

M.Sc. Examination 2018
Semester-II
Environmental Science
Course : MEC-25

(Soil Pollution and Solid Waste Management)

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) Langmuir isotherm
 - (b) Utilisation of fly ash
 - (c) Low level nuclear waste
 - (d) K_{ow}
 - (e) Toxicity of lead
 - (f) Phosphate solubilising bacteria
 2. Explain with a schematic representation, the response of soil biota to foreign substances. Discuss the role of oxidoreductase enzymes in degradation of pesticides. 3+5=8
 3. Discuss the sources, behaviour and fate of heavy metals in urban soil. 3+3+2=8
 4. What is biomedical waste? Give a note on their classification and the methods to manage it. 1+3+4=8
 5. What is Phytoremediation? Explain the basic strategies for phytoextraction. What are the limitations and future trend for application of phytoremediation? 2+4+1+1=8
 6. Briefly discuss the method and provide a protocol to curb the menace of solid waste for Santiniketan – Sriniketan Development Authority. 8
 7. What is biogeochemical cycling? Discuss sulfur cycle and the role of various microorganism in it. Why is dimethylsulfide (DMS), considered to be a “minor” part of the sulfur cycle? 1+5+2=8
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