

CONTENTS

	Page
ACKNOWLEDGEMENT	
SUMMARY	
1. INTRODUCTION	1
1.1 The Earth Artificial Satellites	1
1.2 The Three Body Problem	13
2. THE PLANETARY MOTION	27
2.1 The Unperturbed Planetary Motion	27
2.2 Solution of Kepler's Equation	29
2.3 The Planetary Equation in Perturbed Orbits ...	31
2.4 Lagrange's Planetary Equations	33
3. EFFECT OF PERTURBATIONS ON THE MOTION OF CELESTIAL BODY	53
3.1 Outlines of The Method of Solution	55
3.2 First-Order Corrections	57
4. MORE CORRECTIONS TO THE PERTURBED ORBITS	88
4.1 Second-Order Perturbation	88
4.2 Mixed Secular Terms	113
4.3 Numerical Examples	135
5. THE THREE BODY PROBLEM	152
5.1 The Differential Equation of Motion	152
5.2 Lagrange's Solution of The Three-Body Problem ..	154
5.3 Modification of Lagrange's Solution	161
5.4 Verification of The Solution in The Solar System	166
6. CONCLUSIONS	179
APPENDICES	
REFERENCES	