UNAM
UNIVERSITY OF NAMIBIA

SCHOOL	**SCHOOL OF EDUCATION**		
DEPARTMENT	**INTERMEDIATE AND VOCATIONAL EDUCATION**		
SUBJECT	**MATHEMATICS EDUCATION 2A**		
SUBJECT CODE	**E3621IM**		
DATE	**JUNE 2026**		
DURATION	**3 HOURS**	**MARKS**	**100**
LECTURERS	**MR SHIVUTE; DR. VATILENI ; MR F. HAIMBODI; MR BM SIMASIKU**		

FIRST OPPORTUNITY EXAMINATION

Examiner: **Mr. B.M Simasiku (University of Namibia)**

External Moderator: Dr Mzwandile Wiseman Zulu (University of KwaZulu-Natal)

INSTRUCTIONS

1. **This paper consists of 4 pages including the cover page.**
2. **Work in an orderly way and present your work as neatly as possible.**
3. **While most of the marks will be awarded for content, candidates must bear in mind the importance of presentation, i.e. insight and critical thinking.**
4. **Number your questions correctly and clearly.**
5. **Answer all the questions.**
6. **POCKET CALCULATORS ARE NOT ALLOWED**

UNIVERSITY OF NAMIBIA EXAMINATION QUESTION PAPER

Section A

Answer the following multiple choice questions by only writing the correct letter e.g. A.

1.1 $\frac{4}{5}$ is equal to

A. 0.2 B. 0.6 C. 0.7 D. 0.8 E. 0.9 [2]

1.2 The value of 0.3 x 0.4 + 0.3 x 0.9 is

A. $\frac{12}{100}$ B. $\frac{27}{100}$ C. $\frac{39}{100}$ D. $\frac{49}{100}$ E. $\frac{189}{1000}$ [2]

1.3. Which one of the following numbers is the smallest?

A. 0.086 B. 0.07 C. 0.2 D. 0.078 E. 0.2433 [2]

1.4 The value of $\frac{1}{4}+\frac{1}{4}\times\frac{1}{4}-\frac{1}{4}$ is

A. 0 B. $\frac{1}{16}$ C. $\frac{3}{16}$ D. $\frac{4}{16}$ E. $\frac{5}{16}$ [2]

1.5 Given that $(21)^4 = 194481$, then $(0.21)^4$ equals

A. 0.000194481 B. 0.00194481 C. 0.194481 D. 19.4481 E. 1944.81 [2]

1.6 The mass of a bucket of milk is 11.99 kg. The same bucket when half-filled has a mass of 7.07 kg. The mass of a bucket in kg is

A. 2.00B. 2.15 C. 2.50 D. 4.92 E. 9.84 [2]

1.7 A girl divides one integer by another and obtains the answer 4 (correct to the nearest whole number). The pair of integers that the girl used could have been

A. 23 and 6 B. 35 and 9 C. 56 and 14 D. 19 and 5 E. 27 and 7 [2]

1.8 It takes 8 hours to fill $\frac{4}{5}$ of a container with water. The time in hours, that it takes to fill the remainder of the container, at the same rate is

A. 1 B. 4 C. 2 D. 1.6 E. 2.5 [2]

1.9 Mary was given money by her mother. She spent $\frac{1}{2}$ of her money to buy a dress. She, then, spent $\frac{1}{4}$ of the remaining amount to buy a Maths book. She remains with N$24. The amount of money she was given by her mother was ....

A. 20 B. 32 C. 64 D. 74 E. 82 [2]

1.10 In the history of fractions, the ....., dating from 1650 BC, provides insights into Egyptian mathematical practices including the use of fractions.

A. Rhind Papyrus B. Nile Papyrus C. Indian Papyrus D. Scroll Papyrus E. Pharo Papyrus [2]

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SECTION B

1. Generate three equivalent fractions of $\frac{2}{7}$, and explain how you generate them. [5]
2. Convert 0.125 to a common fraction and explain your working. [5]
3. Draw a linear model and a set model of each of the following fractions:
   (a) $\frac{2}{5}$ [3]
   (b) $\frac{3}{4}$ [3]
4. Explain the following concepts
   (a) Fraction [2]
   (b) Improper fractions [2]
   (c) Terminating Decimal Fractions. [2]
5. Explain how you will teach Grade 7 learners to convert recurring decimals to common fractions. Use at least five examples. [10]
6. Use the standard method and area model to work out the following:
   (a) $\frac{3}{5} - \frac{1}{4}$ [5]
   (b) $\frac{1}{2} \div \frac{1}{4}$ [5]
7. Simplify
   (a) $\frac{x+3}{x-5} \times \frac{x-5}{x-3}$ [2]
   (b) $\frac{1}{(x-2)(x-3)} + \frac{1}{x-2}$ [3]
8. Solve the following equations
   (a) $\frac{x}{5} = \frac{16}{20}$ [2]
   (b) $\frac{2x+5}{4} = \frac{4x-3}{6}$ [4]
9. Explain what is meant by direct proportion. [10]
10. Create an inverse proportion question and solve it using two different methods. [4]
11. Solve the following problems:
    (a) The ratio of the mass of parcel X to that of parcel Y is 5:3. If the total mass of the parcels is 64 kg, how much is parcel X heavier than parcel Y? [5]

(b) A garage increases the price of a truck by 10%. If the original price was N$ 150 000, calculate its new price. [5]

12. David has a vegetable garden of $26\frac{1}{4}$ m^2. He plants $\frac{1}{5}$ of the garden with beans and wants to plant Mahangu on the rest of the garden.

a. What fraction of the plot will he plant with Mahangu? [1]

b. Calculate the area in (m^2) he will have for Mahangu. [2]

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END