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MEV-013

M. SC. (ENVIRONMENTAL SCIENCE)

(MSCENV)

Term-End Examination

December, 2024

MEV-013 : ENVIRONMENTAL CHEMISTRY

Time : 3 Hours

Maximum Marks : 100

Note : Attempt any **ten** questions. Each question carries 10 marks.

1. What are the various applications of chromatographic techniques in environmental monitoring ?

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2. Describe various applications of Radioisotopes in Environmental Monitoring.
3. Describe basic instrumentation for IR spectrometry. What are its environmental applications ?
4. Define adsorption. Explain its mechanism.
5. Explain the following :
 - (a) Formation of stratospheric aerosol layer
 - (b) Carbon dating
6. Define Cation Exchange Capacity (CEC) and Exchangeable Cation Statics (ECS). Describe their methods of determination.
7. Write a short note on acid mine drainage with suitable examples.

8. Explain the following with suitable examples :
- (a) Organohalides
 - (b) Organonitrogen compounds
9. Explain the limestone scrubbing method for control of SO_x .
10. Describe the following :
- (a) Soil profile
 - (b) Organic matter of the soil
11. Differentiate between wet and dry adiabatic lapse rate.
12. Explain the toxic effects of the following ions present in water :
- (a) Cyanide
 - (b) Mercury

13. What are the earth friendly plastics ? Explain.

14. Write short notes on the following :

(a) Catalysis

(b) Lubricants

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