

(iv) BOD and COD

(v) Nitrification and Denitrification

(b) What is meant by greenhouse effect? Give the important photochemical reactions occurring in the atmosphere.

(c) Give the molecular formula and uses of bleaching powder and potassium dichromate. (5,5,5)

6. (a) Discuss methods used for primary treatment of wastewater in detail.

(b) Name the physical, chemical, and biological parameters used to define water quality.

(c) Explain the process of softening hard water. (5,5,5)

(1000)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 9909

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Unique Paper Code : 2173540012

Name of the Paper : DSE- Industrial Chemicals and Environment

Name of the Course : B.Sc. (Prog) Life Science/
Physical Science

Semester : VII

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **FOUR** questions in all. **All** questions carry **15** marks each.

1. (a) Fill in the blanks :

(i) Name one chemical used for coagulation

_____.

(ii) The full form of COD is _____.

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(iii) The main constituent of green house gases is _____.

(iv) Reagent used in the analysis of sulphur dioxide _____.

(v) Name any one bacteria used for nitrogen fixation _____.

(b) Write short notes : (Any two) :

(i) Ozone Hole

(ii) Acid Rain

(iii) Hydrosphere

(c) Describe the Ostwald process for nitric acid preparation and the hazards involved in handling. (5,5,5)

2. (a) Give one method for the manufacture of potassium dichromate and write its applications.

(b) Name the physical, chemical, and biological parameters used to define water quality.

(c) Discuss the different components of the lithosphere. (5,5,5)

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3. Write a short note on : (Any three)

(i) Particulate matter.

(ii) Carbon monoxide gas analysis.

(iii) pollution from the fertilizer industry.

(iv) Name the different types of species present in the aquatic ecosystem and their importance.

(v) Effect of sulphur dioxide and nitrogen oxides on humans. (5,5,5)

4. (a) Explain the difference between Industrial waste water and domestic waste water.

(b) Describe the Chlorination and reverse osmosis techniques for the purification of water.

(c) Explain the causes, effects, and control measures of water pollution. (5,5,5)

5. (a) Differentiate between : (Any three)

(i) Stratosphere and thermosphere

(ii) Anaerobic and aerobic digestion

(iii) Biosphere and lithosphere

P.T.O.