

BTECH
(SEM VII) THEORY EXAMINATION 2018-19
INDUSTRIAL POLLUTION CONTROL AND ENVIRONMENTAL AUDIT

Time: 3 Hours**Total Marks: 100****Notes:** Assume any Missing Data.

SECTION-A

- 1. Attempt all parts.** **(2x10=20)**
- (a) Write down the sources and effects of CFCs .
 - (b) What are the methods to remove cyanide from waste water?
 - (c) What do you mean by "Zero Discharge effluent"?
 - (d) What is the difference between Nano-filtration and Reverse Osmosis?
 - (e) What are the causes of radiation pollution?
 - (f) How do industrial processes affect the water quality? Explain.
 - (g) What do you mean by EMS?
 - (h) What are the benefits of ISO 14000?
 - (i) What is the difference between Compliance auditing and system auditing?
 - (j) What are the wastes generated from distillery industry?

SECTION-B

- 2. Attempt any five parts.** **(10x5=50)**
- a) Discuss about anaerobic treatment processes of organic wastes in water. Also explain volatile organic compounds.
 - b) What are the sources of air pollution? Discuss about oxides of sulphur and oxides of nitrogen.
 - c) Discuss about following contaminants present in industrial wastewater?
 - i) Biodegradable organics matter, ii) Fluoride, iii) Cyanide.
 - d) Write the name of various gaseous particulate control devices. Explain Gravitational settling chamber and Wet scrubbers with neat sketch.
 - e) Discuss hierarchy of various treatment option of industrial waste. Which type of waste should be disposed off into a landfill as per solid waste management rule (2000)? What are main pathways involved for environmental contamination?
 - f) Discuss about the treatment of effluent generated from metal plating industry.
 - g) What do you understand by an Environmental Management System? Explain its features also.
 - h) Explain all the key features of Environmental Protection Act (1986) of India.

SECTION-C

Note: Attempt any two parts: **(15x2=30)**

- 3. Discuss in details the different pollutants causing air pollution.
- 4. Discuss about the effluent generated in steel industries and impact of effluents on water bodies. Explain the waste water treatments required for steel industry.
- 5. What do you understand by Environmental Auditing? Briefly discuss scope and different steps involved in audit process.