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Study of Water Quality of River Ganga at Patna

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Abstract: Water pollution is an acute problem in all major rivers of India. Rivers are heavily polluted due to the industrial, municipal, agricultural and domestic effluents. Over the years rivers have been indiscriminately polluted and misused. The anthropogenic activities have posed serious environmental problems which threaten human life and conservation of biodiversity. The present study deals with the water quality of the Ganga River at Patna. The water samples were collected from different sites (site I- Danapur, site II- Mandiri, site III- Kali Ghat, site IV- NIT Ghat) of Ganga River at Patna during the rainy season (August to September), 2017. Analysis of water quality was done by determining pH, TDS (Total Dissolved Solid), Conductivity, DO (Dissolved Oxygen) and

BOD (Biological Oxygen Demand). The minimum pH, TDS and BOD were recorded at site I (Danapur) and minimum conductivity at site II (Mandiri), minimum DO was recorded at site III (Kali Ghat). The maximum pH, DO and BOD were recorded at site II (Mandiri) and maximum TDS and conductivity recorded at site III (Kali Ghat).

The water quality of site II was poor as compared to site I, site III and site IV. The high value of BOD and DO suggests that the purification may be necessary for domestic consumption.

Keywords: Biological Oxygen Demand (BOD), Dissolved Oxygen(DO), Total Dissolved Solid (TDS).

Introduction:

Water pollution is a global problem that does not respect national boundaries. The source of pollution may be domestic, agricultural or industrial. Water pollution is an acute problem in all major rivers of India. The small and large areas which fall in the way of the river, dump their waste in the river (Banerjee et al., 2016).

Ganga is the 13th largest river in the world, covering an area of 8,61,404 km² (Rehman, 2009). Its origin is in the western Himalaya ranges in the state of Uttarakhand. This river has also significant historical value. The river Ganga passes through Uttarakhand, Uttar Pradesh, Bihar, and West Bengal. The river supports abundant biological width, characterized by rich fisheries and faunal diversity. Due to copious availability of water throughout the year, it has a major

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