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**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)  
UNIVERSITY EXAMINATIONS  
2023/2024 ACADEMIC YEAR  
FOURTH YEAR FIRST SEMESTER EXAMINATIONS  
MAIN EXAM  
FOR  
THE BACHELOR OF EDUCATION DEGREE  
(SPECIAL NEEDS EDUCATION)**

**COURSE CODE: SNE 414E**

**COURSE TITLE: BRAILLE MATHEMATICS AND KISWAHILI**

**DATE: 4<sup>TH</sup> DEC. 2023**

**TIME: 12:00 – 2:00 PM**

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**INSTRUCTIONS TO CANDIDATES**

Answer question ONE and any other TWO questions one MUST be Mathematical and one Kiswahili. Total THREE questions.

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over.

### QUESTION ONE

- a) Write the following in Braille. (4 marks)  
 $\frac{1}{2}$ , 20%,  $9\frac{2}{5}$ , 32.14
- b) Identify the +, -, ÷ and × signs in Braille. (8 marks)
- c) Write the following signs in Braille; Equal, Square roots, Numeral, and Letter Sign. (6 marks)
- d) Describe the following in Braille; ( ), [ ], { }, <>(angle brackets). (8 marks)
- e) Matrix bracket. (2 marks)

### QUESTION TWO

Transcribe the following into Kiswahili Braille. (20 marks)

Ilikuwa Jumatatu siku ya Soko Lubao. Wanainchi walijumuika pale sokoni walikuwa na furaha furifuri. Walikuwa wametoka kila sehemu ya Magharibi na nia ya kununua Mbwa pale sokoni. Ghafla bin fuu wanunusi na wachuuzi wakajikuta katika hali ya mguu niponye majibwa waligeuka fisi wa msituni na nia ya kumalizana na binadamu.

### QUESTION THREE

Work out the following in Braille using Brailers

- a) 
$$\begin{array}{r} 1532 \\ 619 \\ \hline \end{array} +$$
 (5 marks)
- b)  $\sqrt[16]{635}$ . (5 marks)
- c)  $64 - ? = 36$  (5 marks)
- d)  $256 \div 2 = ?$  (5 marks)

### QUESTION FOUR

Braille the following Mathematics.

- a)  $7m^2$  (4 marks)
- b)  $\sqrt{XY}$  (4 marks)
- c)  $\begin{cases} X \\ Y \\ Z \end{cases}$  (4 marks)
- d)  $24^2$  (4 marks)
- e)  $\frac{a}{b-c}$  (4 marks)

### QUESTION FIVE

Write an entertainment and creative story in Kiswahili Braille (20 marks)