

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2022
(Fourth Semester)

Branch – CHEMISTRY

DISCIPLINE SPECIFIC ELECTIVE-II ENVIRONMENTAL CHEMISTRY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

- Name the major source of indoor air pollutant.
(i) Radon (ii) Argon (iii) Neon (iv) Helium.
- Which one of the following pollution causes tension, stress, anxiety and increase in heart beat?
(i) Noise (ii) Water (iii) Radioactive (iv) Soil.
- Which of the following is the most important green house gas in the earth's atmosphere?
(i) CO₂ (ii) NO₂ (iii) SO₂ (iv) Water vapour
- Ozone layer is depleted due to -----
(i) CFC (ii) NO₂ (iii) SO₂ (iv) HCl
- Minimata disease in Japan was due to the water pollutant of ---
(i) Cu (ii) Zn (iii) As (iv) CH₃Hg.
- The excessive rich of nutrients in water body is called -----
(i) Eutropication (ii) Sewage (iii) Activated sludge (iv) Sedimentation
- Temporary hardness is due to the presence of bicarbonates of-----
(i) Ca & Mg (ii) Ca & Ba (iii) Ca & Na (iv) Ca & K
- What is the colour changes occurred after adding EBT in hard water?
(i) red (ii) wine red (iii) blue red (iv) yellow
- The technique involved in burning of solid waste at very high temperature is-----
(i) Incineration (ii) Recycling (iii) Bioremediation (iv) Composting
- Name the soil is formed by the breakdown or fragmentation of rocks like granite, limestone and quartz.
(i) Sandy (ii) Silt (iii) Clay (iv) loamy

SECTION - B (25 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 5 = 25)

11. a. Explain the neat diagram of phosphorous cycle.

[OR]

- b. Discuss the objective and principles of environmental education.

- 12.a. Write short note on Global Warming .

[OR]

Cont...

b. What is greenhouse effect? Write its causes and effects.

13.a. Write short note on water pollution.

[OR]

b. What are BOD and COD? Explain.

14. a. How hardness of water can be removed by lime soda process?

[OR]

b. How water is purified by electro dialysis method?

15.a. Discuss the sources of soil pollution.

[OR]

b. Illustrate the harmful effects of industrial pollutants.

SECTION -C (40 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 8 = 40)

16. a. Explain the environmental segments.

[OR]

b. Explain environmental protection action.

17. a. Illustrate the ozone layer depletion.

[OR]

b. How is acid rain formed? Discuss the effects and control measures of acid rain.

18. a. What is eutrophication? Describe the types and effects of eutrophication.

[OR]

b. Outline the sources, effects and control measures of thermal pollution.

19. a. How hardness of water is determined by EDTA method?

[OR]

b. Explain the various methods of sewage treatment.

20. a. Discuss the types and environmental effects of pesticides.

[OR]

b. Write a short note on i) Incineration ii) Composting