

M.E. Third Semester (Civil (Environmental Engg.)) (P.T.) (CBS)  
**13397 : Air Pollution and Control : 3 SCEE 2**

P. Pages : 1

Time : Three Hours



AU - 3217

Max. Marks : 80

- Notes : 1. All question carry equal marks.  
2. Answer **three** question from Section A and **three** question from Section B.  
3. Assume suitable data wherever necessary.

**SECTION – A**

- |    |      |   |    |
|----|------|---|----|
| 1. | a)   | Discuss the definition of air pollution. What are the methods of identifying air pollution?           | 7  |
|    | b)   | How does the ozone depletion take place? What are the methods to reduce depletion?                    | 7  |
| 2. | a)   | List the various natural and man made sources of air pollution in atmosphere.                         | 7  |
|    | b)   | Discuss the various factors favorable for dispersion of air pollutants in the atmosphere.             | 6  |
| 3. | a)   | What is mean by air pollution episodes? State and explain any two.                                    | 7  |
|    | b)   | Explain the effect of air pollution on treasure art of India.   | 6  |
| 4. | a)   | Discuss solar radiation and terrestrial radiation. Explain the global radiation balance.              | 7  |
|    | b)   | Describe the effect of air pollution on various materials such as rubber, marble, paper, clothes etc. | 6  |
| 5. |      | Explain in brief about.   | 13 |
|    | i)   | Aerosols & smog.  |    |
|    | ii)  | Ambient air sampling.   |    |
|    | iii) | Primary & secondary air pollution.  |    |

**SECTION – B**

- |     |      |  |    |
|-----|------|--|----|
| 6.  | a)   | What is wind rose? What is the significance of wind rose with respect air pollution?   | 7  |
|     | b)   | Explain plume behaviour with respect to air pollution.   | 7  |
| 7.  | a)   | Discuss the various dimensional aspects of cyclone separators.   | 7  |
|     | b)   | Explain the various design aspects and working of fabric filter.   | 6  |
| 8.  | a)   | What do you understand by air quality standards? State National Ambient Air quality standards prescribe by CPCB.   | 7  |
|     | b)   | Discuss the recent developing in the automobile industry to reduce air pollution.  | 6  |
| 9.  | a)   | Explain the neat sketch, the principle, construction and working of settling chamber. How can it's efficiency be improved? State it's advantages and disadvantages.  | 7  |
|     | b)   | A factory uses 2,00,000 liters of furnace oil (specific density 0.97) per month for one million liters of oil used per year, the particulate matter emitted is 3.0 tonnes per year, NO <sub>x</sub> emitted. is 7.5 tonnes per year, SO <sub>2</sub> emitted is 59.7 tonnes per year, hydrocarbon emitted is 0.37 tonnes per year and carbon monoxide emitted is 0.52 tonnes per year, calculate the height of chimney required for safe dispersion of the pollutants. | 6  |
| 10. |      | Explain in brief about.  | 13 |
|     | i)   | Inversion.   |    |
|     | ii)  | Mixing height.   |    |
|     | iii) | Noise pollution.   |    |

\*\*\*\*\*