	CONTENT	
	CHAPTER -I INTRODUCATION.	
1.1.1	IMPORTANCE OF C - LANGUAGE.	
1.1.2	CONSTANT, VARIABLE AND DATA TYPES.	
1.1.3	C - TOKENS.	
1.1.4	FLOATING POINT TYPES.	
1.1.5	OVERFLOW AND UNDERFLOW OF DATA.	
1.1.6	OPERATORS. 1.1.6 (A) PRECEDENCE OF ARITHMATIC. OPERATORS	
	1.1.6 (B) SOME COMPUTATIONAL PROBLEMS. 1.1.6 (C) TYPE CONVERSION IN EXPRESSIONS. 1.1.6 (D) CASTING A VALUE. 1.1.6 (E) OPERATOR PRECEDENCE AND ASSOCIATIVITY.	
1.1.7	MANAGING INPUT AND OUTPUT OPERATIONS.	
1.1.8	DECISION MAKING AND BRANCHING.	
1.1.9	DECISION MAKING AND LOOPING.	
1.1.10	JUMPS IN LOOPS.	
1.1.11	ARRAYS.	
1.1.12 1.1.12		
1.1.13	C POINTERS.	
1.2	FILE OPEN MODES IN FOPEN()	
1.2.1	W (WRITE) MODE.	
1.1.2	FILE CLOSE WITH FCLOSE()	
1.2.3	GRAPHICS FETURES IN C - LANGUAGE.	

1.2.4	MODES.	49
1.2.5	GRAPHIC MODE. 1.2.5 (A) INITGRAPH. 1.2.5 (B) PUTPIXEL.	4g 50
1.2.6	APPLICATION OF C - PROGRAM.	-
1.2.7	SOME EXAMPLES OF C- PROGRAMS.	50
	CHAPTER - II	
2.1	TIME, G.P.S. TIME AND IONOSPHERIC EFFECTS.	54
2.2	TIME MEASUREMENT.	57
2.3	TRANSISTORIZED TIMIMG CIRCUIT.	59
2.4	ANALYSIS OF TRANSISTORIZED TIMING CIRCUIT.	61
2.5	INTEGRATED CIRCUIT TIMER.	64
2.6	CLOCK GENERATOR.	65
2.7	IGNOSPHERIC EFFECTS AS FROM A TIMING CIRCUIT.	"
2.7 (a) 2.7 (b)	IONOSPHERIC PULSE AMPLITUDE MODULATION. IONOSPHERIC PULSE DURATION MODULATION AND IONOSPHERIC PULSE POSITION MODULATION	66 69
2.8	ADOPTIBILITY OF G.P.S. TIME FOR SHARED SATELLITE ACCESS	70
2.8.1	CONSTRAINTS.	71
2.8.2	DISCUSSION.	71
2.8.3	APPLICATION OF GPS TIME.	72
۰.		
	CHAPTER - III	
3.1	RADIO COMMUNICATION SYSTEM.	75
3 2 (2)		91

PAGE

.

3.2 (a)MODULATION DEPTH.\*13.2 (b)IONOSPHERIC MODULATED WAVE.\$2

:

CONTENT

	3.3	RADIO WAVES IN THE IONOSOPHERE.	83
	3.4	PRESSURE AND DENSITY VARIATION.	85
	3.5	FORMATION OF A CHAPMAN LAYER.	92
	3.6	PLANE WAVES AND SPHERICAL WAVES.	98
	3.7	EFFECT OF COLLISION AND EARTH'S MAGNETIC FIELD.	98
	3.8	THEORY OF WAVE PROPAGATION	99
	3.9	ELECTROMAGNETIC WAVE.	100
	3.10	A SOLUTION OF MAXWELL'S EQUATION.	105
,		CHAPTER - IV	
	4.1	DERIVATION OF APPLETON FORMULA.	108
	4.2	THE VARITION OF COLLISION FREQUENCY WITH HEIGHT.	111
	4.3	RAY PATHS.	113
	4.4	OBLIQUE PROPAGATION.	136
	4.5	GROUP PROPAGATION.	137
	4.6	THEOREM OF BRIETAND TUVE.	144
	4.7	IONOSPHERIC CHANGES, IRREGULATION, AND MOVEMENTS.	147
	4.8	IONOSPHERIC DRIFTS.	148
	4.9	APPROXIMATION AT HIGH FREQUENCIES.	149
	4.10	THE EQUIVALENT HEIGHT OF REFLECTION FOR LINEAR PR OF ELECTRON DENSITY.	OFILE 151
	4.11	THE RAY PATHS FOR A LINEAR GRADIENT OF ELECTRON DENSITY	151
	4.12	FADING.	155
	4.13	SCINTILLATIONS.	156

 $\lambda$ 

PAGE

.

## CONTENTS

## CHAPTER-V

5.1	Empirical Analysis	161
5.2	Time Dispersion Analysis	161
5.3	Electron Concentration Determined with the help of	
	(Fig.3.4(a) and Fig.3.4(b))Atmospheric Nomenclature	166
5.4	Summary and Conclusions	234

.

.

.

.