different places. In this work, water samples collected from nine different places during summer, rainy, post-rainy and winter seasons in the year 2015 and 2016 have been analyzed to study the physico-chemical as well as bacteriological parameters. The mean and standard deviations (SD) and water quality index (WQI) by using the National Sanitation Foundation (NSF) method have been calculated for the year 2015 and 2016 independently. The study reveals that both the years exhibit bad water quality and belongs to class D. The physico-chemical parameter analysis concludes that the river as a whole is contaminated physically, chemically and bacteriologically with respect to Cr (VI), iron, chloride and bacteria.

Keywords

River water pollution, NSF-WQI, Hexavalent chromium

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Novel Approach For Traffic Directing In Urban Areas Using Ant Colony Optimization Technique To Diminish The Effect Of Air Pollution On The Human Body

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Abstract

In this paper, the layered architecture to analyze and suggestive route planning based on the critical parameter air pollution is proposed. Various ways have been proposed for minimizing the criticality of air pollution and its impact on health. Usually while selecting a route from one place to another place, one choose the shortest path or the path which is having lesser traffic density but for the person who suffers from diseases like aggravated cardiovascular, respiratory illness, accelerated aging of the lungs, asthma, bronchitis, emphysema, it is more important to know the level of pollution throughout the route which one wants to use while traveling especially for the riders on two-wheeler. Moreover, this awareness about the recent level of pollution will help them to take precautionary actions. The proposed architecture is based on the modified version of the ant colony optimization technique. The novel part of the proposed architecture is to use the dynamic approach to calculate the probability depending on the different parameters like air pollution, traffic density and distance before arriving at each junction of the route on which leads towards the selection of an optimal path. Furthermore, the inclusion of other parameters can experiment in future work.

Keywords

Vehicular ad-hoc network, Ant colony optimization, Air pollution, Health impact, Sensor