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MEV–013

M. SC. (ENVIRONMENTAL SCIENCE)

(MSCENV)

Term-End Examination

June, 2024

MEV-013 : ENVIRONMENTAL CHEMISTRY

Time : 3 Hours *Maximum Marks : 100*

Note : *(i) Answer any* ***ten*** *questions.*

(ii) All questions carry equal marks.

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1. What is the working principle of Gas Liquid Chromatography (GLC) ? Give any *four* applications of GLC in Environmental Monitoring.

2. What is tracer ? Explain the working procedure of tracer technique.

3. Describe the basic instrumentation for mass spectrometry. What are its environmental applications ?

4. Explain the following with suitable examples :

   (i) Determinate errors

   (ii) Naturally occurring toxic substance

5. Describe the properties of colloidal substances.

6. Explain the diurnal plot for variation of DO with time.

7. Explain the following :

   (a) Difference between K-type and F-type waste

   (b) Flammability range in determining the flammability hazards of organic liquids

8. What are UV-A, UV-B and UV-C radiation ? Explain the adverse effects of UV-B radiation on human health.

9. What is global warming ? How is it different from green house gas effect ? What are the effects of green house ?

10. Write short notes on the following :

    (a) Pedogenesis

    (b) Soil acidity

11. Explain the toxic effects of the following ions present in water :

    (a) Mercury

    (b) Arsenic

12. Differentiate between Chemiluminescence and Luminescence with suitable examples.

13. Explain the structure and composition of atmosphere.

14. Explain the following :

    (a) Lead components are added to gasoline.

    (b) Speciation is important in aqueous system.

    (c) Graphite acts as a lubricant.

    (d) Relation between pH and pOH.