C–5125	Sub. Code
	30641

M.Sc. DEGREE EXAMINATION, APRIL 2025.

Fourth Semester

Industrial Safety and Hygiene

ENVIRONMENTAL SAFETY MANAGEMENT

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. Define air pollution and classify air pollutants based on their origin and physical state.

2. Briefly explain the concept of "clean coal combustion technology."

3. What are the primary health hazards associated with water pollution?

4. Define "effluent" and differentiate between industrial effluents and domestic wastewater.

5. Explain the concept of "waste identification" in hazardous waste management.

6. What are the health hazards associated with toxic and radioactive wastes?

7. Define "Lux Meter' and explain its application in environmental measurement

8. What is the principle behind the operation of an electrostatic precipitator?

9. Briefly describe the pollution control measures in the cement industry

10. What are the advantages of eco-friendly energy sources over conventional ones?

Part B $(5 \times 5 = 25)$

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain "pollution sources," categorizing them based on origin and mobility with examples.

Or

(b) Discuss CFCs and their role in ozone depletion, including phase-out measures and alternatives.

12. (a) Explain water pollutant sampling/analysis: techniques and methods for water quality assessment.

Or

(b) Discuss common industrial effluent treatment methods, their principles, advantages, and limitations.

13. (a) Explain "selection charts' for hazardous waste treatment and their importance in choosing disposal methods.

Or

(b) Discuss 'standards and restrictions" in hazardous waste management and the role of regulatory bodies.

14. (a) Describe the working principles and applications of gas chromatographs in environmental monitoring.

Or

(b) Explain bag filter operation and maintenance procedures.

15. (a) Discuss pollution control in the paper industry, addressing pollutants and treatment technologies.

Or

(b) Analyse challenges/opportunities in promoting eco-friendly energy in India, including policies, tech, and awareness.

Part C $(3 \times 10 = 30)$

Answer **all** questions, choosing either (a) or (b).

16. (a) Discuss automobile pollution's impact on air quality/health, analysing pollutants, sources and control strategies.

Or

(b) Evaluate advanced wastewater treatment's effectiveness in achieving standards, discussing technologies and applications.

17. (a) Critically analyse incineration and vitrification for hazardous waste, discussing pros/cons and environmental implications, comparing to other options.

Or

(b) Discuss the importance of sampling in environmental control, explaining methods for assessing soil quality.

18. (a) Analyse pollution control in dyeing industries: pollutants, impacts and treatment technologies.

Or

(b) Discuss pollution control challenges in thermal power plants in detail.

———————

C–5126	Sub. Code
	30642

M.Sc. DEGREE EXAMINATION, APRIL 2025.

Fourth Semester

Industrial Safety and Hygiene

EHS MANAGEMENT STANDARDS

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define: OHSAS.
2. Write about features of OHSAS 18001.
3. What is OHS policy?
4. What are objectives and targets?
5. Define: Organization structure.
6. Write the examples of active monitoring.
7. Define: EMS.
8. Write about steps in audit.
9. Write about EIA benefits.
10. What is EIS?

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain in detail about development of OHS standard.

Or

(b) Write about the guidelines for implementing OHSAS 18001.

12. (a) How to develop OHS policy?

Or

(b) Explain in detail about contents OHS policy.

13. (a) Write about identifying the training videos.

Or

(b) Explain in detail about accident reporting and recording procedures.

14. (a) Explain in detail about environmental policy.

Or

(b) What are the general principles of environmental audit?

15. (a) Write about ISO 14020.

Or

(b) Write about rules for eco labelling.

Part C (3 × 10 = 30)

Answer **all** questions, choosing either (a) or (b).

16. (a) Explain briefly about ISO 14024.

Or

(b) Write about management review and continual improvement.

17. (a) What are the types of LCA?

Or

(b) Explain: EIA in EMS.

18. (a) Write about importance of ISO 14000 to the management.

Or

(b) Give a brief notes on steps in ISO 14001.

———————