

M.Sc. Examination, 2016
Semester – III
Environmental Science
Paper – MEC-33
(Environmental Toxicology)

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 note on **any four** of the following : 2×4=8
 - a) Dose and Concentration
 - b) Grasshopper effect
 - c) Inducers and Inhibitors
 - d) PM₁₀
 - e) Water born diseases
 - f) Four carcinogen from combustion

 2.
 - a) What is biotransformation? 1+4+3=8
 - b) Enumerate the enzymes and reactions of phase-I biotransformation process.
 - c) Discuss with an example-‘Biotransformation of xenobiotic-the good, the bad and the ugly’.

 3.
 - a) Write a short note on Dose-Response relationship. 3+5=8
 - b) Describe the various types of chemical interaction with dose-response relationship graph.

 4.
 - a) Explain the effect of organic pollution in a river. 4+4=8
 - b) Discuss the toxic effect of acidification in an aquatic ecosystem.

 5. What are POPs? Enumerate their source and toxic effects. Discuss their environmental behaviour and transport in the environment. 1+2.5+4.5=8

 6. Explain any one toxic biochemical mechanism of the following pollutants. 5+3=8
 - a) Cadmium
 - b) Organo chlorine pesticides

 7. Explain the toxicity of lead with reference to heme synthesis. Discuss, how the lead poisoning brought down ancient Rome 6+2=8
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