education

Department:
Education
PROVINCE OF KWAZULU-NATAL

MATHEMATICAL LITERACY

GRADE 11

NOVEMBER EXAMINATION

PAPER 1

2019

TOTAL: 100 MARKS   **DURATION: 2 HOURS**

INSTRUCTIONS TO LEARNERS:

1.   THIS QUESTION PAPER CONSISTS OF 6 PAGES and FIVEQUESTIONS.

2.   ANSWER ALL THEQUESTIONS!

3.   SHOW ALL CALCULATIONSCLEARLY.

4.   ROUND OFF ALL FINAL ANSWERS APPROPRIATELY, ACCORDING TO THE GIVEN CONTEXT, UNLESS OTHERWISE STATED.

5.   AN APPROVED, NON-PROGRAMMABLE AND NON-GRAPHICAL CALCULATOR MAY BEUSED.

6.   UNITS OF MEASUREMENTMUST BE INDICATED WHEREAPPLICABLE.

7.   WRITE NEATLY ANDLEGIBLY.

Question 1

Moseley School is planning an excursion to Ushaka Marine World on

29th November 2019.

Entry to Ushaka is R72 per pupil and transport cost is R23. For every 25 pupils, the school gets one free educator ticket.

1.1. On what day does the 29th November 2019 fall on? (2)

1.2. What is the cost of going on the excursion? (2)

1.3. What must the school pay Ushaka Marine World for 670 pupils? (2)

1.4. If the bus capacity is 65 passengers seated, how many busses must be

hired for 670 pupils (3)

1.5. How many free educator tickets is the school entitled to? (3)

1.6. If the price of the ticket was R68 last year, calculate the % increase of theprice of this year's ticket? (2)

$$\% \text{ Increase} = \frac{New\ Value - Old\ Value}{Old\ Value} \times 100$$

1.7. If the first bus left the school at 7:43 am and reached Ushaka at 9:24 am, how long did the journey take? Write your answer in hours (3)

1.8. The school received a 15% discount on all tickets exceeding 500 tickets. Calculate this discount if 670 learners are going on the excursion to Ushaka. (3)

1.9. What is the price of the ticket before VAT (VAT is 15%) (3)

1.10. Calculate the entrance fee in 2 years' time, if inflation 6,8% over the next 2 years

(3)

[26]

Question 2

2.1 Moseley School does its banking with Lloyds Bank.

Below are the deposit fees it charges its customers.

Cash deposit at ATM	R1,70 per R100 (part thereof)
Cash deposit at Branch	R1,98 per R100 (part thereof)
Cheque deposit at Branch or ATM	R23,50

During October the school made the following transaction:

- o 2 cash deposits of R16500 each at their local branch
- o 1 deposit of R4500 at an ATM
- o 2 cheque deposit of R20 000

2.1.1. Calculate the total amount deposited in October   (2)

2.1.2 Calculate the bank charges on the R4500 deposit at an ATM   (4)

2.2 The Bus company donated R5410 back to the school towards the building of their new school hall. The school has decided to invest this money for 2 years.

2.2.1 Bank A offers 7,3% Simple Interest over 2 years. Calculate the interest   (2)

2.2.2 Bank B offers 6,9% Compound Interest over 2 years. Calculate the interest (5)

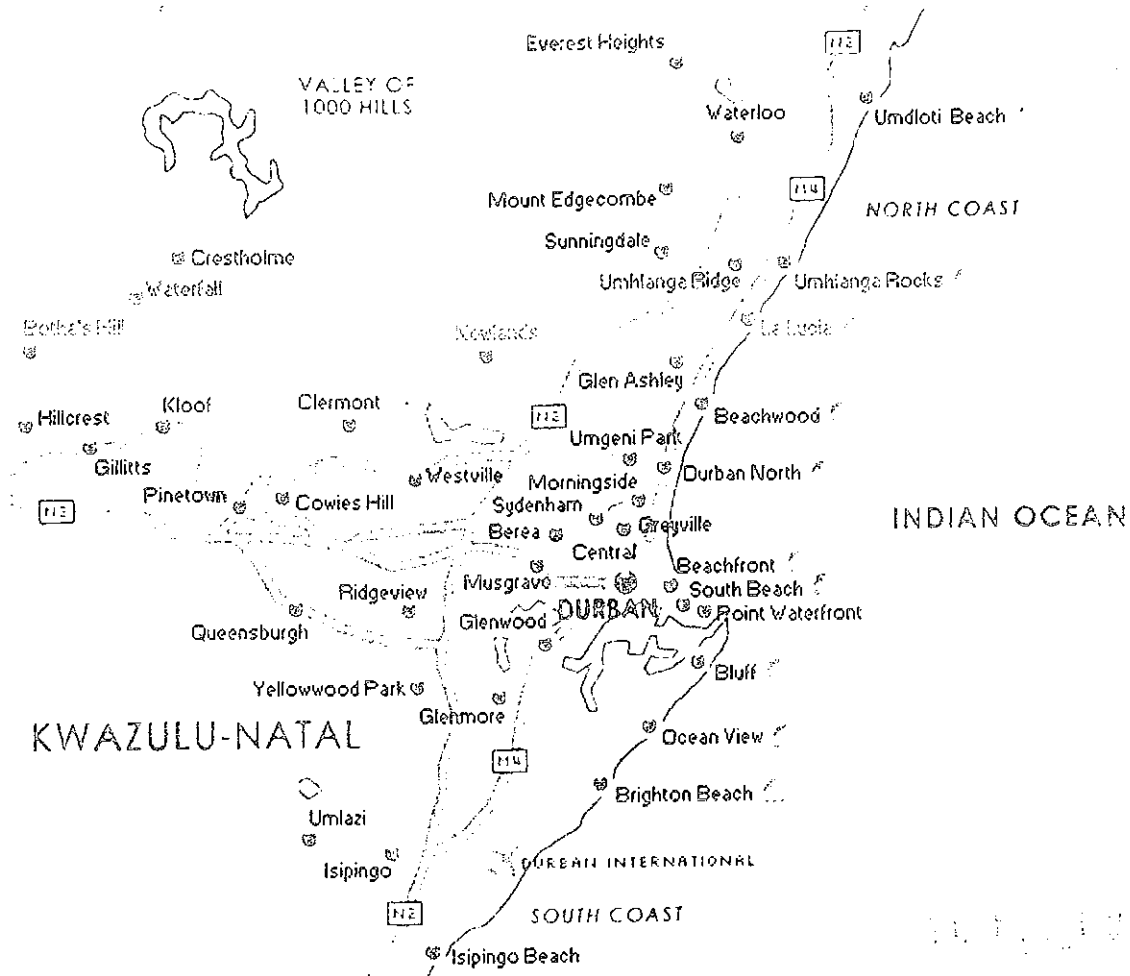2.3 Mr Naidoo is in charge of hiring the bus. He asks two bus companies for a quote.

Company A charges R500 + R15,60 per km

Company B charges R23,45 per km

Calculate the cost for both companies, if the return journey is 90km, for one bus only.
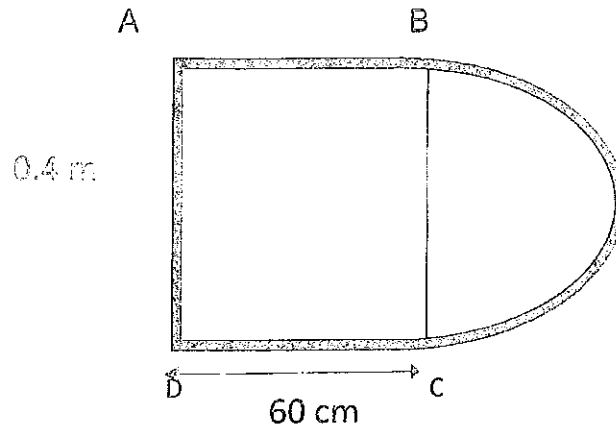(4)

[17]

Everest Heights

VALLEY OF
1000 HILLS

Waterloo

Umdloti Beach

Mount Edgecombe

NORTH COAST

Sunningdale

Crestholme

Waterfall

Umhlanga Ridge

Umhlanga Rocks

La Lucia

Portia's Hill

Newlands

Glen Ashley

Hillcrest   Kloof   Clermont

Beachwood

Umgeni Park

Gillitts

Westville   Morningside   Durban North

Pinetown   Cowies Hill   Sydenham

Berea   Greyville

INDIAN OCEAN

Central   Beachfront

Ridgeview   Musgrave   South Beach

Queensburgh   Glenwood   DURBAN   Point Waterfront

Yellowwood Park   Bluff

Glenmore

KWAZULU-NATAL

Ocean View

Umlazi   Brighton Beach

Isipingo   DURBAN INTERNATIONAL

SOUTH COAST

Isipingo Beach

3.1. Give the general direction of Hillcrest from Durban (2)

3.2. Which National road would you use from Hillcrest to Central Durban (2)

3.3 Calculate the actual distance in kilometres from Hillcrest to Point Waterfront, using the given scale. (3)

3.4. If the average speed of the bus was 50 km/hr, what is the Time take between the school in Hillcrest and Ushaka Marine World?   (note: S=D/T) (2)

3.5. The bus consumes 13,4 litres of fuel for every 100km. How many litres of petrol would the bus consume for the return from Hillcrest to Point Waterfront. (3)

3.6. If a litre of diesel is R15,45 per litre, what is the total cost of fuel for the return trip?(3)

[15]

4.1 Zanele has a body board, in the combined shape of a rectangle and semi-circle, to use in the pool at Ushaka

4.1.1 Calculate the area of rectangle ABCD

4.1.2 Calculate the area of the semi-circle

4.1.3 calculate the total area

Use the following formulae

Area of Rectangle = Length x Breath

Area of Circle $= \pi r^2$ (5)

4.2 The table below shows how Grade 8 and 9 arriving to school in the morning

	Walk	Car	Bus	Taxi	Total
Grade 8	42	A	52	25	175
Grade 9	62	B	31	19	150
	C	94	D	E	F

4.2.1 Complete the table in the missing values (A to F)   (6)

4.2.2 Determine the probability that the student taken at random:

4.2.2.1 Took a taxi to school.   (2)

4.2.2.2. Is a Grade 8 learner who travels by bus   (2)

4.2.2.3 Comes to school by helicopter   (2)

4.3 Priya wants to make money to pay for her ticket to Ushaka. She decides to sell hot dogs to make some extra cash.

Rolls cost R15 per 6 rolls.

Sausages cost R84 per dozen

4.3.1 What is the cost of 1 sausage? (2)

4.3.2 What will it cost her to make 1 sausage roll? (3)

4.3.3 She also wants to sell cups of cool drinks, which can hold 200ml of drink it. How many cups of cool drinks can she get from a 2 litre bottle? (3)

4.3.4 She sells 50 cups of cool drinks at R5 each. Calculate her income (2)

(22)

Question 5

5.1.The number of buses parked at Ushaka were counted for one week. The data were recorded as follows:

8   10   12 9   10   11   7

Use the above data to calculate:

a) Mean

b) Median

c) Mode

d) Range

e) The number of days the buses parked at Ushaka, are greater than the mean.
(7)

5.2. A survey was conducted on the number of rural schools and urban school visiting the Marine World on weekdays. The table below shows the data:

Days	Mon	Tue	Wed	Thurs	Fri
Rural	4	5	6	3	9
Urban	7	6	6	8	5

5.2.1. Represent the data by constructing a double bar graph (6)

(marks will be awarded for a heading, labelling the axis, key etc)

5.2.2. In the week shown above, did more rural or urban schools visit the Marine World (2)

(15)

TOTAL 100