

Name: ..... Class: .....

Date: ..... Adm No: .....

MATHEMATICS

TIME: 2 HOURS 30 MINUTES

# END OF TERM 1 EXAM

*Kenya Certificate of Secondary Education (K.C.S.E.)*

## FORM ONE

**INSTRUCTIONS TO CANDIDATES:**

- Write your name, admission number, Class, and write date of examination in the spaces provided
- The paper contains two sections. Section I and Section II.
- Answer ALL the questions in section I
- Answer ALL questions in section II.
- Answers and working must be written on the question paper in the spaces provided below each question.
- Show all steps in your calculations below each question.
- Marks may be given for correct working even if the answer is wrong.
- KNEC mathematical table may be used, except where stated otherwise.

**FOR EXAMINERS USE ONLY**

**SECTION I**

Question	1	2	3	4	5	6	7	8	9	10	11	TOTAL
Marks												

**SECTION II**

Question	12	13	TOTAL
Marks			

**GRAND TOTAL**

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**SECTION I (30 MARKS)**

**Answer all the questions from this section**

1. Write the following numbers in figures

(a) Ten thousands and ten

(1 mark)

(b) One hundred and two billion, three hundred and sixty five million, four hundred and seventy eight thousands and one

(1 mark)

2. All prime numbers less than ten are arranged in descending order to form a number.

(a) Write down the number formed.

(1 mark)

(b) State the total value of the second digit in the number formed in (a) above (1 mark)

3. Express 7056 as a product of its prime factors leaving your answer in power form.

(3 marks)

4. Three bells ring at an interval of 9 minutes, 15 minutes and 21 minutes. The bells will next ring together at 11.00pm. Find the time the bells had last rang together? (3marks)

5. Three tanks are capable of holding 108 litres, 168 litres and 180 litres of milk. Determine the capacity of the greatest vessel which can be used to fill each one of them an exact number of times. (3 marks)

6. Test whether 1 478 019 is divisible by 11. (2 marks)

7. Evaluate.

(3 marks)

$$\frac{-16 \div 4 + 6 \times 14 - 2 \times -5}{84 \div 14 \times 3}$$

8. Evaluate

(2 marks)

$$\frac{1}{3} \text{ of } \left( \frac{5}{6} - \frac{1}{4} \right) \div \frac{1}{12}$$

9. Express the recurring decimal below as a fraction in simplest form.

(3 marks)

$0.2\dot{3}$

10. Evaluate using tables of square roots

(3 marks)

$$\sqrt{0.792}$$

11. Without using mathematical tables or calculator evaluate

(4 marks)

$$\sqrt{\frac{0.0625 \times 2.56}{0.25 \times 0.08 \times 0.5}}$$

**SECTION II (20 MARKS)**

**Answer ALL the questions from this section**

12. Kinyua spent  $\frac{1}{4}$  of his net January salary on school fees. He spent  $\frac{1}{4}$  of the remainder on electricity and water bills. He spent  $\frac{1}{9}$  of what remained on transport. If he finally has sh.8400, calculate

a) His total January salary. (4 marks)

b) Money spent on school fees. (2 marks)

c) Money spent on transport. (2 marks)

d) Money spent on electricity and water bills. (2 marks)

13. A bookstore has 30 816 exercise books which were packed in cartons. Each carton contained 24 exercise books. The mass of an empty carton was 2kg and that of a full carton is 12kg.

(a) How many cartons were there? (2 marks)

(b) What was the total mass of the empty cartons? (2 marks)

(c) What was the total mass of books in one carton? (2 marks)

(d) What was the total mass of all the exercise books? (2 marks)

(e) What was the mass of one exercise book in kg to 2 decimal places? (2 marks)