

## ENVIRONMENTAL POLLUTION UNIT :

#### \* AIR POLLUTION :

It can be defined as any atmospheric condition in which certain substances are present in such concentration they that they can produce harmful effects to this environment.

### \* CLASSIFICATION OF AIR POLLUTION SOURCES:

- 2 categories:
- (a) Natural Sources and
- (b) Man-Made sources
- (a) NATURAL SOURCES:
  - 1) V. Olcanic Activity
  - 11) Forest Fire
  - 111) Ocean Activities
- ( ) MAN-MADE SOURCES :
  - 1) Domestic sources
  - 11) Commercial sources
  - 111) Agricultural sources vi) Autonobile sources

- 14) Wind Blown dust
- V) Unaerobic Cultivation
- VD Excessive Cultivation
- IV) Industrial sources
- V) Combustion sources

# POLLUTANTS: 2 categories:

- (a) Gas Pollutants and
- (6) Particle Pollectants

U usually gases are gaseous in nature exists at normal temperatures.

→ SO2, CO, NO2, Smog. It can be divided in 2 categories:

· Primary Gases: Co, CO2, SO2, No

· secondary Gases: NO2, SO3, HNO3, H2SO4, O3

PARTICLE POLIUTANTS:

substances which are not gases but may be in solid particle form.

ex (Led-PB, Mercury-Ha)

a) Effects on Human Health

## \* WATER POLLUTION :

It may be defined as the presence of impurities in water in quantities that may cause a health hazard & making it unfit for we

\* SOURCES OF WATER POLLUTION :

- (a) Domestic sources sewerage
- (4) Industrial Waste and
- (C) Other sources.

Biodegradable organic waste should be used for general of bio gas.

is Chemical fertilizers should be replaced by biofertilizer of mining techniques should be improved to reduce the spread of mine dust.

vi) special pits should be used for collecting and disposing was

recycled.

the bevel of perticides.

THERMAL POLLUTION :

It is defined as the undesirable changes in the natural environment due to the presence of waste heat in the walk or air.

SOURCES OF THERMAL POLLUTION !

i) Nuclear Reactors and Power Plants

ii) Dyorestation of the shoreline.

iii) Natural causes.

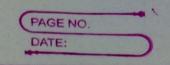
iv) soil crosion

y Industrial Waste

EFFECTS OF THERMAL POLLUTION :

i) It reduces the after content of water

dissoured oxygen



ii) It charges the characteristical properties of water.

iii) It influences reproductive cycle, digestion/respiration rate & many enzymatic activities of living organisms.

Iv) It favours the growth of bacteria and pathogens.

CONTROL OF THERMAL POLIUTION: It can be controlled by:

i) Cooling ponds and towers.

i) Using and wasting less electricity.

RADIDACTIVE POLIUTION OF NUCLEAR POLIUTION:
Radioactive substances which are present in nature emitts high
energy radiations which pollute the environment and causes
harmful effects.

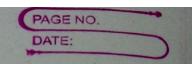
SOURCES

i) Natural

ii) man made

2) Radisactive substances | elements present in rock, salt & water like Uranium 235, Uranium 238, Radium 224, Thorium 232, and Carbon 14 etc. and Cosmic rays.

ii) Nuclear Weapons, fuels, Atomic reactors, radioactive isotopus and Xrays.



a) Atomic explosion > release large no. of ractions to the environment -> Radioactive particles fall on earth through the sing drops -> they cause soil pollution >
rain from soil it is transferred into water
sources -> then enter into food chain -> ultimately harm
human leines. human leings.

b) In Medical Treatments use of XRays detecting skeleton disorder, Cancer therapy etc. also causes problems.

2) Radioactive radications can effects even genes & chapme.

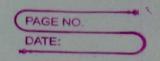
Somes and the resulting mulations are transmitted to generations.

d) It may lead to burn, miscarriages, lungs, cancer of thisis

e) the damage caused the to the human body be radiation depends upon the dose, dose weight & the part of the body exposed.

f) In high doses, radications can cause instant death whereas in lower doses, it can impose the functioning of the body

a) In human hands and feet can tolerate a much larger don of radiation as compared to the other parts of humanbody. h) some cells like embryo, reproductive, bonemarrow cells de readily affected by radiation whereas the nurder, bond and nervous tissue are less injury prone by radiations i) radiations from strontium 90 gets deposited in bones



## as calcium and cause bone cancer.

### \* CONTROL OF RADIDACTIVE POLLUTION:

- i) The total exposure should be kept below the max. dose.
- ii) swoid routine xrays.
- iii) Using six fitters, exhaust system, wearing protective ctathing, ruinimises the radiation contamination.
- iv) reakage of Radioactive Elements from Nuclear Reactors need to be checked from time to time
- v) Areas which source exposure to radiation should be marked as Radiation zone and entry should be restricted in those areas.
  - the Radioactive waste should be stored in the deeper layers of ithosphere where there gradual harmless decay can take place.
  - Radioactive waste disposal in deep nines, wells, oceans require careful evaluation before being permitted.