	Subject	Page Number	
	00000	I	
	Dedication	II	
	Acknowledgement	III	
	0000 0000	IV	
	Abstract	V	
	Table of content	VI	
Chapter one			
Introduction			
1.1	Historical Review	1	
.12	The Aim of Project	3	
1.3	Presentation of The Thesis	4	
Chapter Two			
Laser Theory			
2.1	Introduction	5	
2.2	Spontaneous and Stimulated Emission	5	
2.3	Spontaneous Emission	6	
2.4	Stimulated Emission	7	
2.5	Absorption	7	
2.6	Population Inversion	10	
2.7	Amplification Through Population Inversion in Gain Meduim	11	
2.8	Pumping	14	
Chapter Three			
Fiber Optics			
3.1	Introduction	19	
3.2	Fiber Construction	19	
3.3	The Wave Nature of Light	21	
3.4	The Planar Dielectric Wave Guide	23	

3.5	Fiber as A Wave Guide	24	
3.6	Classification of Optical Fiber	27	
3.7	Electromagnetic Modes of a Fiber	29	
3.8	Comparison between (SMF) and (MMF)	31	
3.9	Attenuation in Optical Fibers	31	
3.10	System for Optical Fiber Communication	33	
3.11	Detectors	34	
3.12	Polarization	35	
3.13	Bending and Microbending	42	
Chapter Four			
Experimental Setup			
	Introduction	47	
Chapter Five			
Result and Discussion			
5.1	Introduction	52	
5.2	Variation of the Intensity with Polarization	52	
	Tables shows the relations between the output intensity and polarization angles	53-56	
	Tables shows the relations between the output intensity with radius	57-59	
	Tables shows the relations between ΔI versus R	60	
	Graphs	61-67	
5.3	Results and Discussion	68	
5.4	Conclusion	70	
5.5	Recommendations	71	
	References	72	