NATIONAL EDUCATION SOCIETY'S HIGH SCHOOL.
BHANDUP (W), MUMBAI-400 078

I Preliminary Examination

Std : X
Roll NO:
Date : 18/12/18

Subject: Maths I
No of pages- 01

Marks : 20
Time : 1Hr

Q1 A) Solve the following sub- questions **2M**

iii) Solve: $|x - 5| = 2$

iv) Which of the following expressions are polynomials?

a) $\frac{2}{3}x^3 + \sqrt{3}x^2 - 5x + 24$ b) $3x^2 + 5x + \sqrt{-7}$

B) Solve the following sub- question: **2M**

i) if $\frac{a}{b} = \frac{3}{2}$ than find the value of the ratio $\frac{5a+3b}{5a-3b}$

Q2 A) Solve the following sub- questions: **4M**

i) Mangala started doing physical exercise 10 minutes for the first day. She will increase the time of exercise by 5 minutes per day, till she reaches 45 minutes per day. How many days are required to reach 45 minutes?

ii) Solve the following simultaneous equation using Cramer's Rule :

$y = 2x + 14$, $7x = 2y + 5$

B) Solve the following sub- questions: **6M**

i) If one of the root of quadratic equation $x^2 - 10x + 2k = 0$ is $(h + 2\sqrt{6})$ find the values of 'h' and 'k'

ii) If the 10^{th} term and the 18^{th} term of an A.P. are 25 and 41 respectively then find the following

b) The 1^{st} term and the common difference b) The 38^{th} term

Q3 A) Solve the following sub- questions: **4M**

i) Father and son together complete a task in 15 days. If one day's work of father is 3 times one days work of his son, Find the number of days required by each alone to complete the task.

B) Solve the following activity based questions: **2M**

Sr. No	Quadratic Equation	General form	a	b	c
1	$x^2 - 4 = 0$				
2	$y^2 = 2y - 7$				
3	$x^2 + 2x = 0$				
4	$(l + 2)(l - 5) = 0$				