



Damietta University
Faculty of Science
Environmental Sciences Department



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Time: 2 hours

" Final Exam in Soil and Water pollution (310 ENV)" for 3rd. year Environmental Sciences and Environmental Sciences /Chemistry programs students

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Answer all the following questions: Total Mark: 70 (Part I, 35 Marks)

Question [1]: Write the scientific term for the following: [18 marks]

1. The branch of the science dealing with the characteristics of fresh water.
2. Any concentration of a toxin, such as pesticides, in the tissues of tolerant organisms at successively higher levels in a food chain.
3. Unenriched, clear water that supports small populations of aquatic organisms.
4. The area of land drained by a river system.
5. Measures the total amount of water diverted from a source.
6. The collection of water as droplets on a cold surface.
7. Place when saltwater moves into freshwater aquifers due to excessive consumption.
8. Occurs when the demand for water exceeds the supply.
9. Is water falling back to the ground as snow, rain, sleet, or hail.
10. Loss of water vapor by plants.
11. When water is consumed faster than it is replenished.
12. The study of water.
13. When soil is fully saturated, water will flow over the surface, a process called?
14. A process where waste heat is recycled for domestic and/or industrial heating purposes.
15. Water pollution that alters a plant's surrounding pH level.
16. The gradual accumulation of substances, such as pesticides, heavy metal or other chemicals, in a living organism.
17. Pollution that arrive in the environment (surface or underground water) from different non identifiable sources.
18. Is the science of the ocean and its physical and chemical characteristics.

Question [2]: [17 marks]

- a) Write on eutrophication, definition, sources, effects and solutions. [7 marks]
- b) Discuss five reasons for the death of the fish in a water body. [5 marks]
- c) Illustrate the effects of sediment pollution. [5 marks]

Part II

Question 1

Choose the correct answer: (9 marks)

1- In, a gray eluvial horizon that has a color of quartz overlies black subsoil.

- a) Oxisols b) Vertisols c) Spodosols d) Ultisols

2-are highly weathered soils of tropical regions.

- a) Oxisols b) Vertisols c) Spodosols d) Ultisols

3- The type of soil texture that not able to form a ribbon is

- a) Loamy sand b) Sandy loam c) Clay loam d) Loam

4-is the third most common element in the earth's crust and more available at low pH

- a) Iron b) Aluminum c) Manganese d) Potassium

5- In silty clay soil, the percentage of silt ranges from

- a) 40-60 b) 40-70 c) 40-80 d) 40-90

6- Sodium can cause.....of soil structure.

- a) Flocculating b) Deflocculating

7- Saturated Hydraulic Conductivity is measured in.....

- a) $\mu\text{m}/\text{sec}$ b) cm/sec c) mm/sec d) m/sec

8- Usually the base saturation is 100 percent when the pH is above

- a) 5.5 b) 6.5 c) 7.5 d) 8.5

9- Alkali soil has an exchangeable sodium percentage (ESP) greater than

- a) 13 b) 14 c) 15 d) 16

Question 2 (26 marks)

a) Complete the following sentences:

1- Base saturation is the fraction of thebinding sites occupied by bases.

2- Anions can lead to groundwater contamination because it can easily.....

3-is added to acid soils to raise the pH.

