P T E MATHEMATICS MOCK
EXAMINATION

NAME_____INDEXNO._____

CLASS_____DATE_____CANDIDATE SIGNITURE_____

2011/1

PI MATHEMMATICS
PAPER 1
MOCK EXAMINATION
MARCH APRIL 2018
TIME 2½ HRS

INSTRUCTION TO CANDIDATES

1. Write your name and index no in the space provide above.
2. Sign and write the date of the examination in the provided space.
3. This paper contains TWO sections: A and B.
4. Answer ALL the questions in section A.
5. Answer any Five questions from section B
6. Answer and working out in both section must be written on the space provided.

Candidate should answer all questions in English.

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE SCORE
A	1-20	60	
B	21	8	
	22	8	
	23	8	
	24	8	
	25	8	
	26	8	
TOTAL SCORE		180	

SECTION A

ANSWER ALL THE QUESTIONIN THIS SECTION IN THE SPACE PROVIDED.

1 Evaluate

$\underline{2(x+1)}$

2. Solve the following simultaneous equations.(3mks)

2r+3S=29

3r+2S=16

3. A stadium is represented on a diagram using a scale 1:20,000.what actual distance in Metres does a line of 3.4cm represent? (2mks)

4. A plane landed at Jomo Kenyatta Airport on Monday at 0130hrs after flying for 5 hours from Johannesburg. On what day and time had it left Johannesburg? (3mks)

5. Adipo borrowed money from a money lender who charged simple interest at the rate of 10% p.a .After a month she paid back the money plus an interest of sh. 3,000. How much money had she borrowed?(3mks)

6. Find the value of(3mks)

$4\frac{2}{3} - \frac{1}{3} \times 2\frac{1}{2} + 7\frac{7}{8} \div 1\frac{1}{8} - 3\frac{3}{4}$

7. A retailer got 20% discount on the marked price of an article. The retailer then sold the article for sh. 4,400 and made a 10% profit. What is the marked price of the article? (3mks)

8. What is the volume of the triangle based prism below. (4mks)

9. Three clocks were set at intervals of 8 minutes, 12 minutes and 18 minutes. If they started at the same time, after how long did they ring together? (3mks)

10. The perimeter of triangle plot is 74m. if the length is 3m longer than the width, what is the area of the plot? (4mks)

11. Juma spent $^{2}/_{5}$ of his salary on food, $^{1}/_{3}$ of the reminder on electricity and saved the rest. If he spent on food 12,000 what was his salary? (3mks)

12. The pie-chart below shows how a certain school spent its grants in the year 2009.

If the school spent sh. 58,500 on sport, how much money was the grant? (2mks)

13. What is the value of $8.4 \div 0.023$, correct to two decimal place. (2mks)

14. An open cylinder has a radius of 6.3cm and height of 25cm. What is the surface area of the cylinder in square centimeter? Take $\pi = \frac{22}{7}$.

15. In the figure below, O is the center of the circle, L angle CDE is 24° and angle BCA= 47°. Find angle

i) EAC

(2mks)

ii) CBE

16. Make F th1e subject of the formula.

$$\frac{1}{V} + \frac{1}{U} = \frac{1}{F}$$

17. The cash price of a cooker is sh. 28,000. The hire purchase price is 25% higher than the cash price. Tom bought the cooker on hire purchase terms. If he paid a deposit of 20% of the cash price:

a) What was the hire purchase price? (2mks)

b) What was the deposit? (2mks)

18. The table below shows the height of 50 students of kamwenja teachers college to the nearest centimeters

Height (cm0	130-134	135-139	140-144	145-149	150-154
Frequency	5	15	16	10	4

What is the mean height? (3mks)

19. A right pyramid has a square base of side 8cm and a slant height of 5cm.

Draw the net of the pyramid and find its area. (3mks)

20. A machine A can complete a piece of work in 6hrs while machine B can complete the same work in 10hrs. if the two machine are working together how long will it take to complete the work. (3mks)

SECTION B (40MKS)

21. a) Use the equation $y=3-2x-x^2$ to complete the table below. (2mks)

X	-4	-3	-2	-1	0	1	2	3
$Y=3-2X-X^2$	-5	0			3			-12

b) On the grid provided, draw the curve $Y=3 - 2X – X^2$ (3mks)

i) what is the greatest value of Y? (1mk)

ii) What are the values of X in the equation $3 – 2x –x^2 =0$. (2mks)

22. Below is an extract from the monthly record mass in kg of diabetic patients in a certain health center.

57	59	59	61	60
59	60	63	61	61
59	63	60	65	65
60	60	64	66	69
67	70	74	80	50
70	76	80	89	54
75	80	90	92	56
84	86	96	74	60
63	65	68	78	76

a) Prepare a grouped frequency distribution table of width 8 taking the lowest limit of the first class as 49 (use tally marks) (4mks)

b) Calculate the mean mass of the patients. (3mks)

c) Identify the modal class and show us true class limits. (1mk)

23. John's farm is in the shape of a triangle ABC such that AB=600m angle BAC= 60° and angle BCA=45°.

a) Using a ruler and a pair of compasses only, make an accurate drawing of the firm. (use the scale 1:1000) (4mks)

b) Construct a perpendicular point C and let it meet line AB at point P. Determine the area of the farm in hectares.

24. A tank of cross-section 2m by 1m and of height 1m is filled by a pipe delivers $1m^3$ per minute.

Find

i) The rate of flow of water in the pipe. (5mks)
ii) The time taken to fill the tank. (3mks)

25. a) A sum of money was divided among three people A, B and C in the ratio 18:16:11. If A got sh. 1,841 more than C, how much did B get? (5mks)

b) Given that p:q =5:6 and q:r=9:8 . Express p:q:r as simply possible. (3mks)

26. A group of young men decided to raise sh. 480,000 to start a business. Before the actual payment was made, four of the members pulled out and each of those remaining had to pay an additional sh. 20,000. Determine the original number of members. (8mks)