**HW1: Hand Simulation**

**Following parameters have been taken**

Arrival Interval = 6 time units

Service rate = 10 time units

Maximum Queue Size = 2,

Retransmission delay = 5 time units

MAX\_time\_Limit = 70

**Assumption: In case CLA, CLS and CLR have the same value, at the next MC, priority is given as per following order**

CLR > CLA > CLS

**Simulation Table**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **MC** | **CLA** | **CLS** | **Queue** | **CLR** |
| 0 | 2 | - | 0 | - |
| 2 | 8 | 12 | 1 | - |
| 8 | 14 | 12 | 2 | - |
| 12 | 14 | 22 | 1 | - |
| 14 | 20 | 22 | 2 | - |
| 20 | 26 | 22 | 2 | 25 |
| 22 | 26 | 32 | 1 | 25 |
| 25 | 26 | 32 | 2 | - |
| 26 | 32 | 32 | 2 | 31 |
| 31 | 32 | 32 | 2 | 36 |
| 32 (Arrival) | 38 | 32 | 2 | 36,37 |
| 32 (Exit) | 38 | 42 | 1 | 36,37 |
| 36 | 38 | 42 | 2 | 37 |
| 37 | 38 | 42 | 2 | 42 |
| 38 | 44 | 42 | 2 | 42,43 |
| 42 (Retransmitted arrival) | 44 | 42 | 2 | 43,47 |
| 42 (Exit) | 44 | 52 | 1 | 43,47 |
| 43 | 44 | 52 | 2 | 47 |
| 44 | 50 | 52 | 2 | 47,49 |
| 47 | 50 | 52 | 2 | 49,52 |
| 49 | 50 | 52 | 2 | 52,54 |
| 50 | 56 | 52 | 2 | 52,54,55 |
| 52 (Retransmitted arrival) | 56 | 52 | 2 | 54,55,57 |
| 52 (Exit) | 56 | 62 | 1 | 54,55,57 |
| 54 | 56 | 62 | 2 | 55,57 |
| 55 | 56 | 62 | 2 | 57,60 |
| 56 | 62 | 62 | 2 | 57,60,61 |
| 57 | 62 | 62 | 2 | 60,61,62 |
| 60 | 62 | 62 | 2 | 61,62,65 |
| 61 | 62 | 62 | 2 | 62,65,66 |
| 62 (retransmitted arrival) | 62 | 62 | 2 | 65,66,67 |
| 62 (Regular Arrival) | 68 | 62 | 2 | 65,66,67,67 |
| 62 (Exit) | 68 | 72 | 1 | 65,66,67,67 |
| 65 | 68 | 72 | 2 | 66,67,67 |
| 66 | 68 | 72 | 2 | 67,67,71 |
| 67 | 68 | 72 | 2 | 67,71,72 |
| 67 | 68 | 72 | 2 | 71,72,72 |
| 68 | 74 | 72 | 2 | 71,72,72,73 |
| 71 | 74 | 72 | 2 | 72,72,73,76 |
|  |  |  |  |  |

Total Requests served in 70 units of time = 6