



*(University of Choice)*

**MASINDE MULIRO UNIVERSITY OF SCIENCE AND  
TECHNOLOGY (MMUST)**

**UNIVERSITY EXAMINATIONS  
2023/2024 ACADEMIC YEAR**

**FIRST YEAR SECOND SEMESTER EXAMINATIONS**

**MAIN EXAM  
FOR  
THE CERTIFICATE IN EDUCATION**

**(EARLY CHILDHOOD)**

**COURSE CODE: ECD 009**

**COURSE TITLE: SCIENCE AND MATHEMATICS ACTIVITIES**

**DATE: 19<sup>TH</sup> DEC. 2023**

**TIME: 2:00 - 4:00 PM**

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INSTRUCTIONS TO CANDIDATES

Answer Question **One** and any other **Two**

MMUST observes ZERO tolerance to examination cheating

### QUESTION ONE

- a) Define the following terms (5mks)
- (i) Early childhood education
  - (ii) Science
  - (iii) Mathematic
  - (iv) Science Education
  - (v) Evaluation
- b) Explain five importance of teaching science and mathematics in elementary schools (6mks)
- b) What is the role of the teacher in Learner centered approach of teaching and learning (4mks)
- c) Mention at least four instructional materials used in teaching mathematics education for grade one and two (4mks)
- d) As an ECDE teacher, explain how you would introduce science education to your preschool learners (5mks)
- e) Briefly explain the two broad categories of teaching approaches that mathematics and science teachers in Early Childhood Education needs to know. (6mks)

### QUESTION TWO

- (a) Explain at least five activities that a teacher would use to promote the Science processing skills to learners during indoor and outdoor learning (10mks)
- (b) Describe any five methods and approaches for teaching science activities to elementary schools and ECD centers (10mks)

### QUESTION THREE

- a) Explain what is meant by questioning (2mks)
- b) Describe any five questioning skill that you already know are applicable in the study of science and mathematics for preschoolers (10mks)
- c) What are advantages of using question strategy when teaching preschool learners (8mks)

### QUESTION FOUR

- a) What is evaluation as used in science and mathematics education (2mks)
- b) Describe at least four assessment strategies that teachers in elementary schools can use in assessment of mathematics evaluation (8mks)
- c) Explain at least five challenges that face teaching of science and mathematics education to early learners in Kenyan schools (10mks)