**TABLE OF CONTENTS**

|  |  |
| --- | --- |
| **ACKNOWLEGMENT**  **ABSTRACT**  **LIST OF FIGURES** | **I**  **II**  **III** |
| **LIST OF TABLES** | **IV** |
| **NOMENCLATURE USED** | **V** |
| **CHAPTER 1** | **01** |
| 1. **INTRODUCTION**     1. What is Li-Fi    2. Working of Li-Fi    3. Problem Statement    4. Limitations of the Current Work    5. Objectives | **01**  02  04  04  04  05 |
| **CHAPTER 2** | **06** |
| 1. **LITERATURE SURVEY**    1. Li-Fi Based Automatic Traffic Signal Control for Emergency Vehicles.    2. Collision Avoidance between Vehicles through Li-Fi based Communication System.    3. Smart navigation with AI Engine for Li-Fi based Medical Indoor Environment.    4. Li-Fi Based Health Monitoring System for Infants.    5. Design and implementation of a vehicle to a vehicle communication system using Li-Fi technology.    6. Vehicle to Vehicle Communication Using RF and IR Technology. | **06**  06  07  08  09  09  10 |
| **CHAPTER 3** | **11** |
| 1. **COMPARATIVE STUDY**    1. Distance Short Range Communication VS Li -Fi Technology.    2. Wi-Fi VS Li-Fi Technology.    3. Bluetooth    4. WiMax    5. Gi-Fi  |  | | --- | | **CHAPTER 4** | | 1. **LI-FI TECHNOLOGY** | | * 1. Advantages of Li-Fi   2. Disadvantages of Li-Fi | | **11**  11  12  13  13  13  **14**  **14**  14  14 |
| **CHAPTER 5**   * 1. Future Scope   2. Applications      1. Underwater Communication      2. Traffic Management      3. Medical Application      4. Sensitive Areas or Hazardous Environment      5. Smarter Power Plants | **15**  15  15  15  16  16  17  17 |
| **CHAPTER 6** | **18** |
| 1. **CONCLUSION** | **18** |
| **References** |  |
|  |  |

**LIST OF FIGURES**

|  |  |  |
| --- | --- | --- |
| Fig. No. | Description of the figure | Page No. |
| 1.1 | Vehicle to Vehicle Communication | 1 |
| 1.2 | Li-Fi in airplanes | 2 |
| 1.3 | Use of Li-Fi underwater | 2 |
| 1.1.1 | Basic concept diagram of Li-Fi | 3 |
| 1.1.2 | Transceiver Li-Fi based on Visible Light Communication | 3 |
| 2.1 | Block diagram of Li-Fi based Traffic Control System | 6 |
| 2.2 | Block diagram of Li-Fi communication system | 7 |
| 2.3 | Conceptual diagram of transmitting and receiving local information | 8 |
| 2.4 | Architecture of Health Monitoring System | 9 |
| 2.6 | Implementation using IF and IR | 10 |
| 3.1 | DSRC overview in communication between vehicles | 11 |
| 3.2 | Li-Fi review in the vehicle to vehicle communication | 12 |
| 5.2.1 | Underwater Communication | 15 |
| 5.2.2 | Vehicle to Vehicle Communication | 16 |
| 5.2.5 | Use in Power Plants | 17 |

**III**