2016

M.Sc. Part–I Examination

ENVIRONMENTAL SCIENCE

PAPER—III

Full Marks : 100

Time : 4 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give that 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* from the following : 10×2

(i) What is the effect of UV ray on human skin ?

(ii) How tropospheric ozone is formed ?

(Turn Over)

(iii) What is biopesticide ? Give example.

(iv) What are the uniqueness of the troposphere in respect of air pollution ?

(v) What is biomagnification ?

(vi) Mention the difference between Ecodegradation and Pollution.

(vii) Differentiate point pollution from non-point pollution.

(viii) What are bioindicator species ?

(ix) What is 'Air Quality Standard' ?

(x) What is sewage ? How does it differ from sludge ?

(xi) Enlist the sinks of air pollutants.

(xii) Enlist different factors leading to water turbidity.

(xiii) Mention the effect of global warming on coral reef ?

2. Draw the relationship between 'Green House Effect' and 'Global Warming'. Highlight the environmental impacts of global warming. 6+10

3. Enlist different particulate pollutants based on their size classes. Briefly highlight major impacts of such pollutants. Add a note on their controlling strategies. 6+6+4

4. Why *E. Coli* is considered as an indicator of water pollution ? Mention the treatment process of municipal waste water. 3+13

5. Define Acid rain. Discuss the roles of metrological parameters on the formation of acid rain. Mention the chemical pathways of the formation of acid rain. What are the impacts of acid rain on environment ? 2+4+4+6

6. Explain different sources of marine pollution. What are the impacts of pollution in the marine environment ? What are the prospective preventive measures ? 5+7+4

7. Why the pollution by chemical fertilizers and pesticides are considered as both point and non-point pollution ? Discuss on the impact of chemical fertilizers on air, soil and human health. Elaborate the concept of biomagnification with example. 4+6+6

8. What is 'Ozone hole'? Describe the nature, sources of pollutants and interactions for creating of such holes in the stratosphere. What are environmental consequences of such pollution? 2+8+6

9. What is sound pollution? What are its sources? What are the harmful effects of this? How can we overcome such problem? 2+4+6+4

10. Write notes on the following (any *two*) : 8+8

(a) Thermal pollution ;

(b) Trickling filter ;

(c) Major causes of soil pollution and their remedial measures ;

(d) Microbial pollution in water and remedial measures.

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