Guess Paper - 2008

Class - XI

Subject - Mathematics

Test Yourself _____ *Class-XI*

LINEAR INEQUALITIES & COMPLEX NUMBERS

Time Allowed : 1 Hour] [*Maximum Marks* : 30

1. Solve $\frac{3x-4}{2} \geq \frac{x+1}{4} - 1$. Show the graph of the solutions on number line. ③

2. The marks obtained by a student of Class XI in first and second terminal examination are 62 and 48, respectively. Find the number of minimum marks he should get in the annual examination to have an average of at least 60 marks. ③

3. Find all pairs of consecutive odd positive integers both of which are smaller than 10 such that their sum is more than 11. ④

4. Solve the following system of inequalities graphically: ④

   $3x + 4y \leq 60, x + 3y \leq 30, x \geq 0, y \geq 0$

5. A manufacturer has 600 litres of a 12% solution of acid. How many litres of a 30% acid solution must be added to it so that acid content in the resulting mixture will be more than 15% but less than 18%? ④

6. Express $(5 - 3i)^3$ in the form $a + ib$. ③

7. Represent the complex number $-1 - i$ in the polar form. ③

8. Solve $\sqrt{5}x^2 + x + \sqrt{5} = 0$ ③

9. Find the conjugate of $\frac{(3-2i)(2+3i)}{(1+2i)(2-i)}$. ③