NATIONAL UNIVERSITY OF LESOTHO
INSTITUTE OF EXTRA MURAL STUDIES
RESEARCH, EVALUATION & MEDIA DEPARTMENT
DIPLOMA IN MASS COMMUNICATION
2022/2023 ACADEMIC YEAR

AED 0106 / DPM 0111-12 –
Numeracy Skills for Non-Mathematics Leaners – Year 1
First Semester Final Examination Paper

January 2023 **Marks: 100** **Time: 3 hrs.**

Instructions:

- Read all questions carefully before you answer.
- **Answer all the questions.**
- Number your answers exactly the same way they appear on the question paper.
- Please ensure that you proof-read all your answers.
- Marks will be deducted for untidy and/or illegible handwriting and grammar mistakes.
- Each question must be answered on a separate page.

Question **1**

A. The following is a list of some real numbers.

$$0,\quad 4.2,\quad \sqrt{64},\quad 0.7\overline{8},\quad -9,\quad 0.233224546567\ldots,\quad \sqrt{15},\quad \pi$$

From the list, identify the numbers which are:

I.	Integers	**[2]**
II.	Rational	**[2]**
III.	Irrational	**[2]**
IV.	Real	**[2]**

B. Real numbers follow certain properties which make manipulation of numbers easier to handle. Mention the properties shown below:

i.	$c + d = d + c$	**[2]**
ii.	$2(6 + 4) = 2 \times 6 + 2 \times 4$	**[2]**
iii.	$5 \times 1 = 5$	**[2]**

C. Work out:

I.	$40 - [7 + \{17 - (19 - 3)\}]$	**[2]**
II.	$23 - \frac{1}{4}(2 + 8)$	**[2]**
III.	$\frac{1}{6} + \frac{1}{2}(4 - 6)$	**[2]**

D. Use a number line to show the following:

I.	$-3.7 + 7.5$	**[3]**
II.	$3 - 9 + 5$	**[3]**

Question **2**

A. Write down the place value of **5** in each of the following numbers:

I. 1065.00334. **[2]**
II. 6588024. **[2]**
III. 0.0458. **[2]**

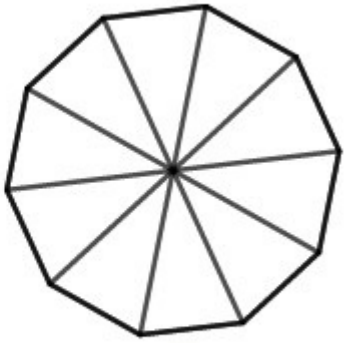
B. Copy the diagrams below and shade parts which represent the following fractions:

I. $\frac{1}{2}$ **[2]**

II. $\frac{2}{5}$ **[2]**

(i)

(ii)



C. Round-off **6368.3599** to the nearest:

I. Whole number. **[2]**
II. Ten. **[2]**
III. Hundred. **[2]**
IV. Thousandth. **[2]**
V. Hundredth. **[2]**
VI. Ten Thousand. **[2]**

D. Lisebo is making an outfit for a graduation ceremony. She needs $3\frac{2}{9}$ m of cloth for the jacket and $3\frac{3}{5}$ m for the skirt.

I. If she has 5m of cloth, how much more of the cloth does she need to finish the outfit? **[3]**
II. Cloth materials are only sold in 1m length. How many metres does she need to buy? **[1]**
III. If a metre of cloth costs M63.80, how much does she need to pay for the additional material? **[2]**

Question **3**

A. Write each number correct to the given degree of accuracy.

I. 293 172 to the nearest 10 000. **[1]**
II. 4.998 to 1 decimal place. **[1]**
III. 447 622 to 3 significant figures. **[1]**
IV. 8 229. 749 to the nearest tenth. **[1]**

B. In Shoprite supermarket milk is sold in packs of six 1 litre bottles at M79.80 per pack. Apart from that, one litre of milk is sold at M14.50. Terry bought a pack and Thabiso bought six singles 1 litre bottles.

I. How much did Terry pay for 1 litre of milk? **[2]**
II. Who paid more, Terry or Thabiso? Show all the necessary working to justify your answer. **[2]**

Question **4**

A. Convert the given quantities to the units stated in brackets:

I. 6.28 kilometres (metres). **[2]**
II. 820 centimetres (millimetres). **[2]**
III. 4.3 litres (millilitres). **[2]**
IV. 2.489 kilograms (grams). **[2]**
V. 1860 millilitres (litres). **[2]**
VI. 12000mm (kilometres). **[2]**

B. A street vendor bought two bags of oranges containing 22 oranges each, one bag of potatoes weighing 12kg and a box of tomatoes containing 64 tomatoes. A bag of oranges cost M44, a bag of potatoes cost M92 and box of tomatoes cost M133.

I. He then discovered that three oranges were spoiled and sold the rest at M3.50 each. How much profit did the street vendor make from selling the rest of the oranges? **[3]**
II. He sold the potatoes at M15 per 1kg. Calculate the total amount that he collected for selling all the potatoes. **[3]**
III. A bundle of tomatoes contained 4 tomatoes and each was sold for M18. How much did the street vendor collect for selling all the tomatoes? **[3]**
IV. Calculate the total profit that the street vendor made from selling all the fruits and vegetables bought. **[3]**

Question **5**

Thabo is planning to operate a meter taxi in Maseru. He is planning to charge a taxi fare of 2^C (two cents) per meter.

I. If Thabo travels 20 km per day how much will he make in 5 working days? **[4]**

II. Suppose Thabo takes home M350.00 made on Saturday only.
How many kilometres will he have travelled. **[5]**

III. Suppose on Sunday Thabo works for only 4 hours takes home M250.00 Maloti.
How many kilometres will he have travelled per hour? **[5]**