**SID:** 480110301

**Question 3**

(a)

**Minimizing the total toll**

Let be the number of trucks travel from node i to j, where

**Objective:**

**Constraints:**

**Maximizing the average safety rating**

Let be the number of trucks travel from node i to j, where

**Objective:**

**Constraints:**

(b) The minimum total toll is $880.

The maximum accumulative safety rating is 535 with

(c) Let be the maximum weighted proportional deviation from optimal target values.

Let be the number of trucks travel from node i to j, where

**Objective:**

**Constraints:**