## - Sic $\square$ U

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| Form 1 | Term 2 | 121 A - Mathematics | $05-J u l-16$ | Weekly Ambush |
| :---: | :---: | :---: | :---: | :---: |

ADM
NAME
CLASS
TIME: 1 hr

## INSTRUCTIONS:

1. Write your name, class and ADM number in the spaces provided above.
2. Answer all the questions provided in this question paper
3. All workings must be clearly shown
4. Any acts of cheating will render your examinations nullified
5. Sign and write the date of the examination in the spaces provided below

| Invigilator's Name | Date Issued | Date Returned | Date Revised | Student's signature |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |

## For examiner's use only

| Question/Section/Page | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | Total |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Max. Score |  |  |  |  | $\mathbf{3 6}$ |
| Candidate's Score |  |  |  |  |  |

## Questions

1. Find the place value and total values of the underlined digits in the following numbers.

| Numbers | Place value | Total value |
| :--- | :--- | :--- |
| $\mathbf{6 9 7 , 3 4 8 , 0 1 5}$ |  |  |
| $\mathbf{8 , 4 9 3 , 6 2 7 , 5 0 1}$ |  |  |
| $7 \underline{74.0532}$ |  |  |

2. 

a. Write 30 and 462 as product of factor form.
b. Hence work out $30 \times 462$ giving your answer as a product of prime factors in power form.
3. Three tanks have a capacity of 20 litres, 24 litres and 32 litres respectively. What is the greatest volume of a container that can be used to empty the tanks completely when full without any remainder?
4. Work out the following
$\frac{36 \div \frac{1}{2} \text { of }(7+5)-2 \times 4}{24 \div 6 \times 2-6}$
5. Simplify completely
a. $\frac{R^{2}-4 R}{R-4}$
(2 mks)
b. $\frac{3 X^{2}+X^{3}}{3 X+X^{2}}$
(2 mks)
6. 20 men working 10 hours a day take 10 days to complete a job. How long would 30 men working 8 hours per day take to complete the same job?
7. Three children; Mucheru, Kimutai and Moraa shared 80 oranges. Mucheru received $1 / 4$ of the oranges while Kimutai got $1 / 3$ of the remainder. All the rest were taken by Moraa. How many oranges did Moraa get?
8. Simplify
9. Use mathematical tables to evaluate:
a. $\sqrt{7.613}$
(1 mk)
b. $\sqrt{387654}$
c. $\sqrt{0.009363}$
10. An airliner takes off from Nairobi airport on Thursday at 10.15 p.m. It reached Mumbai on Friday at $8.30 \mathrm{a} . \mathrm{m}$. How long did the flight take?
11. Solve the following equations
a. $4 y-8=y+7$
(2 mks)
b. $\frac{x+2}{4}-\frac{x-4}{2}=\frac{x-3}{3}$
(3 mks)

