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(**Pages : 2**)

Name..... Reg. No.....

FIFTH SEMESTER U.G. DEGREE EXAMINATION, NOVEMBER 2021

(CBCSS-UG)

Chemistry

CHE 5D 01-ENVIRONMENTAL CHEMISTRY

(2019 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answers)

Answer at least **eight** questions. Each question carries 3 marks. All questions can be attended. Overall Ceiling 24.

- 1. What is non persistent pollutant?
- 2. What is the role of atmosphere in photosynthesis?
- 3. Name some gaseous air pollutants.
- 4. What are the sources of oxides of nitrogen in the atmosphere?
- 5. Write a short note on the contamination of ground water by agricultural activities.
- 6. What is itai itai disease?
- 7. Mention two methods for reducing the contamination of water with lead.
- 8. What is Eutrophication ?
- 9. The dangers posed by soil pollution are due to increase in population. Comment.
- 10. List the harmful effects of soil pollution.
- 11. Give two examples of green solvents.
- 12. What is atom economy ?

 $(8 \times 3 = 24 \text{ marks})$

Turn over

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Section B (Paragraph)

 $\mathbf{2}$

Answer at least **five** questions. Each question carries 5 marks. All questions can be attended. Overall Ceiling 25.

- 13. Write a note on the air pollution in Delhi.
- 14. Explain the effects of acid rain.
- 15. Briefly describe the pollution due to plastics.
- 16. Endosulphan destroyed the biodiversity of certain villages in Kerala. Justify.
- 17. Explain the important segments of environment.
- 18. Discuss the role of zoning and green belt in controlling air pollution.
- 19. Explain the applications of green chemistry.

 $(5 \times 5 = 25 \text{ marks})$

Section C (Essays)

Answer any **one** question. The question carries 11 marks.

- 20. Discuss the different water quality parameters.
- 21. Briefly explain the use of a) Gravitational settling chamber; b) Catalytic converters; and c) Cottrell's precipitator in controlling pollution.

 $(1 \times 11 = 11 \text{ marks})$

C 23055

Name..... Reg. No.....

FIFTH SEMESTER (CUCBCSS/CBCSS) DEGREE [SPECIAL] EXAMINATION APRIL 2022

Chemistry

CHE 5D 01-ENVIRONMENTAL CHEMISTRY

(2019 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answers)

Answer at least **eight** questions. Each question carries 3 marks. All questions can be attended. Overall Ceiling 24.

- 1. What is meant by environmental pollution?
- 2. Classify the different environmental segments.
- 3. What are the consequences of greenhouse effect ?
- 4. Write a brief note on chlorofluorocarbons.
- 5. What are the natural causes of water pollution ?
- 6. Name any two heavy metals present in water and the toxic effects resulted.
- 7. Write a short note on water pollutants.
- 8. What is oil pollution ?
- 9. How to control soil pollution ?
- 10. Define thermal pollution.
- 11. What is green chemistry?
- 12. Write any *two* applications of green chemistry in our daily life.

 $(8 \times 3 = 24 \text{ marks})$

Turn over

(**Pages : 2**)

C 23055

Section B (Paragraph)

Answer at least **five** questions. Each question carries 5 marks. All questions can be attended. Overall Ceiling 25.

- 13. Differentiate between persistent and non-persistent pollutants.
- 14. Briefly discuss the depletion of ozone layer.
- 15. What are alternate refrigerants? Discuss their role in reducing air pollution.
- 16. Write short note on noise pollution.
- 17. What is radioactive pollution ? What are its effects ? How can we control it ?
- 18. Discuss the control of air pollution by fabric filter and wet scrubber.
- 19. List out the principles of green chemistry.

 $(5 \times 5 = 25 \text{ marks})$

Section C (Essay)

Answer any **one** question. The question carries 11 marks.

- 20. Explain briefly the important water quality parameters.
- 21. Discuss the control of air pollution using Gravitational settling chamber and Cottrel electrostatic precipitator.

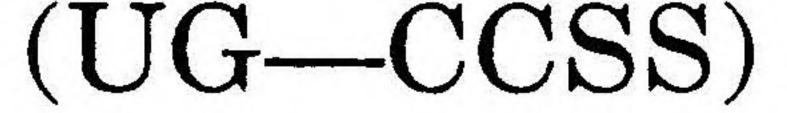
 $(1 \times 11 = 11 \text{ marks})$

(Pages: 2)

Name.....

Reg. No.....

FIFTH SEMESTER B.A./B.Sc./B.Com./B.B.A. DEGREE (SUPPLEMENTARY/ **IMPROVEMENT) EXAMINATION, NOVEMBER 2016**



Open Course

CH 5D 01—ENVIRONMENTAL CHEMISTRY

Time : Three Hours

Maximum : 30 Weightage

I. Answer all the *twelve* questions. Each question carries a weightage 1/4 : (This section contains multiple choice, fill in the blanks, and word answer questions)

Choose the correct answer of the following :

- 1 Which gas released from jet exhaust causes air pollution?
 - Chlorine. Carbon dioxide. (a) (b)
 - Fluorine. Nitrogen oxides. (\mathbf{c}) (d)

2 The total amount of dissolved salt in water is called :

- Salinity of water. Alkalinity. (a)(b)
- Total dissolved solids. Turbidity. (\mathbf{c}) (d)
- 3 Which of the following gas is controlled using Wet and Dry Chemical scrubbers?
 - (a) SO_2 . (b) NO₂. (c) CO_2 . (d) CH₄.
- 4 In which term the air pollution is measured?
 - (a) Parts per billion. (b) Parts per million.
 - (c) Parts per trillion. (d) Parts per gram.
- 5 Endosuiphan is an off patent organo chlorine pollutant.

- 8 The amount of oxygen used up during oxidation of oxygen demanding waste is called _____.
- 9 Name one method of desalination of water.
- 10 What is the environmental segment of the outer mantle of solid earth?
- 11 What is the other name of the horizon-top soil?
- 12 What is the cloudiness or haziness of a fluid by suspended solids called?

 $(12 \times \frac{1}{4} = 3 \text{ weightage})$

Turn over

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- II. Each question carries a weightage 1. Answer all the *nine* questions :
 - 13 What is the source of fly ash?
 - 14 Name of any two secondary air pollutants.
 - 15 How is fluoride concentration in water tested?
 - 16 Suggest a method for detecting excess concentration of Sulphur dioxide gas in air.
 - 17 Name any two environment friendly substitutes for CFC.
 - 18 Suggest any four water quality indices.
 - 19 Which is the major greenhouse gas. What is it's source ?
 - 20 What is biosphere?

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21 Suggest a method of analysis of radioactive pollutants.

 $(9 \times 1 = 9 \text{ weightage})$

- III. Each question carries a weightage of 2. Answer any five questions :
 - 22 Write the difference between pollutants and contaminants.
 - 23 Describe the harmful effects of thermal pollution.
 - 24 Some inorganic ions and toxic heavy metalsare causing water pollution. What are they?
 - 25 Write briefly about the composition of the atmosphere.
 - 26 What are persistent and non persistent pollutant?
 - 27 To determine dissolved oxygen in water by Winkler method, the test should be done instantaneously. Why?
 - What are the various parameters in air quality monitoring fixed by Central Pollution Control 28 Board of India?

 $(5 \times 2 = 10 \text{ weightage})$

- IV. Answer two questions. Each question carries a weightage of 4 :
 - 29 Write the composition of particulates and discuss the health effects of particulates.
 - 30 Discuss in detail the various noise control measures.

31 What are the steps involved in Tertiary treatment of Sewage ? Explain the USAB Process.

 $(2 \times 4 = 8 \text{ weightage})$

(Pages : 2)

Name.....

Reg. No.....

FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2023

Chemistry

CHE 5D 01-ENVIRONMENTAL CHEMISTRY

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answers)

Answer questions up to 20 marks. Each question carries 2 marks.

- 1. Name the different regions of atmosphere.
- 2. What is meant by contaminant ? How is it differ from a pollutant ?
- 3. Define global warming. Name any two gaseous pollutants causing global warming.
- 4. How can we control photochemical smog?
- 5. What is underground water pollution ?
- 6. Differentiate between BOD and COD.
- 7. What are the sources of e-waste ?
- 8. Define thermal pollution. Write any *two* sources of thermal pollution.
- 9. Name any *four* methods used to control air pollution.
- 10. How catalytic converters are used for controlling air pollution?
- 11. Define green chemistry. Comment on its need?
- 12. Write any two applications of green chemistry in daily life.

 $(Ceiling \ of \ marks: 20)$

Turn over

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Section B (Paragraph)

 $\mathbf{2}$

Answer questions up to 30 marks. Each question carries 5 marks.

- 13. Discuss the classification of Pollutants.
- 14. Briefly discuss the causes of water pollution.
- 15. Write and explain any two methods used for solid waste management.
- 16. Give an account on radioactive pollution.
- 17. Write a short note on Gravitational settling chamber.
- 18. Discuss briefly the air pollution control by Cottrell electrostatic precipitator.
- 19. List out the basic principles of green chemistry.

(Ceiling of marks : 30)

Section C (Essay)

Answer any **one** question. The question carries 10 marks.

20. Explain the different gaseous air pollutants causing tropospheric pollution.

21. Write a note on the different sources of water pollution.

 $(1 \times 10 = 10 \text{ marks})$

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(Pages: 2)

Name.....

Reg. No.....

FIFTH SEMESTER B.A./B.Sc./B.Com./B.B.A. DEGREE EXAMINATION NOVEMBER 2017

[CUCBCSS—UG]

Open Course

CHE 5D 01-ENVIRONMENTAL CHEMISTRY

Time : Two Hours

Maximum : 40 Marks

Section A

Answer all questions. Each question carries 1 mark.

- 1. Name an Environmental Segment.
- 2. The lowest layer of Atmosphere is :
- 3. Name an Automobile Pollutant.
- 4. Name a Toxic Metal in Water.
- Name a Persistent Pollutant. 5.
- How does uncontrolled use of Fertilizers effect the Soil Fertility? 6.
- Mention one method to remove temporary hardness of Water. 7.
- 8. Name the Radiation responsible for green house effect.
- Name a Primary Pollutant. 9.
- 10. The cause London Smog in 1952 was mainly due to the use of ————.

 $(10 \times 1 = 10 \text{ marks})$

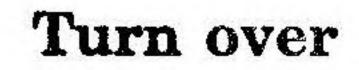
Section B

Answer any five questions. Each question carries 2 marks.

- 11. Write a note on Hydrological Cycle.
- 12. What are the Environmental Segments?
- 13. What is BOD? Mention its significance.
- 14. What is meant by Bio- accumulation.
- 15. What is meant by Green chemistry?
- 16. What is meant by Hydrological cycle?
- 17. What is Photochemical Smog?

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 $(5 \times 2 = 10 \text{ marks})$



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Section C

 $\mathbf{2}$

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Answer any two questions. Each question carries 5 marks.

- 18. Write a note on Green house effect.
- 19. Write a note on air pollution.

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20. Write a note on the Narmada movement.

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 $(2 \times 5 = 10 \text{ marks})$

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Section D

Answer any one question. The question carries 10 marks.

- (a) Discuss Radioactive Pollution with reference to sources, effects and control measures. 21.(b) Write a note on Water treatment methods.
- Write a note on Soil Pollution. 22.(i)
 - Write a note on Water Born Diseases. (ii)

(5 + 5 = 10 marks)

(5 + 5 = 10 marks) $[1 \times 10 = 10 \text{ marks}]$



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Reg. No.....

FIFTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION NOVEMBER 2020

(CUCBCSS-UG)

Chemistry

CHE 5D 01-ENVIRONMENTAL CHEMISTRY

Time : Two Hours

Maximum : 40 Marks

Section A

All questions to be attended. Each question carries 1 mark.

- 1. Name the uppermost layer of atmosphere.
- 2. Name any one air-borne disease.
- 3. COD stands for -----
- 4. Name one greenhouse gas.
- 5. Name one air pollution control measure.
- 6. _____ causes depletion of ozone layer.
- 7. Name a hydrocarbon pollutant?
- 8. Name the metal responsible for Minamata disaster.
- 9. Define smog.
- 10. Name an alternate refrigerant.

 $(10 \times 1 = 10 \text{ marks})$

Section B

All questions can be attended and overall ceiling. Each question carries 2 marks

- 11. What is meant by biological magnification?
- 12. What is meant by acid rain?
- 13. Differentiate between degradable and non-degradable waste.
- 14. What is meant by noise pollution ?

Turn over

15. Mention the segments of environment?

16. Mention the cause and drugs used for the treatment of chickenpox.

17. How are pollutants classified ?

 $(5 \times 2 = 10 \text{ marks})$

Section C

All questions can be attended and overall ceiling. Each question carries 5 marks.

18. Write a note on water quality parameters.

19. Explain radioactive pollution with reference to their source, effects and control measure.

20. Write a note on water-borne diseases.

 $(2 \times 5 = 10 \text{ marks})$

Section D

All questions can be attended and overall ceiling. The question carries 10 marks.

21. (a) Write a note on air pollution control measures.

(b) Explain in detail about hydrological cycle.

(5 + 5 = 10 marks)

22. (a) Write a note on depletion of ozone layer.

(b) Write a note on soil pollution.

(5 + 5 = 10 marks) $[1 \times 10 = 10 \text{ marks}]$

(Pages : 2)

Name.....

Reg. No.....

FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2022

Chemistry

CHE 5D 01-ENVIRONMENTAL CHEMISTRY

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answers)

Answer questions up to 20 marks. Each question carries 2 marks.

- 1. What are the different segments of environment?
- 2. How are pollutants classified?
- 3. What is zoning ?
- 4. Explain the role of green belt in controlling air pollution.
- 5. What is the role of catalytic converters in automobiles ?
- 6. List the sources of sulphur dioxide in the atmosphere.
- 7. Name any two polluted Indian rivers and the industries that cause their pollution.
- 8. What are biofertilizers ? Give an example.
- 9. Write a note on soil pollution by *e*-waste.
- 10. What is smog?
- 11. What is green chemistry?
- 12. List any four principles of green chemistry.

 $(Ceiling \ of \ marks: 20)$

Section B (Paragraph)

Answer questions up to 30 marks. Each question carries 5 marks.

- 13. Illustrate the importance of hydrosphere.
- 14. Explain global warming.

Turn over

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- 15. Write a note on Bhopal tragedy.
- 16. Explain the different types of hardness of water.
- 17. Discuss some methods for the disposal of radioactive waste.
- 18. Briefly describe the soil pollution by industrial wastes.
- 19. What is the role of green chemistry in controlling pollution ? Explain any *two* applications of green chemistry in daily life.

(Ceiling of marks : 30)

Section C (Essay)

Answer any **one** questions. Each question carries 10 marks.

- 20. Discuss the various sources of water pollution.
- 21. Briefly explain any four measures that can be adopted to control air pollution.

 $(1 \times 10 = 10 \text{ marks})$

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FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2018

(CUCBCSS-UG)

Open Course

CHE 5D 01-ENVIRONMENTAL CHEMISTRY

Time : Two Hours

Maximum: 40 Marks

Section A

Answer all questions. Each question carries 1 mark.

1. Name a green house gas.

2. Name an air pollutant.

3. Name a water pollutant.

4. Name an environmental movement.

5. Name a non-persistent pollutant.

6. Name an environmental imbalance caused by deforestation.

7. Mention one method to remove temporary hardness of water.

8. Name a major pollutant in automobile exhaust.

9. The cause London smog in 1952 was mainly due to the use of _____

10. Name a secondary pollutant.

$(10 \times 1 = 10 \text{ marks})$

Section B

Answer any **five** questions. Each question carries 2 marks.

11. What is acid rain?

12. Write a note on hydrological cycle.

13. What is DO ? Mention its significance in water pollution ?

14. What is meant by eutrophication ?

Turn over

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- 15. Name two methods for soil waste management.
- 16. What are the environmental segments ?
- 17. What is meant by hydrological cycle?

 $(5 \times 2 = 10 \text{ marks})$

Section C

Answer any two questions. Each question carries 5 marks.

- 18. Write a note on noise pollution.
- 19. Write a note on endosulfan disaster in Kerala.
- 20. Write a note on the Chipco movement.

$(2 \times 5 = 10 \text{ marks})$

Section D

Answer any one question. The question carries 10 marks.

21. i) Write a note on the source, effects and control of house hold waste.

ii) Explain the terms pollutant, contaminant receptor and sink.

(5 + 5 = 10 marks)

22. i) Discuss radioactive pollution with reference to sources, effects and control measures.

ii) Discuss the major environmental movements in India.

(5 + 5 = 10 marks) [1 × 10 = 10 marks]

(Pages : 2)

Name.....

Reg. No.....

FIFTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

(CUCBCSS-UG)

Chemistry

CHE 5D 01-ENVIRONMENTAL CHEMISTRY

Time : Two Hours

Maximum : 40 Marks

Section A

Answer all questions. Each question carries 1 mark.

1. Define environment and ecosystem.

2. Name any three air borne disease.

3. Define BOD.

4. Name some ionizing radiations.

5. What is photochemical smog?

6. Name two green house gases.

7. Give an example each of persistent and non-persistent pollutants.

8. Name any two drugs used in treatment of Tuberculosis.

Dissolved oxygen is expressed as ———.

10. What is Biological magnification?

Section B

Answer any five questions. Each question carries 2 marks.

11. Write S.N. on Chlorofluoro carbons.

12. What is Eutrophication?

13. Describe thermal pollution.

14. Write S.N. on Minamata disaster.

15. Discuss briefly alternate refrigerants.

16. How does lead pollution occur? What are the toxic effects of lead?

17. Write S.N. on cottrell electro-static precipitator.

 $(5 \times 2 = 10 \text{ marks})$

 $(10 \times 1 = 10 \text{ marks})$

Turn over

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Section C

Answer any two questions. Each question carries 5 marks.

- 18. What are the symptoms of Cholera and Typhoid ?
- 19. Discuss briefly sources and effects of E-waste.
- 20. Write S.N. on USAB process.

Section D

Answer any one question. The question carries 10 marks.

21. (a) Discuss water treatment methods.

(b) What are the control measures to check air pollution?

(5 + 5 = 10 marks)

 $(2 \times 5 = 10 \text{ marks})$

22. (a) What are the adverse effects of radiation ? Discuss the control measures.

(b) Explain in detail the major water pollutants.

(5 + 5 = 10 marks)

 $[1 \times 10 = 10 \text{ marks}]$