SH-I/Env.Sc./102C-2(T)/18-19

B.Sc. Semester I (Honours) Examination, 2018-19

ENVIRONMENTAL SCIENCE

Course ID : 11812 **Course Code : SHENV/102/C-2(T)**

Course Title : Physics and Chemistry of Environment

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

The figures in the margin indicate full marks.

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

1. Answer *any five* questions from the following: 1×5=5

(a) Define limnological mixed layer.

(b) Which aliphatic hydrocarbons have single covalent bonds? Give examples.

(c) Differentiate molality and molarity.

(d) Which elements have the highest and lowest ionization potential? Mention their particular ionization energy associated.

(e) What do you mean by redox reaction? Give example.

(f) What types of acids are associated with acid rain?

(g) What is KH?

(h) Define base exchange in context of soil chemistry.

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

(a) Briefly describe the main features of Gaussian plume model. Name two Gaussian models used in Industrial area analysis. 3+2=5

(b) Explain Polarity. Arrange the functional groups in descending order on the basis of Polarity. 2+3=5

(c) Describe the synthesis of synthetic polymers. 5

(d) Discuss the nitrogen cycle. 5

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

(a) Describe the adverse effect of acid rain on the environment. 10

(b) Describe the different process of heat transfer in the atmosphere. 10

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