

## Project Design Phase-I Proposed Solution.

Project Name	<b>IOT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE</b>
Team ID	<b>PNT2022TMID02250</b>
Date	16 October 2022
Max Marks	2 Marks

S.NO.	Parameter	Description
1.	Problem Statement. (Problem to be solved)	<p>Crops are not irrigated properly due to insufficient labor forces.</p> <p>Improper maintenance of crops against various environmental factors such as temperature climate, topography and soil quantity which results in crop destruction.</p> <p>Requires protecting crops from wild animal attacks birds and pests.</p>
2.	Idea /Solution Description.	<p>Moisture sensor is interfaced with Arduino Microcontroller to measure the moisture level in soil and relay is used to turn ON &amp; OFF the motor pump for managing the excess water level. It will be updated to authorities through IOT.</p> <p>Temperature sensor connected to microcontroller is used to monitor the temperature in the field.</p> <p>Image processing techniques with IOT is followed for crop protection against animal attack.</p>
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 analyzing the data in cloud and operation is performed using robots.