



AC-1573

M. Sc. (Environmental Chemistry) (SF) (Sem. IV)  
Examination

April / May – 2015

Water & Air : Pollution & Analysis : Paper - II

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दर्शायेव निशानीवाणी विगतो उत्तरवही पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="M. SC. (ENVIRO. CHEMISTRY) (SF) (SEM. IV)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="Water &amp; Air : Pollution &amp; Analysis : Paper - 2"/>	<input type="text"/>
Subject Code No. : <input type="text" value="1"/> <input type="text" value="5"/> <input type="text" value="7"/> <input type="text" value="3"/>	<input type="text"/>
Section No. (1, 2,.....) : <input type="text" value="Nil"/>	<input type="text"/>
	Student's Signature

(2) Figures to the **right** indicate full marks of the questions.

- 1 Explain any **three** of the following: 18
- (a) Why soil is known as the sink for carbon monoxide. Give measures for control of carbon monoxide emissions in the atmosphere.
- (b) Describe the different oxides of nitrogen as pollutants in the atmosphere.
- (c) How do microbial production of  $N_2O$  contribute to the ozone layer depletion?
- (d) Which are the major stack gas scrubbing systems for the removal of oxides of sulfur from stack gases. Explain any two processes emphasizing the advantages and disadvantages.
- 2 Answer any **three** of the following. 18
- (a) Describe sources, uses and environmental harmful effects of Ketones.

(b) What are Halons? Give uses of chlorofluorocarbons and their adverse environmental effects.

(c) Give a brief account of Minamata disaster.

(d) Why perfluorocarbons and dioxins are considered as environmental pollutants. Explain giving suitable examples.

**3** Answer any **three** of the following. **18**

(a) Describe how the  $\text{NO}_x$  are determined by chemiluminescence method

(b) Discuss the merits and demerits of various wet and dry scrubbers.

(c) How the hydrocarbons are determined? Explain in detail.

(d) Give a brief account of direct spectroscopic method for analysis of gaseous pollutants.

**4** Answer any **three** of the following. **16**

(a) Discuss different methods for control of vapours and gaseous matter.

(b) "The Global burden of carbonyl sulfide is 2.4 million tons." Explain the statement.

(c) What are the harmful effects of oxides of carbon on human health and plants.

(d) Why the hydrocarbon alkenes are considered as pollutants. Discuss the interactions of alkenes in atmosphere.

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