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C/18/DDE/MSc/Part-I/ENVS/1

2018

M.Sc.

Part-I Examination

ENVIRONMENTAL SCIENCE

PAPER—I

Full Marks : 100

Time : 4 Hours

*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.*

*Illustrate the answers wherever necessary.*

Answer Q. No. 1 and any five questions from the rest.

1. Answer any ten questions : 10×2

- (i) What do you mean by atmosphere ?
- (ii) Explain environmental science as a scientific discourse.

(Turn Over)

- (iii) Define relative humidity.
- (iv) Narrate the evolutionary process of human being on the surface of the earth.
- (v) What do you understand by population explosion ?
- (vi) What is heat island effect ?
- (vii) What do you understand by fragile ecosystem ?
- (viii) Explain the factors responsible for evolution of rural settlements.
- (ix) What is food web ?
- (x) What do you understand by lithosphere ?
- (xi) Mention two important features of renewable resources.
- (xii) Narrate important biological factors of the environment.
- (xiii) What do you mean by deforestation ?
- (xiv) What is ecological pyramid ?
- (xv) What do you mean by biodiversity ?
2. What do you understand by system ? Differentiate between closed and open system. "Environmental system is basically energy system"—Explain. 3+6+7

3. Explain briefly the structure of the atmospheric system. What do you understand by ozone layer. Explain briefly the formation mechanism of ozone layer. 5+5+6
4. What is lapse rate ? Explain briefly different types of lapse rate. How lapse rate could be related to the stability of the atmosphere. What do you understand by adiabatic process ? 3+6+5+2
5. What do you understand by conservation of natural resources ? Explain the role of social system in conservation process. "Soil is a renewable resource"—Explain. 5+5+6
6. What are settlements ? Discuss the various types of human settlements you have studied. How does human settlements affect natural resources ? 3+9+4
7. Explain the methods of classification of geographical zones. Briefly describe at least two important geographical zones. 6+5+5
8. Explain briefly the concept of scale in meteorology. What do you understand by synoptic meteorology ? Differentiate between weather and climate. 3+5+8

9. " Define ecosystem. Explain the functional characteristics of ecosystem services to human society. 3+5+8

10. Differentiate between :

(a) Sigmoid growth curve and logistic growth curve

(b) Grazing Food Chain and Detritus Food Chain.

8+8