

LIST OF TABLES

TABLE NO.	TITLE	PAGE NO.
2.1	Effect of λ^+ and μ_0 on $I_0, I, P_0, P, S, R, L_q, L_s$	42
2.2	Effect of β_0 and η on L_I, L_{P_0}, L_P, L_R and L_s	43
3.1	Performance Measures versus δ	69
3.2	Performance Measures versus α	69
3.3	Performance Measures versus p_{11}	69
3.4	Performance Measures versus p_{12}	69
4.1	Mean Orbit Size for varying values of η, μ_0 and ω_1	95
4.2	Mean Values by varying β_0 and v	96
4.3	Performance Measures by varying ω_1	97
4.4	Performance Measures by varying ω_2	97
4.5	Performance Measures by varying ω_3	97
4.6	Performance Measures by varying ω_4	97
5.1	Server State	101
5.2	Performance measures by varying λ^-	123
5.3	Performance measures by varying τ_0	123
5.4	Performance measures by varying r_0	123
5.5	Performance measures by varying γ_0	123

TABLE NO.	TITLE	PAGE NO.
6.1	Effect of λ^+ on I_0 , I and L_s	149
6.2	Effect of η on I_0 , I and L_s	149
6.3	Effect of b on I_0 , I and L_s	149
6.4	Effect of r on I_0 , I and L_s	150
6.5	Effect of v on I_0 , V and L_s	150
6.6	Effect of λ^- on I_0 , \mathcal{A} and \mathcal{F}	150
7.1	Impact of η on the System Measures	174
7.2	Impact of p on the System Measures	174

LIST OF FIGURES

FIG. NO.	TITLE	PAGE NO.
1.1	General Structure of a Queueing System	1
1.2	General Structure of a Retrial Queueing System	4
1.3	Organisation of the Thesis	15
2.1	Batch Arrival Retrial G-Queue with Multistage and Multi-Optional Services, Starting Failure and Feedback	21
2.2	Effect of η and α on I_0	44
2.3	Effect of η and α on I	44
2.4	Effect of η and α on S	45
2.5	Effect of η and α on L_s	45
3.1	Batch Arrival Retrial G-Queue with Multistage and Multi-Optional Services, Priority and Collision	48
3.2	Mean Values L_I , L_P and L_R versus λ	70
3.3	Mean Values L_I , L_P and L_R versus μ_{11}	70
3.4	Mean Values L_I , L_P and L_R versus β_{11}	70
4.1	Batch Arrival Retrial G-Queue with Multistage and Multi-Optional Services, Admission Control, Feedback and Vacation	74
5.1	Batch Arrival Retrial G-Queues with Multistage and Multi-Optional Services, Active Breakdown, Delayed Repair and Orbital Search	99

FIG. NO.	TITLE	PAGE NO.
5.2	Effect of (η, μ_0) on I_0, I, P_0, R, D and F	124
5.3	Effect of (θ, η) on I_0, I, L_s and \mathcal{A}	125
6.1	Batch Arrival Retrieval G-Queue with Multistage and Multi-Optional Services, Non-Persistent Customers, Vacation and Orbital Search	128
6.2	Effect of ' λ^+ ' on Orbit Size L_I, L_P, L_R and L_V	151
6.3	Effect of ' b ' on Orbit Size L_I, L_P, L_R and L_V	152
6.4	Effect of ' r ' on Orbit Size L_I, L_P, L_R and L_V	153
7.1	Batch arrival Retrieval G-Queue with Multistage and Multi-Optional Services, Feedback, Randomized J Vacation and Orbital Search	156
7.2	Effect of λ^+ on L_s with and without Orbital Search θ	174
7.3	Effect of (γ, J) on L_I	175
7.4	Effect of (γ, J) on L_P	175
7.5	Effect of (γ, J) on L_R	175
7.6	Effect of (γ, J) on L_V	175
7.7	Effect of (γ, J) on L_s	175