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MEV-013

**M. Sc. (ENVIRONMENTAL
SCIENCE)
(MSCENV)**

Term-End Examination

June, 2026

MEV-013 : ENVIRONMENTAL CHEMISTRY

Time : 3 Hours

Maximum Marks : 100

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

(ii) Each question carries 10 marks.

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1. What are the primary causes of cadmium pollution ? Describe its environmental impacts and toxicological effects.

2. What do you mean by hydrolysis ? Explain salt hydrolysis with suitable example and equations.
3. Define the following :
 - (a) Chemical equilibrium
 - (b) Dynamic equilibrium
 - (c) Chemical potential
 - (d) Order of reaction
 - (e) Common ion effect
4. What is Carbon Dating ? Explain in detail.
5. Write short notes on the following :
 - (a) Geiger Muller Counter (GMC)
 - (b) Dry adiabatic lapse rate

6. What is meant by hyphenated technique ?
What are its advantages ?
7. Describe the role of oxygen in both the photosynthetic and photodissociation process within the earth's atmosphere.
8. What are environmentally benign pesticides ?
Explain with suitable examples.
9. What are the different types of bioplastics ?
How do these bioplastics align with the principles of green chemistry ?
10. Describe the *three* stages of atmospheric evolution. Explain the key characteristics of each stage.
11. What are colloidal substances ? Explain their classification and properties.

12. What is the working principle of HPLC ?

Describe the advantages of HPLC over GLC.

13. Explain the following in brief :

(a) Aerosols in atmospheric smog.

(b) Harmful effects of Nitrogen oxides.

14. Describe the soil horizons. Explain their significance in determining the soil properties.

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