

B.Sc. (CBCS Pattern) Sem-V
USCCHT11 - Chemistry Paper-III : Industrial Chemical and Environment

P. Pages : 2

Time : Three Hours



GUG/W/22/13091

Max. Marks : 50

Note : All questions are compulsory and carry equal marks.

1. a) Explain manufacture and hazards in handling of 5

i) Borax ii) Bleaching powder

b) Discuss applications of following chemicals- 5

i) Sodium thiosulphate ii) Hydrogen peroxide

OR

c) Give the large scale production of carbon monoxide. 2½

d) Explain the hazards in handling of potash alum. 2½

e) Explain the method for storing of sulphur dioxide. 2½

f) Explain the analysis of Chromalum. 2½

2. a) State importance of biocatalysis in green chemistry. 5

b) Give the preparation of ultrapure metals for semiconductor technology. 5

OR

c) State biogeochemical cycle of nitrogen. 2½

d) Explain the importance of biocatalysis in chemical industry. 2½

e) Give the method of preparation of metals with respect to non ferrous compound. 2½

f) Discuss the importance of Biocatalysis in chemical industry. 2½

3. a) What is green house effect? Explain ozone depletion by oxides of nitrogen. 5

b) Discuss the major regions of atmosphere? Discuss chemical and photochemical reactions in atmosphere. 5

OR

c) Explain effect of air pollution on living organism. 2½

d) How particle size and chemical nature affect air pollution? 2½

- e) Explain methods of estimation of CO and NO₂. 2½
- f) Discuss control of particulates. 2½
4. a) Explain the following 5
- i) Solar energy ii) Hydel energy
- b) Discuss nuclear disaster and its management. 5

OR

- c) Explain about disposal of nuclear waste. 2½
- d) Explain the geothermal energy. 2½
- e) Write about Tidal energy. 2½
- f) Differentiate between nuclear fusion and nuclear fission. 2½
5. Answer **any ten** questions. 10
- 1) How neon gas is stored?
 - 2) State any two applications of potash alum.
 - 3) What are the hazards in handling caustic soda.
 - 4) What is biocatalysis?
 - 5) Define ecosystem.
 - 6) Define semiconductors.
 - 7) What is photochemical smog?
 - 8) What are major sources of air pollution?
 - 9) State any two natural gas.
 - 10) What are foul smelling gases?
 - 11) What is nuclear pollution?
 - 12) How coal can be used as source of energy.
