

B.Sc. 1st Semester (Honours) Examination, 2019-20**ENVIRONMENTAL SCIENCE****Course ID : 11812****Course Code : SHENV-102-C-2**

Course Title: Physics and Chemistry of Environment

Time: 1 Hour 15 Minutes**Full Marks: 25***The figures in the right hand side 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) What is meant by electromagnetic spectrum?
 - (b) How does Coriolis force work?
 - (c) What is Darcy's Law equation?
 - (d) What is pH?
 - (e) What Gaussian plume model?
 - (f) What are the components of soil?
 - (g) What is the main cause of photochemical smog?
 - (h) What is the main difference between aliphatic and aromatic compounds?
2. Answer *any two* questions from the following: 5×2=10
- (a) Write a short note on adiabatic lapse rate (dry and moist adiabatic). 5
 - (b) What are the differences between diffusion and dispersion? What is buffer? 4+1=5
 - (c) What is the concept of thermodynamic system? 5
 - (d) What is the meanings of alkalinity and acidity of water? What is hardness of water? 3+2=5
3. Answer *any one* question from the following: 10×1=10
- (a) Write a note on the formation of acid rain. Briefly discuss the role of CFCs in ozone layer depletion. 6+4=10
 - (b) Briefly discuss Kirchhoff's law. Write a short note on Boltzmann equation. 4+6=10
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