

Roll No.

Total Pages : 3

019603

May 2024

B.Tech. (ENV) VI Semester

Soil Pollution and Remediation (PCC-ENV-603)

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART-A

1. (a) Define soil pollution. (1.5)
- (b) What are the sources of soil pollution? (1.5)
- (c) Name one sustainable agricultural practice for soil health. (1.5)
- (d) Why is soil monitoring important? (1.5)
- (e) Define soil spectroscopy. (1.5)
- (f) What are the causes of soil pollution? (1.5)
- (g) Name one microbial method for soil remediation. (1.5)

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- (h) Describe soil washing in one sentence. (1.5)
- (i) Name one common heavy metal found in soil. (1.5)
- (j) What is the role of organic matter in soil fertility?
(1.5)

PART-B

- 2. (a) Describe the process of risk assessment for soil contaminants and its significance in environmental management. (10)
- (b) Discuss the sources and pathways of heavy metal contamination in soil. (5)
- 3. (a) Define soil remediation and discuss its importance in environmental management. (5)
- (b) Describe the principles and applications of phytoremediation in treating soil contamination. (10)
- 4. Describe the role of pesticides and fertilizer in soil pollution, and propose sustainable alternatives. (15)
- 5. (a) Discuss the effects of heavy metals on soil quality and human health. (5)
- (b) Explain how soil pollution can lead to groundwater contamination and its consequences. (10)
- 6. (a) Define soil management and explain its importance in sustainable agriculture. (10)

- (b) Describe the methods used for sampling soil contaminants in the field. (5)

- 7. Explain the concept of precision agriculture and its applications in optimizing soil management practices. (15)
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