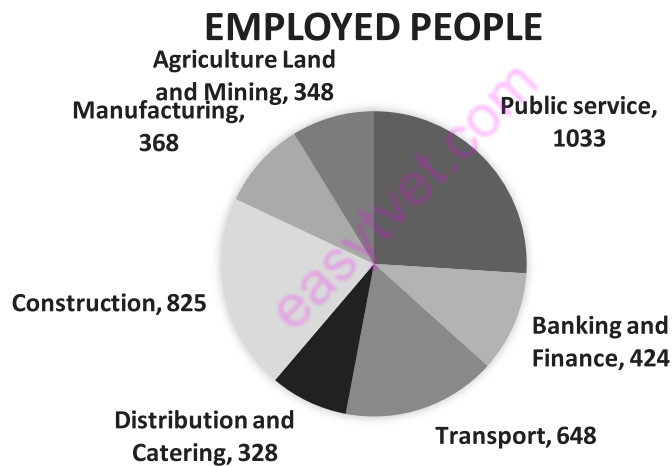12. The number of people employed in different areas were as presented in Figure 4;

EMPLOYED PEOPLE

Agriculture Land and Mining, 348
Manufacturing, 368
Public service, 1033
Construction, 825
Banking and Finance, 424
Distribution and Catering, 328
Transport, 648

Figure 4

Find the difference between the number of people employed in public service and those employed in construction? (1 Mark

   A. 208
   B. 825
   C. 1858
   D. 1033

13. Which of the following fractions is an equivalent to $\frac{2}{3}$?   (1 Mark)

    A. $\frac{37}{45}$

    B. $\frac{40}{55}$

    C. $\frac{44}{66}$

    D. $\frac{15}{27}$

14. Determine the area of a circle whose diameter is 14cm. (*use* π *as* $\frac{22}{7}$)   (1 Mark)

    A. 44

    B. 154

    C. 616

    D. 308

15. Which one of the following equations represent the line graph in Figure 5?   (1 Mark)

    A. $y = x^2$

    B. $y = x$

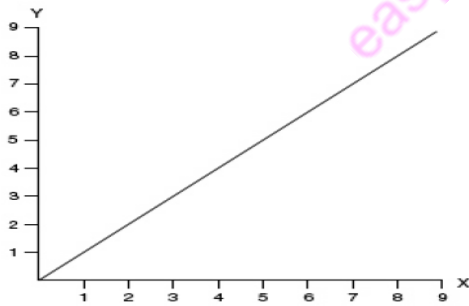   C. $y = 2x$

    D. 2y=x

   Figure 5

16. Which value will x take if x is greater than -4?   (1 Mark)

    A. -5

    B. -4

    C. -3

    D. -6

17. Find the value of p in $3p - 3 = 18$. (1 Mark)

    A. 7

    B. 21

    C. 6

    D. 9

18. Which one of the following is a central direction in a compass? (1 Mark)

    A. North-East

    B. South-South-West

    C. East-West

    D. South

19. Table 1 shows the taxes paid in the year 2019 and 2021.

    Table 1

Type of Tax	2019 (Ksh.)	2021 (Ksh.)
Income Tax	2,800	5,180
National Insurance	1,876	2,900
VAT	1,916	2,556
Fuel Duty	696	1,014
Vehicle Exercise Duty	172	190
Tobacco	308	408
Alcohol	232	312
Betting Duty	60	48

How much **more** tax, did a home owner who does not smoke, drink alcohol or gamble pay in 2021? (1 Mark)

    A. Ksh. 168

    B. Ksh. 2,347

    C. Ksh. 4,380

    D. Ksh. 4,548

20. How many Millimeters make 1Metre? (1 Mark)

   A. 100

   B. 10000

   C. 1000

   D. 10

SECTION B (30 MARKS)

*Answer **ALL** questions in this section*

21. A Safaricom dealer has planned routes for each staff in the sales department. One of the salespersons traveled from Kisumu to Kakamega a distance of 83 km, then to Mbale a distance of 26km, then to Luanda Market a distance of 6 km, then to Maseno town a distance of 0.8km and then back to the office a distance of 43 km. Find the total distance covered by the salesperson to the nearest whole number. (3 Marks)

22. Ali spent $\frac{2}{3}$ of his Salary to cater for his bills and $\frac{3}{5}$ as savings. If the bills were 10,000, find the amount he saved. (2 Marks)

23. A sachet of blue band weighs 50g and costs Ksh. 30. Find the cost of 1kg of blue band.
   (3 Marks)

24. A garden compost is made up of cow dung, socked grass and socked leaves in the ratio 7: 3: 2. If a farmer uses 4 buckets of socked leaves, how many buckets of cow dung is required? (3 Marks)

25. Figure 7 represents the number of cars parked in a college; how many more cars were packed on Tuesday than on Thursday? (3 Marks)

Figure 6

26. An examination has three test papers. A student must attain an average of 50 marks to pass the examination. A student got an average of 43 in two papers. Find the marks that the student must get in the third paper in order to pass. (3 Marks)

27. The perimeter of a square is 48cm. Find its area . (3 Marks)

28. A driver took a loan of Ksh. 500,000 from a bank. If the bank gives loans at simple interest rate of 15% per year. How much will the driver pay by the end of the two years? (3 Marks)

29. The number of road accidents in Kenya in 2019 is presented in Table 2. Draw a line graph from the data provided. (4 Marks)

Table 2

Jan	Feb	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
411	364	369	418	433	444	464	490	525	495	556	545

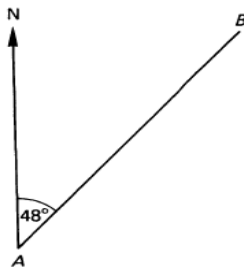30. What is the bearing of an aircraft flying from B to A? (3 Marks)

Figure 7

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