

- Q.28 Explain the process of ion exchange.

Q.29 Write a short note on incineration and Compositing.

Q.30 Differentiate between grab and composite sampling of water pollution.

Q.31 Write in detail about electrostatic precipitation.

Q.32 Write in brief about modification of existing equipments of air pollution.

Q.33 Discuss the effects of air pollution animals and plants.

Q.34 Discuss in brief about

  - 1) Fabric Filters
  - 2) Ambient sampling

Q.35 Explain the function of spray Towers.

## **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Discuss in detail about Venturi scrubber with the help of a neat diagram.

Q.37 With the help of neat diagram explain the working of trickling filters.

Q.38 Write in brief about

  - Activated sludge process
  - Sedimentation

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**6th Sem / Branch : Chem, P&P, Found & Forg.  
Sub. : Pollution Ctl. in Chemical Process  
Ind./Env. Engg. & Safety**

Time : 3Hrs. M.M. : 100

## **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Smog is

  - Nothing but black smoke
  - A combination of smoke and fog
  - A liquid particle resulting from vapour condensation
  - Solid particle

Q.2 Which is the most widely used coagulant for the treatment of turbid water

  - Alum
  - Lime
  - Ferric chloride
  - Sodium aluminate

Q.3 Fresh domestic sewage is \_\_\_\_\_ in color

  - Dark brown
  - Black
  - Red
  - Grey

Q.4 Which of the following acts as a natural source of air pollution?

  - Forest fire
  - Deforestation
  - Volcanic eruption
  - None of these

Q.5 Which of the following is man made source of air pollution?

- a) Automobile exhaust
  - b) Forest fire
  - c) Bacteria action in soil
  - d) None of these
- Q.6 Which of the following fine dust removal equipments is most efficient?
- a) Bag filters
  - b) Scrubber
  - c) Electrostatic Precipitator
  - d) Cyclone separator
- Q.7 Global warming is mostly caused by the mission of
- a) Sulphur dioxide      b) Carbon dioxide
  - c) Carbon monoxide    d) None of these
- Q.8 Turbidity of water is an indication of the presence of
- a) Suspended inorganic matter
  - b) Dissolved solids
  - c) Floating solids
  - d) Dissolved gases
- Q.9 Which of the following terms describe addition of water to the atmosphere by plants?
- a) Transpiration      b) Evaporation
  - c) Infiltration        d) Condensation
- Q.10 Incineration of waste is a process of
- a) Air pollution
  - b) Solid waste pollution
  - c) Water pollution
  - d) Noise pollution

## SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Write two sources of air pollution.
  - Q.12 Write the full form of TOC.
  - Q.13 What are the major components for Air pollution?
  - Q.14 Define fog.
  - Q.15 Define desulphurization.
  - Q.16 Expand COD.
  - Q.17 Define dumping.
  - Q.18 Write the unit of water hardness.
  - Q.19 Write the full form of ESP.
  - Q.20 Write any two method of secondary treatment of water pollution.

## SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Explain the term solid wastes in detail.
  - Q.22 Differentiate between permanent hardness and Temporary hardness.
  - Q.23 Discuss about adsorption operation in detail.
  - Q.24 Explain in brief about the removal of suspended solids by membrane process.
  - Q.25 Discuss the utility of incineration.
  - Q.26 Discuss about Grab sampling.
  - Q.27 Explain the process of desulphurization of fuel gases