(g) Name two inorganic components present in soil.

(h) What are redox reactions?

2. Answer any *two* questions : 5×2 =10

(a) Differentiate between Rayleigh and Mie scattering.

(b) Write a short note on photochemical smog formation.

(c) Write down the differences between centripetal and centrifugal force.

(d) Briefly explain about types of chemical bonds.

3. Answer any *one* question : 10×1 =10

(a) Write down the equation of Gaussian Plume Model for estimation of ground level concentration of pollutants under different situations and express the terms therein. What are the assumptions and limitations of Gaussian Plume Model? 5+(3+2)

(b) What are the limitations of first law of thermodynamics? Describe the Carnot cycle and prove that complete conversion of heat into work is impractical. 3+7

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B.Sc. 1st Semester (Honours) Examination-2022-23

ENVIRONMENTAL SCIENCE

Course ID : 11812   Course Code : SH/ENV/102/C-2

Course Title : Physics and Chemistry of Environment (New)

Time : 1 Hours 15 Minutes *Full Marks :* 25

The figures in the right hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer any *five* questions : 1×5 = 5

(a) State Kirchhoff's law.

(b) What is mixing height?

(c) Distinguish between entropy and enthalpy?

(d) What are hydrocarbons?

(e) What do you mean by ozone layer depletion?

(f) What is hard water?