



D-1573

**M. Sc. (Sem. IV) (Environmental Chemistry) (S.F.)
Examination**

April / May - 2016

Paper - II : Water & Air : Pollution & Analysis

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दशांशव निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
M. SC. (SEM. IV) (ENVIRO. CHEMISTRY) (S.F.)	<input type="text"/>
Name of the Subject :	<input type="text"/>
P. - 2 : WATER & AIR : POLLUTION & ANALYSIS	<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"/> 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
- State factors that influences the atmospheric chemical reactions of SO_2 . Suggest some possible ways in which SO_2 may react in the atmosphere in different conditions.
 - Describe how the NO_x emission can be reduced from stationary sources.
 - Write a note on photo-dissociation of molecular oxygen by ultraviolet light.
 - Enlist various inorganic pollutant gases and discuss the fate of any two of them in atmosphere.
- 2 Answer any three of the following : 18
- Describe sources, reactions and pollution due to organosulfur compounds.
 - Enlist major aryl hydrocarbons as pollutant in the atmosphere. Discuss the adverse environmental effects of any three of them.
 - Give a brief account on Chernobyl disaster.
 - Describe the sources, reactions and pollution arising due to aldehyde and ketone compounds.

- 3** Answer any three of the following: **18**
- (a) Discuss the adverse effects of CO. Describe the use of NDIR in the analysis of CO.
 - (b) What is sampling? How an accurate and useful sampling is important in measurement of pollutants in air?
 - (c) Why fabric filters are advantageous for particulates removal? Discuss the functioning and cleaning of fabric filters.
 - (d) Explain the principle of electrostatic precipitation giving suitable diagram.
- 4** Answer any three of the following: **16**
- (a) Discuss the merits and demerits of ventury scrubbers.
 - (b) Write short notes on :
 - (i) Reactions of ammonia in the atmosphere
 - (ii) Hydrogen fluoride as a dangerous gas.
 - (c) What are the consequences of presence of halides in environment?
 - (d) How the organic pollutants are determined? Explain.
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