



UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION
NOVEMBER EXAMINATION 2015

PROGRAMME: BED FOUNDATION PHASE
MODULE: MATHEMATICS FOR FOUNDATION PHASE 2B
CODE: MFP10B2
TIME: 2 hours
MARKS: 100
EXAMINER: PROF. K. LUNETA
MODERATOR: DR. JP MAKONYE

(This paper consists of 3 pages)

INSTRUCTIONS

Read the following instructions carefully before answering the questions.

1. This question paper consists of 5¹¹ questions divided into several parts
2. Answer ALL the questions
3. No calculators are allowed in this examination

QUESTION 1

- i. What is the difference between capacity and volume? (2)
 - ii. What do you understand by the term conservation of capacity? (2)
 - iii. Discuss the difference between mass and weight. (2)
 - iv. In measurements what do you understand by the terms standard and none standard units of measurements, provide examples in each case. (6)
- [12]

QUESTION 2

Define and draw the following angle

- i. Complementary angles (3)
 - ii. Supplementary angles (3)
 - iii. Congruent triangles (3)
- [9]

QUESTION 3

Draw the following angles

- i. Acute angle (2)
- ii. Reflex angle (2)

iii. An obtuse angle

(2)

[6]

QUESTION 4

Name the TWO units used to measure the following attributes in imperial and metric

Attribute	Imperial Units	Metric Units
Capacity		
Length		
Mass		

[6]

QUESTION 5

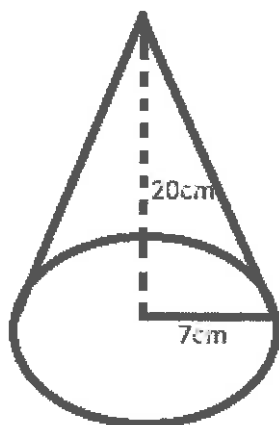
Complete the table below

3 km	.....cm	.....mm
346900 mm	.....m	.....km
9245300g	.....kg	.....tonnes
1800 minutes	.....hr	.....seconds
2.5l	.....cm ³	.....ml

[10]

QUESTION 6

What is the capacity of the cone in litres?



(4)

[4]

QUESTION 7

The mass of the above regular hexagonal precious metal pipe is 2 tonnes. If the value of 1000g of the metal is R200.

- i. What is the total value of the metal pipe? (5)
- ii. If the length of the one of the regular sides is 10m and its height is 15 m, what is the volume of the pipe in litres if the hexagonal face has an area of 120m^2 ? (5)

[10]

QUESTION 8

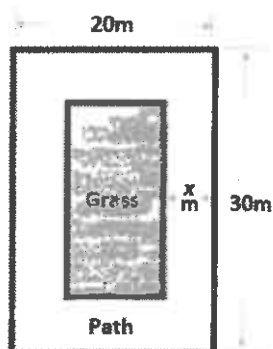
- i. A cyclist covers 120km in 1hr 30 minutes how many km will he cycle at the same speed in 180 minutes? (4)
- ii. Find the speed of a car in m/sec that covers 400 km in $1\frac{1}{3}$ hrs. (4)

[8]

QUESTION 9

- i. If the time difference between London and Johannesburg 2 hrs at what time and day will a plane that leaves London at 23.25hrs on Monday night arrive in Johannesburg if the flight is 10 hrs? (4)
- ii. If a regular nonagonal field is fenced with an 81000 cm wire mesh, what is the length of each side in metres? (4)

[8]

QUESTION 10

A path of a width x is laid around a rectangular lawn as shown.

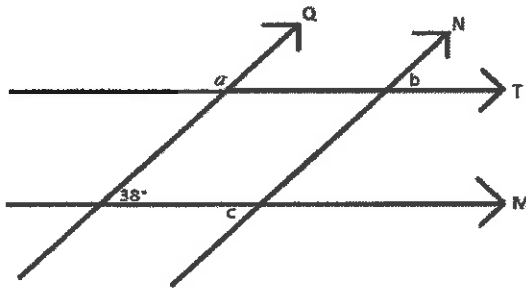
- a. Find an expression for the perimeter of the grass. (4)
- b. Find an expression for area of the grass. (4)

[8]

QUESTION 11

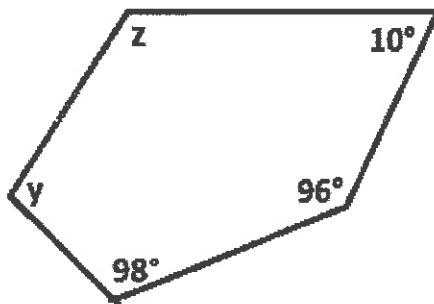
11.1 Complete the sentence: The exterior angle of a triangle is equal to the(3)

11.2 Find the values of angles: a , b , and c if Q, N, T and M are parallel lines



(6)

11.3 Find the sum of angles marked Y and Z in the figure below. 11.4



(4)

11.4 Find the sum of the interior and exterior angles of a 26 sided regular polygon (6)
[19]

TOTAL: 100