

Five-Year Integrated M. Sc. Examination 2021-2022

Semester: V

Paper: EES-3-5-2

Subject: Water Pollution

Time: 4 Hours

Full Marks: 80

Questions are of value as indicated in the margin

Answer **Question No. 1** and **any five** from the rest.

-
1. Write short notes on **any five** of the following. 5×4 = 20
- a) Residence time of water
 - b) Critical point of water
 - c) Minamata disease
 - d) Dirty Dozens
 - e) Bio-concentration factor
 - f) Biological Effects of radioactive pollution
 - g) Control measures for thermal pollution
2. (a) What is confined and unconfined aquifer?
- (b) Write down the chemical properties of water.
- (c) Describe thermal layer or thermal stratification of surface water bodies. 2+5+5 = 12
3. (a) Explain hydrological cycle with a suitable schematic diagram.
- (b) Describe water distribution in the Earth. 8+4 = 12
4. (a) What are the types and effects of water pollution?
- (b) What is meant by trace elements in water? 10+2 = 12
5. (a) What are the sources of Pb in water?
- (b) How Leaded Gasoline converts to environmental Lead?
- (c) Describe the mechanisms of Mercury toxicity. 4+4+4 = 12
6. (a) Define pesticides and its types.
- (b) Briefly describe organochlorine pesticides and its families.
- (c) Define bio-concentration, bio-accumulation and bio-magnification. (2+1)+6+(1+1+1) = 12
7. (a) What are the criteria to define a compound as POPs?
- (b) Who was Rachel Carson? What environmental issue she raised?
- (c) Give some example of intentionally and unintentionally produced POPs with their chemical structure. 4+(1+3)+(2+2) = 12
8. (a) What are the treatment process for potable water for human consumption?
- (b) Write a short note on Yamuna Action Plan. 6+6 = 12