## List of Tables

3.1	Range of Jacobi constant for different solar radiation pressure $q$ 65
3.2	Analysis of $\boldsymbol{f}$ family periodic orbits for given pairs of $(q, C)$
3.3	Analysis of $\boldsymbol{f}$ family periodic orbits
3.4	Analysis of periodic orbit at separatrices
4.1	Admissible range of $C$ for Sun–Mars system
4.2	Admissible range of $C$ for Sun–Earth system
4.3	Analysis of periodic orbit for different pairs of $A_2$ and $C$ for Sun–Mars system
4.4	Analysis of periodic orbit for different pairs of $A_2$ and $C$ for Sun–Earth system
4.5	Location, velocity and distance of orbit from both primaries for $A_2=0.00001,0.00005,0.0001,0.00005$ for Sun–Mars system
4.6	Location, velocity and distance of orbit from both primaries for $A_2=0.00001,0.00005,0.0001,0.00005$ for Sun–Earth system
4.7	Variation in location of periodic orbit when $A_2 = 0.00001$ for Sun–Mars system
4.8	Prediction and error for periodic orbit when $A_2=0.00001$ for Sun–Mars system
4.9	Variation in location of periodic orbit when $A_2=0.0005$ for Sun–Mars system
4.10	Prediction and error for periodic orbit when $A_2 = 0.0005$ for Sun–Mars system

4.11	Variation in location of periodic orbit when $C=2.96$ for Sun– Mars system	105
4.12	Prediction and error for periodic orbit when $C=2.96$ for Sun–Mars system	105
4.13	Variation in location of periodic orbit when $A_2 = 0.00001$ for Sun–Earth system	106
4.14	Prediction and error for periodic orbit when $A_2=0.00001$ for Sun–Earth system	106
4.15	Variation in location of periodic orbit when $A_2=0.0005$ for Sun–Earth system	107
4.16	Prediction and error for periodic orbit when $A_2=0.0005$ for Sun–Earth system	107
4.17	Variation in location of periodic orbit when $C=2.96$ for Sun–Earth system	108
4.18	Prediction and error for periodic orbit when $C=2.96$ for Sun–Earth system	108
5.1	Admissible range of $C$ for Sun–Earth system	114
5.2	Admissible range of $C$ for Sun–Mars system	114
5.3	Analysis of periodic orbit for different pairs of $q$ and $C$ for Sun–Mars system	134
5.4	Analysis of periodic orbit for different pairs of $q$ and $C$ for Sun–Earth system	135
5.5	Location, semi major axis and eccentricity of orbits for $q=1,0.995,0.99$ and 0.9845 for Sun–Mars system	136
5.6	Location, semi major axis and eccentricity of orbits for $q=1,0.995,0.99$ and 0.9845 for Sun–Earth system	137
5.7	Location, velocity and distance of orbit from both primaries for $q=1$ , 0.995, 0.99, 0.9845 for Sun–Mars system	138
5.8	Location, velocity and distance of orbit from both primaries for $q=1,$ 0.995, 0.99, 0.9845 for Sun–Earth system	139

6.1	Analysis of exterior first order resonance for $C=2.93$ for perturbed Sun–Earth system	. 147
6.2	Analysis of exterior first order resonance for $C=2.93$ for perturbed Sun–Mars system	. 148
6.3	Analysis of interior first order resonance for $C=2.93$ for perturbed Sun–Earth system	. 153
6.4	Analysis of interior first order resonance $C=2.93$ for perturbed Sun–Mars system	. 156
6.5	Variation in three–loops orbit due to variation in $C$ for $q=0.9845$ and $A_2=0.0001$ for Sun–Earth system	. 156
6.6	Variation in three–loops orbit due to variation in $C$ for $q=0.9845$ and $A_2=0.0001$ in the Sun–Mars system	. 157
6.7	Variation in third order interior resonant seven loops orbit due to variation in $C$ for the Sun–Earth system	. 160
6.8	Variation in third order interior resonant seven—loops orbit due to variation in $C$ for the Sun–Mars system	. 160
6.9	Third order interior resonance $C=2.93$ in the Sun–Earth system	. 162
6.10	Third order interior resonance $C=2.93$ for Sun–Mars system	. 162
6.11	Fifth order interior resonance $C=2.93$ for Sun–Earth system	. 165
6.12	Fifth order interior resonance $C=2.93$ for Sun–Mars system	. 165
7.1	Some constants	. 178
7.2	Analysis of interior seventh order resonance for perturbed Sun–Earth system	. 179
7.3	Analysis of interior seventh order resonance for perturbed Sun–Mars system	. 180
7.4	Analysis of interior ninth order resonance for perturbed Sun–Earth system	. 182
7.5	Analysis of interior ninth order resonance for perturbed Sun–Mars system	. 182

7.6	Analysis of interior eleventh order resonance for perturbed Sun–Earth
	system
7.7	Analysis of interior ninth order resonance for perturbed Sun–Mars
	system