

**MASTER OF SCIENCE (ENVIRONMENT SCIENCE & TECHNOLOGY) (CBCS-2019  
COURSE) M.Sc.(Environment Science & Technology) Sem-II : WINTER : 2021  
SUBJECT: AIR & NOISE POLLUTION MANAGEMENT**

**Day :**Wednesday  
**Date :**29-12-2021

**W-21211-2021**

**Time :** 10:00 AM-01:00 PM  
**Max.Marks** 60

**N.B**

- 1) Answer any **FOUR** from 1 to 5 questions.
- 2) Question 6 is **COMPULSORY**.
- 3) Figures to the right indicate **FULL** marks.
- 4) Draw diagrams wherever necessary.

- Q.1 a)** Explain the temperature – altitude profile diagram and add a note on the significance of each layer. (06)
- b)** What are the key lessons learnt for air pollution management from ‘Delhi air pollution incident’. Highlight cause of the problem and possible solutions. (06)
- Q.2 a)** Explain any three key components of the program to control vehicular pollution in India? (06)
- b)** Define plume. Using a diagram describe different types of plume behaviour under various environmental conditions. (06)
- Q.3 a)** A small town is 10kms long and 5kms wide. The effective mixing height has been found to be 500m. The air that enters the town contains particulate concentration of  $100 \mu\text{g}/\text{m}^3$  and bellows at a velocity of 5m/s. the generation rate of particulate matter in town due to vehicular traffic combustion of fuels, crushing operations etc is  $50\text{g}/\text{m}^2$ . On the basis of the factors given find the concentration of particulate matter all over the town. (06)
- b)** What is ‘Ozone depletion. What are its effects? Add a note on current status. (06)
- Q.4 a)** Using a diagram, explain the principle, working and function of a cyclone separator. (06)
- b)** Write a note on sampling using High volume sampler. (06)
- Q.5 a)** Using a diagram of the ear explain temporary and permanent threshold shifts. (06)
- b)** The wind velocity in on urban atmosphere at an altitude of 10m is 5m/s. determine the velocity at an altitude of 30m during the daytime when it is cloudy. (06)
- Q.6** Write short notes **ANY THREE** of the following. (12)
- a) Wet Scrubbers
  - b) Radiative Inversion
  - c) Wind Roses
  - d) Handling and Storage of Air Samples

\*

\*

\*