SOLAR WATER PURIFIER

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PROBLEM STATEMENT

- In India, water borne diseases are very common due to scarcity of pure drinking water in rural areas.
- Ground water in 1/3rd of the districts is not fit for drinking.
- River water prone to be infested by bacteria, viruses and parasites.
- Concentration of fluoride,iron,salinity and arsenic above tolerance level.
- Energy crisis is another important issue. Conventional energy sources are limited and they cause environmental pollution.

LITERATURE SURVEY

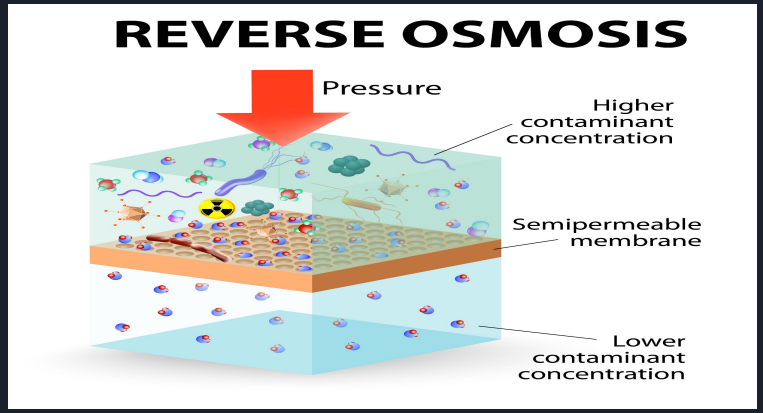
- Around 80% of illness are linked to poor water and sanitation conditions, which leads to the necessity of preserving clean drinkable water.
- This Solar Powered Water Purifier does not contain any sort of chemical components, and does involve exposer to UV rays which also increases the microbiological quality of water.
- As there are areas having low availability of water this unit will be working as a storage supply as well and reusing that stored water by purifying it.

LITERATURE SURVEY

- Zero chemicals.
- Increasing the mineral value of water.
- Minimum consumption of electricity.
- Low maintenance.

METHODOLOGY

- A reverse osmosis water treatment system is designed to demonstrate the capability of the grid water treatment.
- The system is specifically designed for the destruction of contaminants and to meet the needs of a family.

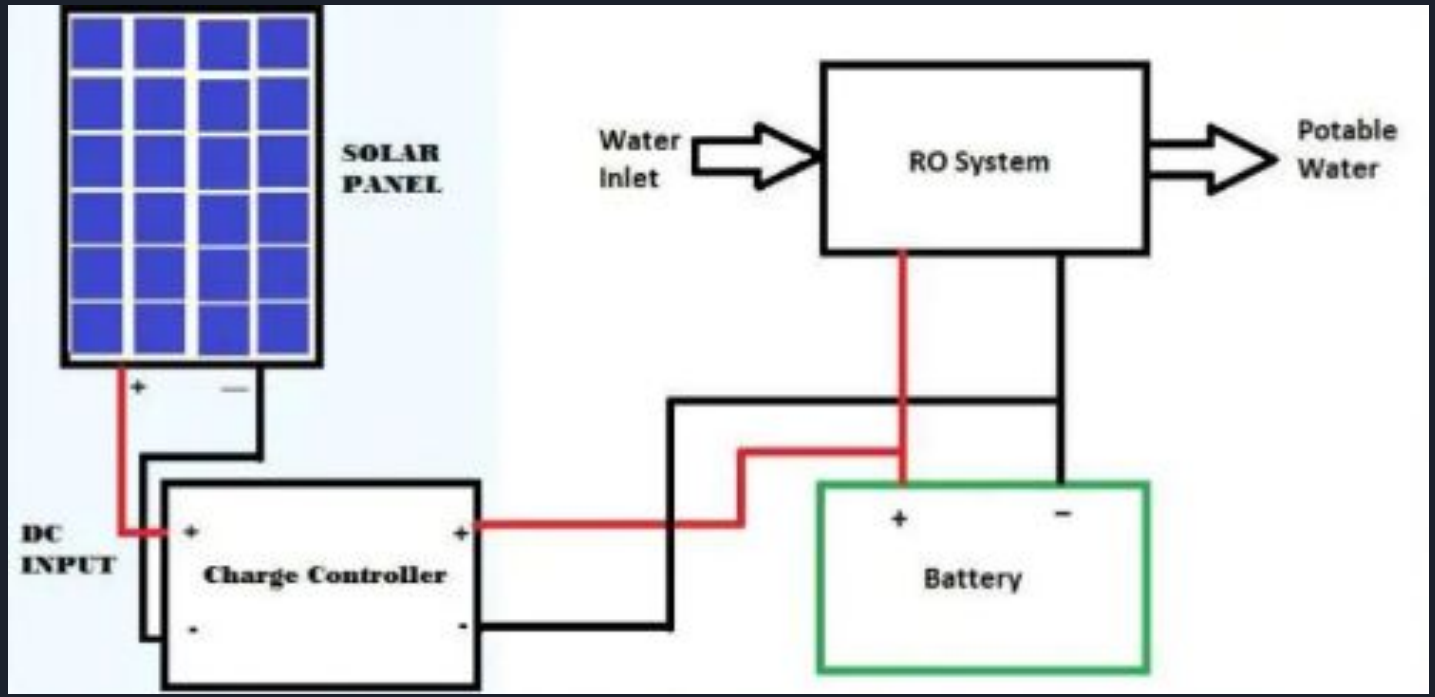


METHODOLOGY

- Only sunlight is required to power the purification system. The solar panels are used to collect energy from sunlight and charge a 24V battery.
- The stored electricity is used to power the RO system having 24v dc motor.
- The RO treatment disrupts the bacteria, contaminants and produces a source of potable water.

METHODOLOGY

BLOCK DIAGRAM OF SYSTEM :



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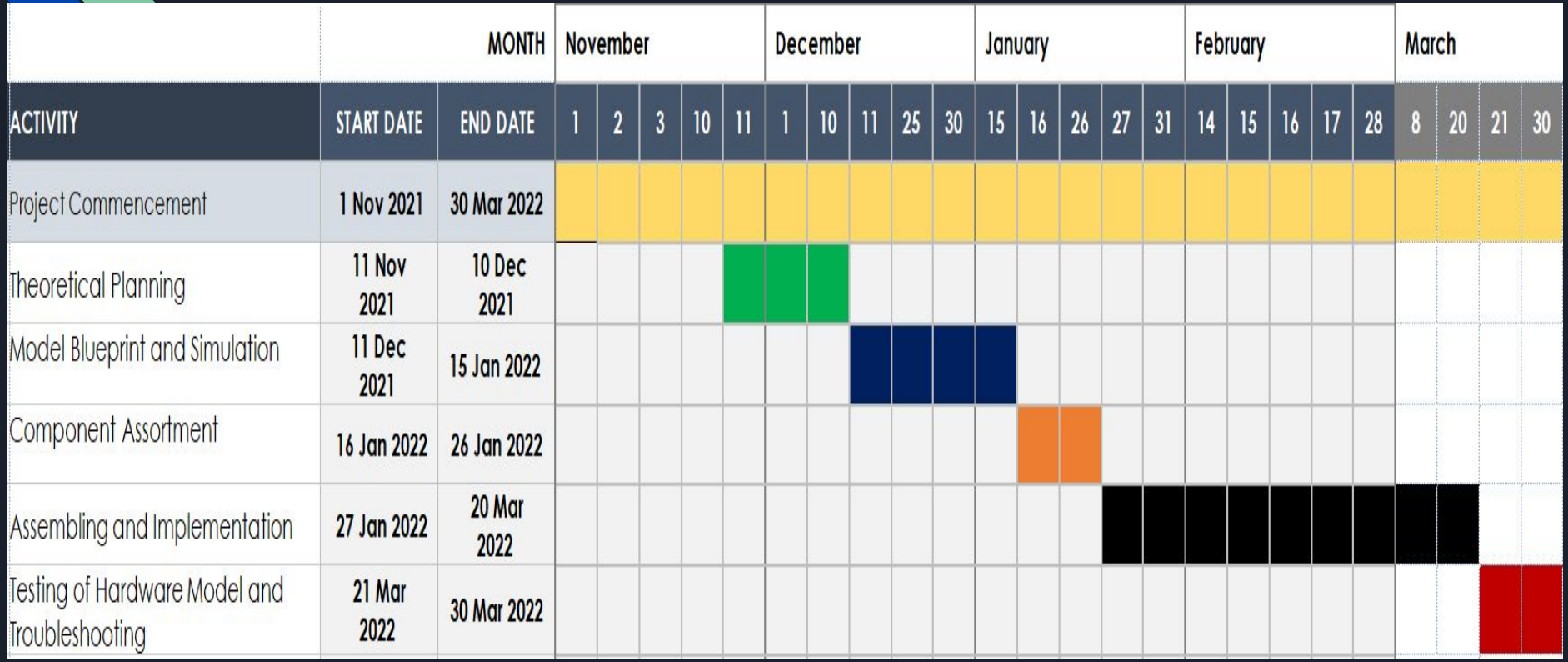

	MONTH	November					December					January					February					March			
ACTIVITY	START DATE	END DATE	1	2	3	10	11	1	10	11	25	30	15	16	26	27	31	14	15	16	17	28	8	20	21	30
Project Commencement	1 Nov 2021	30 Mar 2022																								
Theoretical Planning	11 Nov 2021	10 Dec 2021																								
Model Blueprint and Simulation	11 Dec 2021	15 Jan 2022																								
Component Assortment	16 Jan 2022	26 Jan 2022																								
Assembling and Implementation	27 Jan 2022	20 Mar 2022																								
Testing of Hardware Model and Troubleshooting	21 Mar 2022	30 Mar 2022																								

REFRENCES

- www.reasearchgate.net
- http://climatelab.org/Solar_Water_Treatment
- https://energypedia.info/wiki/Solar_Water_Purification_in_India

THANK YOU