

KATHMANDU UNIVERSITY
End Semester Examination [C]
May/June, 2019

03 JUN 2019

Level : B.Sc.
Year : II
Time : 2 hrs. 30 mins.

Course : ENV5 201
Semester : I
F.M. : 55

SECTION "B"

[3Q × 7 = 21 marks]

Attempt *ANY THREE* questions.

1. An indoor air sample taken from a closed garage contains 0.9% of CO. What is the concentration of CO in this sample in units of g/m^3 at 20°C and 1 atm pressure? Consider the molecular weight of Carbon as 12 and Oxygen as 28.
2. What are the major gases found in different atmospheric layers? Explain.
3. Why the sea water has constant pH? Explain the components involved in making the sea water pH constant.
4. With the help of a diagram explain the production, growth and removal of aerosols in atmosphere.

SECTION "C"

[34 marks]

5. Based on the depth and distance, describe the different zones of a lake. [5]
6. How does the polar ClOx cycle stop? [5]
7. The LD₅₀ of a chemical substance is 100 mg/kg. What would be the lethal amount of this substance for a child weighing 10 kg? [5]
8. Write on the acidification from atmospheric inputs. [5]
9. Assume that gasoline can be represented by C₈H₁₈. How much oxygen per unit of fuel is needed for complete combustion? [5]

OR

Calculate the oven dry weight of a 350 cm^3 soil sample with a bulk density of 1.42 g/cm^3 .

10. Write short notes on (*ANY THREE*): [3Q × 3 = 9]
 - a. Photochemical processes
 - b. Differences between dust and particulate matter
 - c. Atmospheric window
 - d. Biochemical effects of Arsenic



