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KIBABII UNIVERSITY
UNIVERSITY EXAMINATION
2022/2023 ACADEMIC YEAR
SECOND YEAR SEMESTER TWO

MAIN EXAMINATION
(REGULAR)
FOR THE DEGREE OF BACHELOR OF EDUCATION ARTS

COURSE CODE: ECD 221

**COURSE TITLE: SCIENCE AND MATHEMATICS FOR EARLY CHILDHOOD
EDUCATION**

DATE: 19/4/2023

TIME: 2.00PM-4.00PM

INSTRUCTIONS TO CANDIDATES

Answer Question One and Any Other TWO (2) Questions

TIME: 2 Hours

QUESTION ONE.**(30 MARKS)**

a. Define the following terms

- i) Mathematics (2 marks)
- ii) Science (2 marks)
- iii) Concept (2 marks)
- iv) Numbers (2 marks)
- v) Volume (2 marks)

b. Explain four reasons why science and Mathematics are the appropriate activity areas for young children (10marks)

c. Describe seven characteristics of young children that make science natural activity for them. (10 marks)

QUESTION TWO**(20 MARKS)**

(a) Stages of cognitive development according to Jean Piaget, explain the first 3 stages . (10 marks)

(b) Describe four objectives of teaching science in early childhood class. (10marks)

QUESTION THREE**(20 MARKS)**

Discuss 4 major concepts in pre-school mathematics activities . (20 marks)

QUESTION FOUR**(20 MARKS)**

(a) As an ECD teacher of math's explain 5 factors you would take into consideration when developing mathematics activities for young children (10 marks)

(b) Discuss the importance of pre-number activities for young children (10 marks)

QUESTION FIVE**(20 MARKS)**

(a) Explain precisely how to teach number values by showing examples (10 marks)

(b) Explain counting errors commonly made by pre-schoolers (10 marks)