

<b>Uka Tarsadia University (Diwaliba Polytechnic)</b>
<b>Diploma in Environmental Engineering</b>
<b>Assignment (Air Pollution and Control-020060603)</b>

### **Unit-1 Air pollutants**

1. Give classification of air pollutants.
2. Explain primary and secondary air pollutants.
3. Enlist sources of air pollutants.
4. Explain particulate matter in detail.
5. Give details about stationary and mobile source.
6. Write a short note on air pollutants gases.
7. Give classification of Air pollutants.
8. Write a note on Stationary sources and Mobile sources.
9. Identify the sources and its effect on human health of the following air contaminants:
  - a. Sulphur dioxide
  - b. Hydrogen sulphide
  - c. Carbon monoxide
  - d. Oxide of nitrogen

### **Unit-2 Meteorology**

1. Define meteorology
2. Write a short note on lapse rate.
3. Write an effect of metrology parameter on atmosphere.
4. Write short note on plume behavior.
5. Discuss about inversion.
6. Write short note on stability on atmosphere.

### **Unit-3 Air Pollution Sampling and Measurements**

1. Why stack sampling is required?
2. Write procedure for particulate matter sampling.
3. Write a note on gaseous sampling.
4. Discuss different sampling method.
5. Write a short note on ambient sampling.

### **Unit-4 Air Pollution Control Methods and Equipment**

1. Enlist Particulate Emission control equipment, explain each in detail with Diagram.
2. Explain Mechanism of Particle capture in Fabric filter.
3. Discuss in detail Wet scrubber.
4. Write a short note on gravity settling chamber.
5. Discuss about electro static Precipitators.
6. Write a short note on absorption.

### **Unit-5 Control of Specific Gaseous Emissions**

1. Discuss Alternative methods to reduce SO<sub>2</sub> from Fossil fuel combustion.
2. List down flue gas control methods for NO<sub>x</sub> formation and explain in detail catalytic reduction method.
3. Give difference between dry scrubbing and wet scrubbing.

### **Unit-6 Automobile Pollution**

1. Discuss air to fuel ratio
2. Write a short note on catalytic convertor.
3. Write short note on diesel engine modification.