

Contents

<i>Preface</i>	iv
<i>Acknowledgements</i>	vii
CHAPTER 1.: INTRODUCTION OF AIR POLLUTION	1
1.1 Introduction	1
1.1 Episodes of Air Pollution Disasters	3
CHAPTER 2.: SOURCES AND CLASSIFICATION OF AIR POLLUTANTS	6
2.1 Sources of Air Pollutants	6
2.2 Factor Affecting Air Pollution	8
2.3 Classification of Air Pollutants	10
CHAPTER 3.: EFFECTS OF AIR POLLUTION ON HUMAN HEALTH, ANIMALS, PLANTS AND PROPERTIES	20
3.1 Effects of Air Pollution on Human Health	20
3.2 Effects on Animals	23
3.3 Effects of Air Pollution on Vegetation	24
3.4 Effects on Materials and Property	25
CHAPTER 4.: AIR SAMPLING AND ANALYSIS	32
4.1 Introduction	32
4.2 Factors to be Considered in Sampling	32
4.3 Ambient or Atmospheric Air Sampling	33
4.4 Stack Gas Sampling	39
4.5 Methods of Analysis	48
4.6 Procedure of Analysis of Gaseous Pollutants in Atmospheric Air	49

CHAPTER	5. :	METEOROLOGY AND AIR POLLUTION	58
	5.1	Introduction	58
	5.2	Wind Velocity	59
	5.3	Topographical Effects	62
	5.4	Atmospheric Stability	65
	5.5	Lapse Rates	66
	5.6	Inversions	68
	5.7	Plume Behaviour	69
	5.8	Macro and Micro Meteorology	71
	5.9	Meteorological Instruments	74
CHAPTER	6. :	MODELLING OF DISPERSION OF POLLUTANTS	80
	6.1	Introduction	80
	6.2	Dispersion Models	80
	6.3	Plume Rise	86
CHAPTER	7. :	POLLUTION CONTROL METHODS	89
	7.1	Particulate Pollution Control Methods	89
	7.2	Gaseous Pollution Control Methods	102
CHAPTER	8. :	AUTOMOBILE POLLUTION	107
	8.1	Introduction	107
	8.2	Sources and Types of Pollutants	107
	8.3	Control Methods	108
CHAPTER	9. :	AIR QUALITY STANDARDS AND LEGISLATION	112
	9.1	Air Quality Standards	112
	9.2	Air Quality Legislation	117
CHAPTER	10. :	AIR POLLUTION SURVEY AND AIR POLLUTION IN INDIAN CITIES	121
	10.1	Introduction	121
	10.2	Guidelines for Air Survey	121
	10.3	Air Pollution in Indian Cities	124

CHAPTER 11. :	GLOBAL AIR POLLUTION PROBLEMS AND PROGRAMS	129
11.1	Introduction	129
11.2	Green House Effect-Global Warming and Rise in Sea Level	130
11.3	Chlorofluorocarbons (CFCs) - Depletion of Ozone Layer	133
11.4	Acid Rain	137
	<i>References</i>	141
	<i>Appendices</i>	143