

Environmental Science and Technology

(End Exam- 2024)

Total Marks: 50

Time: 120 minutes

Instructions: 1. Write answers as **POINTS** only

2. Write only **RELEVANT POINTS DISCUSSED IN THE CLASS**

Section-I: Match the Following [write number in the bracket] (5 Marks) [COs-1 to 6]

- | A. Computer components | Chemical constituents | |
|------------------------------------|--------------------------------|-----|
| 1. Printed circuit boards | a. Cadmium | [] |
| 2. Computer batteries | b. Poly Chlorinated Bi phenyls | [] |
| 3. Capacitors and transformers | c. Poly Vinyl Chloride | [] |
| 4. Switches & flat screen monitors | d. Lead & cadmium | [] |
| 5. Cable insulation/coating | e. Mercury | [] |
-
- | B. Source Material | Pollutant | |
|--------------------------------|--------------------------|-----|
| 1. Pipe Insulation | a. Methyl chloride | [] |
| 2. Furniture | b. Chloroform | [] |
| 3. Air fresheners / moth balls | c. Mold, bacteria | [] |
| 4. Paint stripper / thinner | d. Para dichloro benzene | [] |
| 5. Heating and cooling ducts | e. Asbestos | [] |

Section-II: What is (5 marks) [one or two sentences] [COs-1,3,5]

- ☒ a. Basel Convention ☒ b. Ramsar Convention ☒ c. Moore's law
☒ d. Green certificate ☒ e. Art-51-A(g)

Section III: Give an example (5 marks) [COs-1, 5]

- ☒ a. Source isolation strategy in indoor air quality maintenance
☒ b. No Money: No Existence ☒ d. Green website
☒ c. Conservation ethics ☒ e. Non-Marketed Environmental Goods

Section IV: Differentiate between (10 marks) [COs-3,4, 5]

- ☒ a. Thick and Thin client ☒ b. Strong and weak sustainability ☒ c. Green Tax and Green Cess
☒ d. Libertarian and Ecological Extension ☒ e. Green computing and Green Engineering

Section-V [10 marks] [COs-1, 4]

- ☒ 1. What are the four factors of production considered in National income?
☒ 2. How SEEA has expanded and complemented SNA?
☒ 3. How is ventilation measured in mechanically ventilated buildings?
☒ 4. What are the negative impacts of Tehri Dam?
☒ 5. Relate Hicksian income with Green accounting ?

Section-VI [15 marks] [COs-1, 2, 5, 6]

- ☒ 1. Explain the impact of smart phone/mobile devices production on environment?
☒ 2. Explain the basic difference between anthropocentrism, biocentrism and ecocentrism views on the environment?
☒ 3. Explain the impact of Denim manufacturing on water consumption and pollution?
☒ 4. What is SNA? Define its framework? Why did the concept of SNA remain so popular for longer time (only list the factors)?
☒ 5. Explain any two Green engineering principles?

Environmental Science and Technology

Time: 90 minutes

Total Marks: 40

Write only RELEVANT POINTS DISCUSSED IN THE CLASS

I. Answer the following [6M]

1. -----and ----- are two major factors influencing the Doom's Day clock
- ② What happens in ice-ocean coupling process?
3. Why volcanic eruption become more frequent when glaciers melt?
4. How Hypercane differs from present day hurricane?
5. Give an example for interaction of four spheres of earth system
6. What are Oligotrophic lakes?

II. What is [24 M] – [two/three sentences]

- | | |
|----------------------------|-------------------------------|
| 1. Grasshopper effect | ⑦ Global terrestrial stilling |
| 2. Population bottle neck | 8. Nuclear winter |
| 3. Trophic cascade | 9. Ecological pyramids |
| 4. Tipping point | ⑩ Elnino |
| 5. Graygoo | 11. Geophysiology |
| ⑥ Continental Drift Theory | 12. Gaia Hypothesis |

III. Explain

- ① Application of Thermodynamic Laws in Ecosystem Energy Flow [4M]
2. Impact of sea level rise on Sundarbans vegetation [4 points – 6M]

