**Project Design Phase-I**

**Proposed Solution.**

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| Project Name | IOT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE. |
| Team ID | PNT2022TMID24757 |
| Date | 16 Oct 2022 |
| Max Marks | 2 Marks |

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| **S.NO.** | **Parameter** | **Description** |
| **1.** | Problem Statement.  (Problem to be solved) | * Crops are not irrigated properly due to insufficient labour forces. * Improper maintenance of crops against various environmental factors such as temperature climate, topography and soil quantity which results in crop destruction. * Requires protecting crops from wild animals attacks birds and pests. |
| **2.** | Idea /Solution Description. | * Moisture sensor is interfaced with Arduino Microcontroller to measure the moisture level in soil and relay is used to turn ON & OFF the motor pump for managing the excess water level. It will be updated to authorities through IOT. * Temperature sensor connected to microcontroller is used to monitor the temperature in the field. * Image processing techniques with IOT is followed for crop protection against animal attack. |
| **3.** | Novelty / Uniqueness. | ✓ Automatic crop maintenance and protection using embedded and IOT Technology. |
| **4.** | Social Impact /  Customer satisfaction. | ✓ This proposed system provides many facilities which helps the farmers to maintain the crop field without much loss. |
| **5.** | Business Model (Revenue Model). | ✓This prototype can be developed as product with minimum cost with high performance. |
| **6.** | Scalability of the solution | ✓This can be developed to a scalable product by using solution sensors and transmitting the data through Wireless Sensor Network and Analysing the data in cloud and operation is performed using robots. |