**Model.**

Parameters:

: *Demand of Order of community j,*

: *Fixed cost to hire person ,*

:*Cost to deliver one order by person to Community j,*

*S: Weekly capacity of delivery Men*

Decisions:

: *Whether person should be hired,*

: *Order to deliver by person to community ,*

Objective: *Maximize Revenue*

\* +

Constraints:

Satisfy demand of a community

2) No delivery allowed from no-hired people

(3) If A is hired, B must be hired

(4) At most 2 people can be hired

, (5) Either B or D must always be hired

(6) Non- negative number of orders

{0,1} (7) Binary decision

Notes:

Constraint 2 ensures that the number of delivery cannot exceed logical capacity constraint. When an investment is not chosen, =0 then is forced to be 0. If an investment is chosen, =1 then can be any value less than S, that is the weekly capacity of person i.

1. A minimum cost of 162$ can be attained by selecting the routes below with number of orders as shown below.

