Nalanda Collage – Colombo 10

Grade 09 – Third Term

Unit Test 21

Mathematics

Inequalities

$1\frac{1}{4}$ hours

Part I

1. Mention the integral solutions for the following inequalities and represent them on number lines.

   i) $x > 2$ ii) $x < 1$ iii) $x \leq 5$ iv) $x \geq -4$ v) $x \geq 0$

2. Mention the inequality represented in following number lines.

   i)

   ii)

3. Represent the set of solutions of following inequalities on a number line.

   i) $-2 < x < 2$ ii) $-3 < x \leq 2$

   iii) $-1 \leq x < 3$ iv) $0 \leq x < 6$

4. Represent the integral solutions of following inequalities on number lines.

   i) $x + 1 \geq 5$ ii) $x + 3 \leq 4$

   ii) $2 + x \leq -1$ iv) $x - 2 \geq -3$

5. Mention the integral solutions of following inequalities and represent them on number lines.

   i) $4x \geq 12$ ii) $7x \leq -14$ iii) $-2x \geq -4$

   iv) $\frac{-3x}{2} < \frac{-9}{4}$ v) $\frac{-2x}{5} > 3$

Part II

1.   A student has 30 books. Mother gave him 5 books and father gave him x books. This can be represented in an inequality as $x + 5 \leq 30$. Find the solution for the maximum number of books given by father by simplifying the above inequality.

2.   16Men can go on an elevator. 4 Men got down from 3rd floor and x number of men got down from 6th floor. This can be shown by an inequality as $x + 4 \leq 6$. Find the solution for the maximum number of men on the elevator when it reaches 8th floor.

3.   Piyumika says he has lesser number of pens than Hirun and if Hirun has x number of pens it can be shown in an inequality as $4x - 3 \geq 33$.

     i)   Find the minimum number of pens Hirun can have.

     ii)   If Hirun has some Red pens and 2 times of it Blue pens, Find the minimum number of red pens and blue pens he has.