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E – 5107

Second Semester M.Sc. Degree Examination, October 2018
Branch : Environmental Sciences
ES 221 : ENVIRONMENTAL CHEMISTRY
(2013 Adm. Onwards)

Time : 3 Hours

Max. Marks : 75

I. Answer **any ten** of the following : **(10×2=20 Marks)**

1) What is the principle behind using green chemicals ?
2) Name the types of nuclear radiation and the existing nuclear reactors in India.
3) Name a few non pesticide organic compounds that are toxic to human health.
4) Differentiate sea water and fresh water with reference to their chemical compositions.
5) What are CFCs ? What is their role in global warming ?
6) How is phosphorus being transformed in the environment ?
7) Describe the calssification of soil.
8) What do you mean by biomagnification ?
9) How are proteins purified in a given sample ?
10) What are the major classes of biological molecules important for living being
11) Lithosphere is an important region of biosphere. Justify.
12) Define photochemical smog with few incidents.

II. Answer **any five** of the following : **(5×5=25 Ma**

13) What are biomolecules ? Explain the types of biomolecules elaborately.
14) How do organophosphate pesticides affect the soil and water ecosysten
15) Write an essay on the Integrated Pest Management practices.

16) Mention a few nuclear accidents that took place globally. Explain in detail any one of the accidents

17) Explain the chemistry of Chromium and its impact in the environment. Write a brief note on the different species of chromium and its significance

18) Write a brief note on the atmospheric aerosols and describe its chemistry

19) Briefly describe the chemistry of urban and indoor atmosphere

III. Answer **any two** of the following : **(2×15=30 Marks)**

20) Differentiate Natural and green insecticides. Elaborate on their sources and target insects.

21) Describe in detail the environmental impact of climate change.

22) Explain the principles and applications of green chemistry.