

**CHUKA**



**UNIVERSITY**

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**UNIVERSITY EXAMINATIONS**

**THARAKA CAMPUS**

**EXAMINATION FOR THE AWARD OF DIPLOMA IN EDUCATION**

**PECI 0121: INTRODUCTION TO BASIC MATHEMATICS CONCEPTS**

**STREAMS: DIP. EDUCATION PART TIME (SB)**

**TIME: 2 HOURS**

**DAY/DATE: TUESDAY 06/08/2019**

**8.30 A.M. – 10.30 A.M.**

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**INSTRUCTIONS:**

- **Answer question ONE and any other TWO questions**

**QUESTION ONE (30 MARKS)**

- (a) Explain the following terms
- (i) Rate counting
  - (ii) Meaningful counting
  - (iii) Axioms (6 marks)
- (b) Explain two types of mathematics concepts. (4 marks)
- (c) State the value of “4” in the following figures. (2 marks)
- (i) 2462
  - (ii) 46982
- (d) Differentiate between a mathematical formula and a mathematical skill. (20 marks)
- (e) Discuss the dimensions on the nature of mathematics. (10 marks)
- (f) Explain BODMAS and simplify the equations. (4 marks)

**QUESTION 2 (20 MARKS)**

- (a) Relation the Jerome's theory to how children learn mathematics. (10 marks)
- (b) Discuss the importance of studying mathematics at primary school. (10 marks)

**QUESTION 3 (20 MARKS)**

- (a) Explain the objective of teaching primary school level mathematics. (10 marks)
- (b) Differentiate deep structure and surface structure in learning of mathematics. (4 marks)
- (c) Describe the theory of Piaget in learning basic mathematics. (6 marks)

**QUESTION 4 (20 MARKS)**

- (a) The importance of planning in teaching primary mathematics. (10 marks)
- (b) Assign skills to the following concepts in mathematics. (8 marks)

Concepts	
Angles	
Multiplication	
Numbers	
Length and areas	

- (c) Solve (2 marks)
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