

M. Sc. Semester-IV Examination 2017
Environmental Studies
Course: MEO-444
(Soil Pollution)

Time : Three 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) Pb toxicity
 - (b) Phyto-volatilization
 - (c) Pharmaceuticals and personal care products
 - (d) Aerobic bioremediation
 - (e) BCR Technique
 - (f) P-solubilization
 2. Enumerate a check list you would be doing before starting the technical work of remediation plan for a contaminated site. Discuss various physico-chemical remediation techniques for a contaminated soil. 2+6=8
 3. Explain the sources behaviour, fate, and toxicity of cadmium in soil. 1+4+1.5+1.5=8
 4. What is chemical speciation? What are its types and explain with an example? Give a schematic diagram of its extraction techniques. 1+(1+4)+2=8
 5. Explain the concept of Bioavailability and bio-accessibility. Explain the role of invertebrate in remediating a contaminated soil. 2+6=8
 6. Explain in detail the various biological tools for assessing the bio-availability of contaminant in soil. 8
 7. What are POPs? Enumerate them and give a note on their toxicity. Explain the various physico-chemical behaviour which plays an important role in their environmental fate and toxicity. 1+(1.5+1.5)+4=8
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