BACHELORS WITH MAJOR IN WATER MANAGEMENT (COURSE TYPE – 1)
4th SEMESTER

WMG422J1 WATER MANAGEMENT _ WATER POLLUTION

CREDITS: THEORY: 3, PRACTICAL: 1

COURSE OUTCOME: *Students are expected to have an understanding on water pollution types and its impacts thereof. This course may lead to have theoretical and practical understanding about the issues related to water environment.*

THEORY (3 CREDITS)

UNIT I: SURFACE AND GFAROUND WATER POLLUTION

Lentic and Lotic system characteristics, River and stream pollution: causes and impacts, Lake and wetland pollution: Causes and impacts, Eutrophication: causes and consequences, Ground water pollution: causes and impacts, Water borne diseases and Public health

UNIT II: MARINE POLLUTION

Marine pollution: Causes and impacts, Marine litter: Types and sources, Oil pollution: Sources and impact on aquatic life and ecosystems, Ocean acidification, Impacts of marine pollution on public health

UNIT III: THERMAL AND RADIOACTIVE POLLUTION

Thermal pollution: causes and impact on water characteristics and aquatic biodiversity, Radioactive pollution: Sources and types of radiations, Impact of thermal pollution on water characteristics and aquatic biodiversity, Radiation hazard and Public health

PRACTICAL (1 CREDIT):

1. Estimation of BOD of water
2. Estimation of COD of water
3. Estimation of ammonical nitrogen of water
4. Estimation of Nitrite and Nitrate Nitrogen of water

SUGGESTED READINGS:

1. Water Pollution and Management, C K Varshney
2. Fundamentals of Water and Wastewater, Krishna Gopal
3. Groundwater Hydrology, David Keith Todd
4. Water and Wastewater Technology, Mark J.Hammer
5. Groundwater Science. Fitts, C.R.
6. Groundwater and Surface Water Pollution. Liu, D.H.F. and Liptak, B.G.
7. Wetlands: Monitoring, Modelling and Management. Okruszko, T., Maltby, E.,Szaltytowicz, J., swiatek, D. and Kotowski, W.
8. Basic Environmental Technology. Nathenson, Jerry. A.

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