

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION  
ENGINEERING**

**IBM – LITERATURE SURVEY**

**PROJECT TITLE**

**Real-Time River Water Quality Monitoring and Control System**

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S. no	Title of Paper	Advantages	Disadvantages	Technology used
1	Internet of things enabled real time water quality monitoring system	Flexibility, low carbon emission and low power consumption  are the advantages of the method proposed in the paper.	Water with a pH of 11 or higher can cause irritation to the eyes, skin and mucous membrane.	Wireless technology is used for communication between sensor to controller and from controller to data storage cloud.  Sensors are connected to the controller, either directly using UART protocol or remotely using Zigbee protocol.
2	A system for monitoring water quality in a large aquatic area using wireless sensor network technology	This Wireless Sensor Network (WSN) is suitable for monitoring physical and chemical water characteristics in remote areas at lower cost and reduce manpower Requirement.	Due to lack of technical know-how and a huge amount in the initial investment, water analyses are usually done through conventional procedures or by using portable testers.	The study only used the simplest ZigBee setup (sensor nodes to sink node) for less installation and operational complication.
3	Smart Water Monitoring System for Real-Time Water Quality and Usage Monitoring.	The Smart water quality check meter is automatic and does not require much human interference, thereby reducing the errors.	Water supply to taps at urban homes and water sources available in more rural areas, is however, not necessarily safe for consumption.	Flow sensor, pH sensor, conductivity sensor, Communal prepaid metering.

4	Water Quality Monitoring Systems based on Intelligent Agents	The development of WQWs is currently directed to the field of Intelligent Agents, for Intelligent Agents represent technology to create complex software systems.	Water Quality Monitoring (WQM) are paramount due to different factors that affect water, such as each living creature needs water to live.	Sensor Networks, Spectrometers UV-VIS TROPOS methodology, UML, FIPA, JADE agent.
5	Literature Survey on Smart Water Quality Monitoring System	ALARM is developed at Victorian Centre for Aquatic Pollution Identification and Management (CAPIM). The aim is to develop a minimal cost, wireless water quality monitoring system that monitors the water conditions contiguously.	The system has been built by applying image processing and auto-recognition of the gesture of fish using fuzzy inference in water bodies.	The Raspberry Pi3 Model B is a wonderful platform that can be used to build automation systems. Clearly, the Raspberry Pi3 model B board is perfect when being used as a “hub” for automation systems, connecting to other open-source hardware parts.
6	Real-Time Water Quality Monitoring System	Monitoring of real time quality of Water from reserve tank of house and colony makes use of PH, turbidity and temperature sensor with Raspberry Pi and existing Cloud system for data analytics.	The cost associated with false alarms is due to not being able to detect the signs.	The system can be expanded to monitor hydrologic, air pollution, industrial and agricultural production and so on. It has widespread application and extension value.

7	IOT Based Real-Time River Water Quality Monitoring System	<p>System that uses wireless sensor networks to continuously monitor river</p> <p>water quality at remote locations with low power consumption, low cost and high detection accuracy.</p>	<p>Water quality monitoring in real time is becoming more difficult as a result of increasing water scarcity, population growth, and other factors.</p>	<p>The use of wireless communication technologies is becoming more common to help people with their personal and daily duties.</p>
8	Water Quality Monitoring System Based on IOT	<p>Monitoring of Turbidity, PH &amp; Temperature of Water makes use of</p> <p>water detection sensor with unique advantage and existing GSM network.</p>	<p>Turbidity is a measure of the cloudiness of water. Turbidity has indicated the degree at which the water loses its transparency.</p>	<p>pH sensor, Turbidity sensor, Temperature sensor, Flow sensor,</p> <p>Arduino model, WI-FI module.</p>
9	IoT Based Real-time River Water Quality Monitoring System	<p>The main aim is to develop a system for continuous monitoring of river water quality at remote places using</p> <p>wireless sensor networks with low power consumption, low-cost and high detection accuracy.</p>	<p>The neural network will produce output to classify water quality as dangerous, be careful, and good. The classification layer will run on top of Hadoop cluster .</p>	<p>The main components of Wireless Sensor Network (WSN) include a microcontroller for processing the system, communication system for inter and intra node communication and several sensors.</p>
10	The Real Time Monitoring of Water Quality in IoT Environment	<p>The online water monitoring technologies have made a significant progress for source water surveillance and water plant operation. The use of their technologies having high cost associated with installation and calibration of a large distributed array of monitoring sensors.</p>	<p>The use of their technologies having high cost associated with installation and calibration of a large</p>	<p>Raspberry PI is used as a core controller. The sensor data can be viewed on the internet using cloud computing with a separate IP address.</p>

			distributed array of monitoring sensors.	
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