**The considered parameters values to solve the Example in subsection 6.3 are as follows:**

Table E: The value of 

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| j | m | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |

Table E: The value of 

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| i | j | 1 | 2 | 3 |
| 0 | | 1 | 1 | 1 |
| 1 | | 1 | 1 | 1 |
| 2 | | 1 | 1 | 1 |
| 3 | | 1 | 1 | 1 |
| 4 | | 1 | 1 | 1 |

Table E: The value of 

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| f | f' | 1 | 2 | 3 | 4 |
| 1 | | 0 | 0 | 17 | 14 |
| 2 | | 0 | 0 | 16 | 10 |
| 3 | | 0 | 0 | 0 | 0 |
| 4 | | 0 | 0 | 0 | 0 |

Table E: The value of 

|  |  |  | f (for all l=1) | |
| --- | --- | --- | --- | --- |
| i | j | m | 1 | 2 |
| 1 | 1 | 1 | 7 | 1 |
| 2 | 5 | 3 |
| 3 | 10 | 1 |
| 2 | 4 | 2 | 6 |
| 5 | 8 | 8 |
| 6 | 8 | 7 |
| 3 | 7 | 6 | 1 |
| 8 | 2 | 1 |
| 9 | 6 | 8 |
| 2 | 1 | 1 | 3 | 10 |
| 2 | 2 | 6 |
| 3 | 3 | 2 |
| 2 | 4 | 9 | 9 |
| 5 | 1 | 4 |
| 6 | 3 | 3 |
| 3 | 7 | 1 | 8 |
| 8 | 5 | 1 |
| 9 | 1 | 1 |
| 3 | 1 | 1 | 9 | 7 |
| 2 | 2 | 7 |
| 3 | 1 | 6 |
| 2 | 4 | 4 | 8 |
| 5 | 5 | 8 |
| 6 | 2 | 8 |
| 3 | 7 | 10 | 3 |
| 8 | 4 | 7 |
| 9 | 3 | 6 |

Table E: The value of 

|  |  |  | f (for all l=2) | |
| --- | --- | --- | --- | --- |
| i | j | m | 3 | 4 |
| 1 | 1 | 1 | 4 | 6 |
| 2 | 1 | 8 |
| 3 | 8 | 3 |
| 2 | 7 | 4 | 8 |
| 8 | 7 | 10 |
| 9 | 8 | 9 |
| 3 | 4 | 2 | 1 |
| 5 | 2 | 4 |
| 6 | 6 | 4 |
| 2 | 1 | 7 | 5 | 7 |
| 8 | 9 | 6 |
| 9 | 8 | 8 |
| 2 | 1 | 8 | 4 |
| 2 | 1 | 3 |
| 3 | 1 | 1 |
| 3 | 4 | 1 | 8 |
| 5 | 8 | 3 |
| 6 | 10 | 4 |
| 3 | 1 | 1 | 7 | 6 |
| 2 | 2 | 3 |
| 3 | 8 | 7 |
| 2 | 4 | 2 | 5 |
| 5 | 2 | 2 |
| 6 | 7 | 8 |
| 3 | 7 | 4 | 2 |
| 8 | 7 | 3 |
| 9 | 8 | 3 |

| Table E: The value of | | | | |
| --- | --- | --- | --- | --- |
|  |  |  | f (for all l=2) | |
| i | j | m | 3 | 4 |
| 0 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 |
| 3 | 1 | 1 |
| 4 | 1 | 1 |
| 5 | 1 | 1 |
| 6 | 1 | 1 |
| 7 | 1 | 1 |
| 8 | 1 | 1 |
| 9 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 |
| 2 | 1 | 0 |
| 3 | 0 | 1 |
| 2 | 7 | 1 | 0 |
| 8 | 1 | 0 |
| 9 | 0 | 1 |
| 3 | 4 | 1 | 1 |
| 5 | 1 | 1 |
| 6 | 0 | 1 |
| 2 | 1 | 7 | 1 | 0 |
| 8 | 0 | 1 |
| 9 | 1 | 0 |
| 2 | 1 | 0 | 1 |
| 2 | 1 | 0 |
| 3 | 1 | 0 |
| 3 | 4 | 1 | 0 |
| 5 | 1 | 0 |
| 6 | 0 | 1 |
| 3 | 1 | 1 | 0 | 1 |
| 2 | 1 | 0 |
| 3 | 1 | 0 |
| 2 | 4 | 0 | 1 |
| 5 | 0 | 1 |
| 6 | 1 | 1 |
| 3 | 7 | 1 | 0 |
| 8 | 1 | 0 |
| 9 | 1 | 0 |
| 4 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 |
| 3 | 1 | 1 |
| 4 | 1 | 1 |
| 5 | 1 | 1 |
| 6 | 1 | 1 |
| 7 | 1 | 1 |
| 8 | 1 | 1 |
| 9 | 1 | 1 |
|  |  |  |

Table E: The value of 

|  |  |  |
| --- | --- | --- |
| stId | jobId | pos |
| 1 | 1 | 1 |
| 2 | 1 | 2 |
| 3 | 1 | 3 |
| 4 | 2 | 1 |
| 5 | 2 | 2 |
| 6 | 2 | 3 |
| 7 | 3 | 1 |
| 8 | 3 | 2 |
| 9 | 3 | 3 |

Table E: The value of 

|  |  |  |
| --- | --- | --- |
| opId | jobId | pos |
| 1 | 1 | 1 |
| 2 | 1 | 2 |
| 3 | 1 | 3 |
| 4 | 2 | 1 |
| 5 | 2 | 2 |
| 6 | 2 | 3 |
| 7 | 3 | 1 |
| 8 | 3 | 2 |
| 9 | 3 | 3 |

| Table 9E: The value of | | | |
| --- | --- | --- | --- |
| stId | ffId | mchf | ptf |
| 1 | 1 | 1 | 7 |
| 1 | 1 | 2 | 5 |
| 1 | 1 | 3 | 10 |
| 2 | 1 | 4 | 2 |
| 2 | 1 | 5 | 8 |
| 2 | 1 | 6 | 8 |
| 3 | 1 | 7 | 6 |
| 3 | 1 | 8 | 2 |
| 3 | 1 | 9 | 6 |
| 1 | 2 | 10 | 1 |
| 1 | 2 | 11 | 3 |
| 1 | 2 | 12 | 1 |
| 2 | 2 | 13 | 6 |
| 2 | 2 | 14 | 8 |
| 2 | 2 | 15 | 7 |
| 3 | 2 | 16 | 1 |
| 3 | 2 | 17 | 1 |
| 3 | 2 | 18 | 8 |
| 4 | 1 | 1 | 3 |
| 4 | 1 | 2 | 2 |
| 4 | 1 | 3 | 3 |
| 5 | 1 | 4 | 9 |
| 5 | 1 | 5 | 1 |
| 5 | 1 | 6 | 3 |
| 6 | 1 | 7 | 1 |
| 6 | 1 | 8 | 5 |
| 6 | 1 | 9 | 1 |
| 4 | 2 | 10 | 10 |
| 4 | 2 | 11 | 6 |
| 4 | 2 | 12 | 2 |
| 5 | 2 | 13 | 9 |
| 5 | 2 | 14 | 4 |
| 5 | 2 | 15 | 3 |
| 6 | 2 | 16 | 8 |
| 6 | 2 | 17 | 1 |
| 6 | 2 | 18 | 1 |
| 7 | 1 | 1 | 9 |
| 7 | 1 | 2 | 2 |
| 7 | 1 | 3 | 1 |
| 8 | 1 | 4 | 4 |
| 8 | 1 | 5 | 5 |
| 8 | 1 | 6 | 2 |
| 9 | 1 | 7 | 10 |
| 9 | 1 | 8 | 4 |
| 9 | 1 | 9 | 3 |
| 7 | 2 | 10 | 7 |
| 7 | 2 | 11 | 7 |
| 7 | 2 | 12 | 6 |
| 8 | 2 | 13 | 8 |
| 8 | 2 | 14 | 8 |
| 8 | 2 | 15 | 8 |
| 9 | 2 | 16 | 3 |
| 9 | 2 | 17 | 7 |
| 9 | 2 | 18 | 6 |

| Table 10E: The value of | | | |
| --- | --- | --- | --- |
| opId | fjId | mchj | ptj |
| 1 | 1 | 2 | 1 |
| 2 | 1 | 7 | 4 |
| 2 | 1 | 8 | 7 |
| 3 | 1 | 4 | 2 |
| 3 | 1 | 5 | 2 |
| 1 | 2 | 10 | 6 |
| 1 | 2 | 12 | 3 |
| 2 | 2 | 18 | 9 |
| 3 | 2 | 13 | 1 |
| 3 | 2 | 14 | 4 |
| 3 | 2 | 15 | 4 |
| 4 | 1 | 7 | 5 |
| 4 | 1 | 9 | 8 |
| 5 | 1 | 2 | 1 |
| 5 | 1 | 3 | 1 |
| 6 | 1 | 4 | 1 |
| 6 | 1 | 5 | 8 |
| 4 | 2 | 17 | 6 |
| 5 | 2 | 10 | 4 |
| 6 | 2 | 15 | 4 |
| 7 | 1 | 2 | 2 |
| 7 | 1 | 3 | 8 |
| 8 | 1 | 6 | 7 |
| 9 | 1 | 7 | 4 |
| 9 | 1 | 8 | 7 |
| 9 | 1 | 9 | 8 |
| 7 | 2 | 10 | 6 |
| 8 | 2 | 13 | 5 |
| 8 | 2 | 14 | 2 |
| 8 | 2 | 15 | 8 |
| 7 | 2 | 10 | 2 |
| 7 | 2 | 11 | 8 |
| 7 | 2 | 12 | 3 |
| 8 | 2 | 16 | 10 |
| 9 | 2 | 13 | 2 |
| 9 | 2 | 14 | 3 |
| 9 | 2 | 15 | 1 |