

M.Sc. Examination 2018
Semester-I
Environmental Science
Course : MEC-15
(Water Pollution)

Time : 3 Hours

Full Marks : 40

Questions are of value as indicated in the margin

Answer question No. **1** and **any four** from the rest.

1. Write short notes on **any four** of the following. 2×4=8
 - a) Analysis of hardness
 - b) Toxic effects of lead
 - c) General structure of PCDD and PCDF
 - d) Acid mine drainage
 - e) Skimmers
 - f) Toxic effect of fluoride

 2. Discuss at least four physico-chemical properties of water and their relevance to life. 8

 3. Define pesticide. Discuss different types of organophosphates pesticides with suitable example. Enumerate the major difference in the toxic effects of organophosphate and organochlorine pesticides. 1+6+1=8

 4. What are soaps and detergents? Discuss the cause, effect and remediation for the problem of detergents in the environment. 2+(2+2+2)=8

 5. What are the major sources of mercury in the environment? Discuss the chemistry of methyl mercury and the factors which affect it, in the aquatic environment. Enumerate the toxic effects of mercury. 2+3+2+1=8

 6. Discuss the status of arsenic in Bengal. Give a note on the mechanism of arsenic release in ground-water of Bengal. Enumerate the toxic effects of arsenic. 2+4+2=8

 7. Write notes on the following : 2×4=8
 - a) Primary treatment of waste water
 - b) Removal of solids from waste water
 - c) Classification of sludge
 - d) Water disinfection
-