Project Design Phase-I
Proposed Solution Template

Date	19 September2022
Team ID	PNT2022TMID46736
Project Name	IOT Based Smart Crop Protection System For Agriculture
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement(Problem To Be Solved)	An intelligent crop protection system helps the farmers in protecting the crop from the animals and birds which destroy the crop. This system also helps farmers to monitor the soil moisture levels in the field and also the temperature and humidity values near the field. The motors and sprinklers in the field can be controlled using the mobile application.
2.	Idea/Solution Description	This system uses a motion sensor to detect wild animals approaching near the field and smoke sensor to detect the fire. In such a case the sensor signals are given to the microcontroller to take action. So here we propose automatic crop protection system from animals and fire.
3.	Novelty/Uniqueness	Agriculture is the backbone of the economy but, because of animal interference in agricultural lands, there will be huge loss of crops. This project provides a comprehensive solution to protect crops.

4.	Social Impact/Customer Satisfaction	The correct use of pesticides can deliver significant social economic and environmental benefits in the form of safe, healthy, affordable food and enable sustainable farm management by improving the efficiency with which we use natural resources such as soil, water and overall land use. The use of transgenic crops will probably maintain, or even increase, the need for effective resistance management programmes.
5.	Business Model(Revenue Model)	The proposition that alternative business models for crop protection can address these problems by incentivizing and benefiting from efficiency of pesticide use. Specifically, we advocate for establishment of crop protection adequacy standards that would allow a market system to maximize efficiency.
6.	Scalability Of The Solution	➢ Monitoring of climate conditions. ➢ Greenhouse automation ➢ Crop management and Cattle monitoring management. ➢ Precision farming and agricultural drones. ➢ Predictive analytics for smart farming. ➢ End-to-end farm management systems.