**Project-II Synopsis**

Course – Diploma in Robotics & Mechatronics

Date – \_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| Student name | Enrollment no. | Signature |
| Vinayak Nitin Renukdas | 2111011 |  |
| Aditya Avinash Bodhi | 2211011 |  |
| Ghananshu Gajendra Desale | 2212025 |  |

**Project Title - Automated Chemical Mixer**

In modern agriculture, precise chemical mixing plays a crucial role in improving crop yield and ensuring efficient use of resources. *The Automated Chemical Mixer* is an automated system designed to assist farmers in accurately dispensing and mixing liquid fertilizers, pesticides, and other agricultural chemicals. By reducing manual effort and minimizing errors in chemical proportions, this system promotes better crop health and optimized chemical usage.

The system allows users to select specific chemicals and their desired quantities through an intuitive interface, ensuring precise mixing based on agricultural requirements. The liquids are dispensed into a mixing container, where they are thoroughly blended using an automated stirring mechanism. This ensures uniform distribution, enhancing the effectiveness of agricultural treatments.

With its user-friendly design, *The Automated Chemical Mixer* simplifies chemical preparation for farmers, reducing waste and improving efficiency. It serves as a valuable tool for modern farming, promoting sustainability and precision in agricultural chemical management.

List of components

|  |  |
| --- | --- |
| Sr. no | Components |
| 1 | Microcontroller unit |
| 2 | Submersible pumps |
| 3 | Relay module |
| 4 | Flow sensors |
| 5 | LCD screen |
| 6 | Matrix keypad |
| 7 | DC motor |
| 8 | Servo motor |
| 9 | Motor Driver |
| 10 | Buzzer |