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FORM1<br>MATHS<br>END TERM EXAM - MARCH 2016<br>TIME: $2 \frac{1}{2}$ HRS

NAME.
.ADMIN NO. $\qquad$ CLASS $\qquad$

## SECTION A

1. Work out:

$$
\begin{equation*}
98+6734+348 \tag{1mk}
\end{equation*}
$$

2. Express the following numbers as products of prime factors. Express your answer in power a form
a) 1573
b) 1078
3. A number K is such that when it is divided by 27,30 or 45 , the remainder is 3 . Find the smallest possible value of K
4. Perform the operation below using a number line
5. If $x=-2, y=-6$ and $z=4$. Find the value of the following a) $4 z+2 y-x$
(2mks)
b) $\frac{4 x y}{z}$
(2mks)
c) $2 y-3 x+z$
(2mks)
6. Evaluate: $96 \div 6+7 \times 15-14 \times 5$
(2mks)
7. Arrange the following in descending order

$$
\begin{equation*}
2 / 5,3 / 10,6 / 5,5 / 11 \tag{2mks}
\end{equation*}
$$

9. Evaluate:
a) $7 \frac{2}{3}+6 \frac{3}{5}+11 \frac{5}{6}$
b) $-2 / 3-(+1 / 10)+(-1 / 7)$
a) $45 / 60 \div(51 / 12-41 / 5)$
b) $3 / 8$ of $\left\{73 / 5-1 / 3\left(11 / 4+3^{1 / 3}\right)+22 / 5\right\}$
(4mks)
10. Express each of the following as a fraction:
a) 0.04
b) 0.67
c) $3.2 \dot{5} \dot{6}$
11. Work out correct to 2 decimal places

$$
(13.42+0.321)-(0.31 \times 2.56)
$$

13. Express the following numbers in standard form a) 509.78
b) 0.0289
14. Find the sum of a third of $(a+b)$ and a fifth of $(a-b)$
15. Without using a calculator, evaluate leaving the answer as a fraction in its simplest Form

$$
\frac{2^{1 / 2}+3 / 5 \div 5 / 6 \text { of } 2^{2} / 5}{1^{7} / 10}
$$

16. Write the following fraction as a decimal and hence express the answer in standard form (3mks) $\frac{521}{30}$

## SECTION B

17. A farmer has four containers of capacity 240 litres, 360 litres, 600 litres and 700 litres. Find the capacity of:
a) The smallest container that can be filled by each one of them an exact number of times
b)The largest container that can be used to fill each one of them an exact number of times
c) A tank K is such that when it is filled by any of the containers above, there is always a deficit of 17 litres for the tank to be full. Find the smallest possible capacity of the tank
d) Express the answer (c) above in standard form
18. The British Government donated shs. 63.89 billion while the Kenya Government contributed shs 300 million towards a project. Of the total amount shs 18.6 million was used to remunerate experts, 890,000 for the purchase of stationery and 13.6 million for the acquisition of machinery.
a (i) How much money was contributed to the project altogether
ii) Express the answer in (i) above in words
(2mks)
c) Calculate the total expenses. Express the answer in Standard form
d) How much money remained unused? Write the answer in words.
19. In a maths questions, every correct answer scores 2 marks, -1 mark for every wrong answer and no mark for no answer. The test has 30 questions:
a) Find :i)The maximum possible score
ii) The minimum possible score
(2mks)
b) If Jane has 20 correct answers, 8 wrong answers and 2 no answers, what mark does she get?
c) Mary scored 25 marks having got 5 answers wrong. How many answers does she get right?
20. a) If $x^{2}=130$, find $x$
b) If $\mathrm{c}=\sqrt{a^{2}+b^{2}}$, find c given that $\mathrm{a}=7$ and $\mathrm{b}=12$
(4mks)
c)If $\mathrm{P}=\sqrt{2 a b}$ and, $\mathrm{a}=9, \mathrm{~b}=11$, Calculate the value of P correct to 1 decimal place(3mks)
21. A soda depot had 30816 sodas which were packed in crates. Each crate contained 24 sodas. The mass of an empty crate was 2 kg and that of a full crate 12 kg .
a) How many crates were there?
(2mks)
b) What was the total mass of empty crates?
(2mks)
c) What was the total mass of sodas alone?
d) A lorry was hired to transport the crates at a cost of shs 5 per crate of soda per trip. The lorry could only carry 107 crates per trip. How much money was spent on transporting all the crates?
