

Exam Date & Time: 28-Sep-2020 (02:00 PM - 05:45 PM)

**PSG COLLEGE OF ARTS AND SCIENCE****Note: Writing 3hrs: Checking & Inserting Image : 30mins****MSc DEGREE EXAMINATION MAY 2020
(Fourth Semester)****Branch - CHEMISTRY****DISCIPLINE SPECIFIC ELECTIVE - II - ENVIRONMENTAL CHEMISTRY [18CHP22A]****Marks: 75****Duration: 210 mins.****SECTION - A****Answer all the questions.**

- 1) The gaseous envelope around the earth is known as atmosphere. The region lying between an altitudes of 11-50km is _____.
(i) Thermosphere
(ii) Mesosphere
(iii) Troposphere
(iv) Stratosphere (1)
- 2) Troposphere pollutant contains
(i) Dust
(ii) Water vapours
(iii) Mist
(iv) All of these (1)
- 3) Ozone depletion will cause
(i) forest fires
(ii) eutrophication
(iii) bio magnification
(iv) global warming (1)
- 4) Which one of the following affects chlorophyll?
(i) Sulphur dioxide
(ii) Nitrogen oxides
(iii) Carbon dioxide
(iv) Both (i) & (ii) (1)
- 5) Most common and commercial water pollutant is
(i) Industrial Waste
(ii) Fertilizers
(iii) Detergents
(iv) PCB's (1)
- 6) Heat pollution affects mainly
(i) Vegetation
(ii) Aquatic creature (1)

- (iii) Rocks
(iv) Air
- 7) Chlorine treatment of water
(i) Disinfectant by killing germs
(ii) Remove hardness of water
(iii) Remove all the air pollutants
(iv) All of the above (1)
- 8) Permanent hardness of water is produced by
(i) Calcium bicarbonate
(ii) Magnesium bicarbonate
(iii) Magnesium Chloride
(iv) Barium Chloride (1)
- 9) Soil pollution can result in decreased
(i) Soil productivity
(ii) Quality of plants
(iii) Purity of ground water
(iv) All of these (1)
- 10) Which of the following can be recycled many times?
(i) Plastic
(ii) Wood
(iii) Organic Materials
(iv) Aluminium (1)

SECTION - B

Answer all the questions.

- 11) Distinguish between primary and secondary pollutant. (5)
- a)
[OR] Briefly describe the segment of environment. (5)
b)
- 12) What is ozone depletion? What is the effect of this depletion? (5)
- a)
[OR] (i) Carbon monoxide gas is more dangerous than carbon dioxide gas. Why?
b) (ii) List gases which are responsible for greenhouse effect. (5)
- 13) Mention the source of water pollution. (5)
- a)
[OR] List out the adverse effect of organic pollutants. (5)
b)
- 14) What is sewage treatment? Distinguish between primary and secondary sewage treatment. (5)

- a)
[OR] Describe electro-dialysis method. (5)
b)
- 15) List out the adverse effect of radioactive waste. (5)
- a)
[OR] What are pesticides? How are they classified? (5)
b)

SECTION - C

Answer all the questions.

- 16) What are the various methods you suggest to protect our environment from pollution? (8)
a)
[OR] Illustrate (i) Nitrogen and (ii) Oxygen Cycle. (8)
b)
- 17) What is greenhouse effect? How is it caused? What are the major gases causing it? What are the adverse effect of green house effect? (8)
a)
[OR] Write note on "Photochemical Smog". (8)
b)
- 18) Explain the measure to control water pollution. (8)
a)
[OR] Give a detail account on thermal pollution. (8)
b)
- 19) Describe activated sludge process. (8)
a)
[OR] (i) Explain reverse osmosis for purification of water. (5 Mark)
b) (ii) List out the advantageous of reverse osmosis. (3 Mark) (8)
- 20) What is meant by soil pollution? What remedial measures can be taken to avoid pollution of soil? (8)
a)
[OR] What is principle of composting method of solid waste management? How it is carried out and explain various types of composting? (8)
b)

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