0302E1345

Candidate's Seat No :_____

MSc Sem.-1 Examination

402

Environmental Science

February-2025

Time : 2-30 Hours] **[Max. Marks : 70**

Instructions: Draw neat labelled diagram wherever necessary.

Q I	Explain evolution, composition and chemical speciation of the Earth's Atmosphere.	14
	OR	
Q I	A. Describe chemical processes involved in the formation of inorganic particulate matters.	7
	B. Explain thermochemical and photochemical reactions in the atmosphere.	7
Q II	Discuss atmospheric aerosols and major smog incidents in detail.	14
	OR	
Q II	A. Describe oxidation of Methane by OH.	7
	B. Explain formation of ozone in the atmosphere.	7
QIII	What is greenhouse effect? Describe global warming potential and its impacts.	14
	OR	
Q III	A. Describe El-Nino climate cycle.	7
	B. Explain Ozone hole.	7
Q IV	Explain methods of monitoring and control of SO_2, NOx and SPM.	14
	OR	
Q IV	A. Explain collection of gaseous and particulate air pollutants.	7
	B. Describe indoor air pollution.	7
Q V	Attempt any 7 out of 12 Short question (Two- or Three-line answer).	14
1	How is OH formed?	
2	What is the primary source of hydroxyl radicals in the atmosphere?	
3	What is the full form and sources of PAH?	
4	What form of UV radiation is the most harmful? Mention the effects.	
5	Why is the ozone hole bigger over Antarctica than Arctic?	
6	What are the four characteristics of the thermosphere?	
7	Which pollutants are present in air as particulate matter?	
8	What is the safe limit for carbon monoxide?	
9	What are most common sources of VOCs?	
10	What is the mechanism of photochemical smog?	
11	What is the main difference between London smog and LA smog?	
12	What is the air quality standard of PM_{10} in India?	