NATIONAL SENIOR CERTIFICATE

GRADE 10

NOVEMBER 2017

MATHEMATICAL LITERACY P2

MARKS: **75**

TIME: **1½ hours**

This question paper consists of 6 pages and an ADDENDUM with 6 ANNEXURES.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.

2. Use the ANNEXURES in the ADDENDUM to answer the following questions:

   ANNEXURE A for QUESTION 1.1
   ANNEXURE B for QUESTION 2.1
   ANNEXURE C for QUESTION 2.2
   ANNEXURE D for QUESTION 3.1
   ANNEXURE E for QUESTION 4.1
   ANNEXURE F for QUESTION 4.2

3. Number the answers correctly according to the numbering system used in this question paper.

4. Start EACH question on a NEW page.

5. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.

6. Show ALL calculations clearly.

7. Round off ALL final answers appropriately according to the given context, unless stated otherwise.

8. Indicate units of measurement, where applicable.

9. Maps and diagrams are NOT drawn to scale, unless stated otherwise.

10. Write neatly and legibly.

QUESTION 1

1.1 Mr. Buqa has an account with Exclusive Clothing Store and receive an account statement every month. ANNEXURE A shows one of Mr. Buqa's account statements.

Use the account statement in ANNEXURE A to answer the questions that follow.

1.1.1 Show with the necessary calculations how the purchases for the month has been calculated. (2)

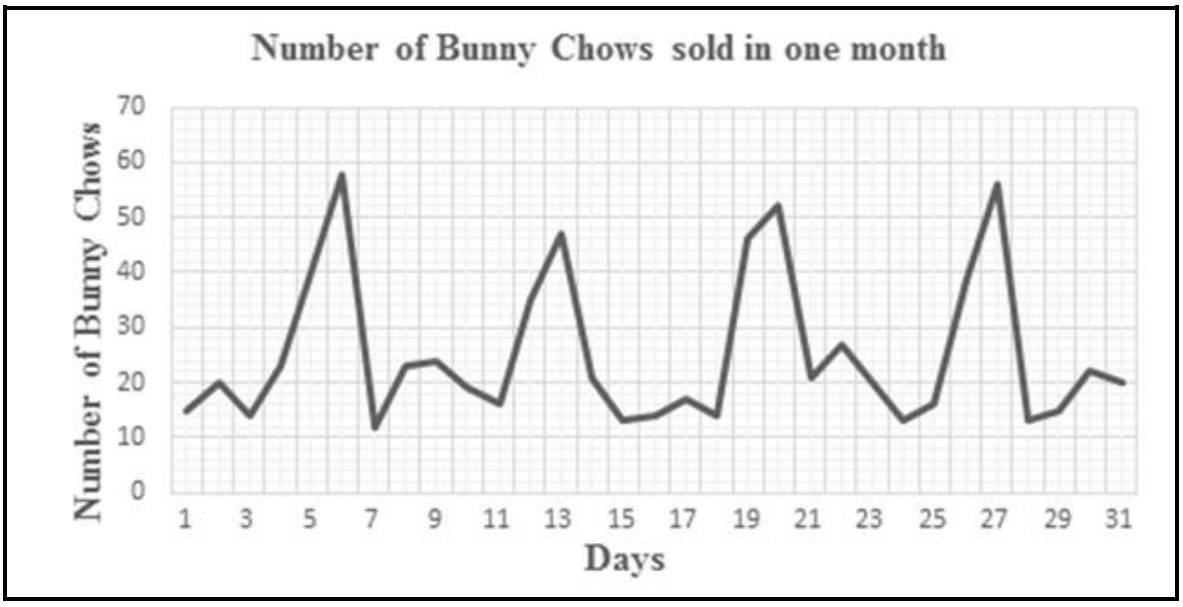
1.1.2 Determine the missing value, A (interest on the money outstanding). (4)

1.1.3 Exclusive Clothing Store calculates the amount owing using a percentage. Calculate the percentage they have used to determine the amount that Mr. Buqa has to pay on the balance that he owes. (3)

1.1.4 Give ONE reason why Mr. Buqa returned the dress. (2)

1.1.5 Mr. Buqa stated that it is unfair of the store not refund him for the underwear he bought, because it will be of no use to his children. Give ONE reason to support the store for not taking back the underwear. (2)

1.2 Mrs. Buqa sells "Bunny Chows" at her house to support her husband with the financial running of the household. Below is a graph representing her sales for one month.



Note: A Bunny Chow is a quarter loaf of bread where the soft part of the bread is removed. The inside is then filled with various fillings and the softer part is put back on top.

Refer to the graph above to answer the following questions:

1.2.1 Explain, with justification, whether the given data is discrete or continuous. (3)

1.2.2 Mrs. Buqa states that she sells more Bunny Chows on weekends than on weekdays. Can it be said with certainty that her statement is true? Give a reason for your answer. (2)

1.2.3 Describe the possible trend of the sales over the last four days of the month. (3)

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QUESTION 2

2.1 Mary-Ann has a Gold Current Account at Absa Bank. The fee structure of Absa Bank is given in ANNEXURE B.

Use the fee structure in ANNEXURE B to answer the questions below.

2.1.1 Calculate the difference in price between 2016 and 2017 to deposit R500 at an Automatic Teller Machine (ATM). (4)

2.1.2 Mary-Ann stated that the percentage change for a withdrawal from ABSA increased by fifty percent more than the withdrawal from another ATM. Show, using calculations, whether her statement is valid or not. (5)

2.2 Mary-Ann received a basic bread recipe from a friend in America. The basic bread recipe is given in ANNEXURE C.

You may use the following conversions:
1 ounce = 28 grams
1 cup = 250 mℓ

Use the bread recipe in ANNEXURE C and answer the questions that follow.

2.2.1 How many grams of active yeast must Mary-Ann use for the bread recipe? (2)

2.2.2 Calculate the maximum temperature of the water in degree celsius that Mary-Ann has to use to make the dough.

Use the following formula:
°C = (°F – 32) ÷ 1,8

Write your final answer to the nearest temperature in degree celsius. (3)

2.2.3 Mary-Ann stated that the loaf pans that she is using is 22,86 cm × 12,7 cm. Show with the necessary calculations whether Mary-Ann is using the correct loaf pans.

Use the following formula:
1 inch = 2,54 cm (3)

2.2.4 Mary-Ann stated that it will take her less than $2\frac{1}{2}$ hours to make the 2 loaves of bread if she only considers the minimum times as indicated in the recipe.

Note:
The time Mary-Ann refers to in her statement includes mixing, rising, panning and baking.

Show, with the necessary calculations, whether Mary-Ann's statement is valid or not. (5)

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QUESTION 3

3.1 A young couple is going to get married. They have chosen a hall for their ceremony and decided on how the seating plan should look like for the reception. The seating plan is represented in ANNEXURE D.

Refer to the seating plan in ANNEXURE D and answer the questions below.

3.1.1 How many people do the couple intend to invite? (3)

3.1.2 Why are there no chairs arranged on the shorter sides of the tables? (2)

3.1.3 A person seated at Table 6 close to the MAIN TABLE wants to put her gift on the GIFT TABLE. Describe a possible route this person can take without walking over the DANCE FLOOR. (2)

3.1.4 Tables 1, 2 and 3 are reserved for the bridal couple, parents of the couple, 1 bridesmaid and 1 best man. Calculate the probability that, if you are invited as a guest, you will be sitting at a table with an even number. Write your final answer to three decimal places. (3)

3.1.5 The caretaker of the hall stated that the area of the dance floor is $\frac{1}{3}$ of the floor area of the hall. The length of the floor is 15,5 m and the width is 9 m. Calculate the area of the dance floor.

You may use the formula:

Area = length × width (3)

3.2 The bridal couple have to spend a lot of money for their entire wedding reception. The reception will be held from 18:00 to 23:30.

Their expenses are as follows:

Hiring of the venue: R3 500,00
Draping and décor: R4 750,00
Disc Jockey (DJ): R250 per hour or part thereof
Catering: R200 per person for the first 100 guests and R100 for every person above 100

Note:
The Disc Jockey will also be included for the catering cost.

The bridal couple stated it will cost R30 000 for the entire reception. Show, with the necessary calculations, whether the statement is valid or not. (6)

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QUESTION 4

4.1 ANNEXURE E shows a map of the Free State in which the Golden Gate National Park is located. Mr. Will, from Edenburg, and his brother from Kroonstad want to visit the Golden Gate National Park during the July holiday. Mr. Will and his brother decide to leave at 10:00 on 10 July 2017.

Refer to the map in ANNEXURE E and answer the following questions.

Mr. Will stated that he and his brother will meet each other at the same time at Marquard. Verify, with an explanation whether this statement is valid or not. (3)

4.2 A weather forecast for Golden Gate National Park from 10 July 2017 to 19 July 2017 is given in ANNEXURE F.

Refer to the weather forecast in ANNEXURE F and answer the following questions.

Determine the following:

4.2.1 Mean for the maximum temperatures (3)

4.2.2 Median for the minimum temperatures (3)

4.2.3 The modal value of the temperatures over the whole period (2)

4.3 Calculate the probability that rain can be expected on one of the days over the period. (2)

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TOTAL: 75