

Question Bank

Subject: Environmental Science

B.Sc III Sem VI

Paper I (Water Pollution: Monitoring And Management)

Unit I:

1) Which of the following are the primary causes of water pollution?

- (a) Plants
- (b) Animals
- (c) Human activities
- (d) None of these

Ans: (c) Human activities.

2) Which of the following is mainly responsible for the causes of water pollution?

- (a) Afforestation
- (b) Oil refineries
- (c) Paper factories
- (d) Both b and c

Ans: (d) Both b and c.

3) Which of the following is a waterborne disease?

- (a) Typhoid
- (b) Cholera
- (c) Diarrhoea
- (d) All of the above

Ans: (d) All of the above

4) The main sources of Arsenic in water are _____.

- (a) Floods

- (b) Fertilizers
- (c) Industrial waste
- (d) Both b and c

Sol: (d) Both b and c.

5) Which of the following is not a waterborne disease?

- (a) Measles
- (b) Typhoid
- (c) Cholera
- (d) Hepatitis

Sol: (a) Measles.

6) Which of the following is the leading cause of death and diseases worldwide?

- a) water pollution
- b) radioactive pollution
- c) air pollution
- d) soil pollution

Ans: a) Water pollution

7) Which of the following reservoirs contains the most water?

- a) atmosphere
- b) Biosphere
- c) Groundwater
- d) Lakes and rivers

Ans: c) Ground water

8) Which of the following rivers is called the world's most polluted river?

- a) Ganga River
- b) Chenab River
- c) Cauvery River

d) Yamuna River

Ans: a) Ganga River

9) How much of the Earth's water is stored in underground aquifers?

a) less than 1%

b) about 5%

c) about 10%

d) about 20%

Ans: a) less than 1%

10) Groundwater containing bacteria and viruses result in.....

a) Cholera

b) Methemoglobinemia

c) Kidney Problem

d) Liver Problem

Ans: a) Cholera

11) Groundwater represents how much of the world's fresh water supply?

a) about 1%

b) about 5%

c) about 20%

d) about 50%

Answer: c) about 20%

12) When did the Ganga Action Plan launched?

a) 1980

b) 1982

c) 1984

d) 1986

Ans: d) 1986

13) What is the authority constituted by Government of India for the implementation of the Ganga Action Plan?

- a) Central River Authority
- b) Central Ganga Authority
- c) Ganga Implantation Scheme
- d) State Ganga Authority

Ans: b) Central Ganga Authority

14) When did Phase-2 of Ganga Action Plan started?

- a) 1991
- b) 1992
- c) 1993
- d) 1994

Ans: c) 1993

15) Ganga Action Plan's only objective is to clean Ganga water.

- a) True
- b) False

Ans: b) False

16) Which state has the highest number of towns selected for Ganga Action Plan 1?

- a) West Bengal
- b) Uttar Pradesh
- c) Bihar
- d) Haryana

Ans: a) West Bengal

17) Which of the following is not an objective of the Ganga Action Plan?

- a) Improve the water quality by interception
- b) Treatment of domestic sewage
- c) Pollution abatement
- d) Increase the water content

Ans: d) Increase the water content

18) The Ganga Action Plan is a successful scheme.

- a) True
- b) False

Ans: b) False

19) Minamata disease was caused by consumption of fish containing _____

- a) Mercury
- b) Lead
- c) Zinc
- d) Sulphur

Ans: a) Mercury

20) Where was the first minamata disease outbreak reported?

- a) Kumamoto
- b) Alabama
- c) Texas
- d) Carolina

Ans: a) Kumamoto

21) Which factory was responsible for outbreak of minamata disease?

- a) Chisso Minamata
- b) Alfred Minamata
- c) Bruce Minamata
- d) Wayne Minamata

Ans: a) Chisso Minamata

22) Infectious hepatitis is caused by _____

- a) Bacteria
- b) Viruses
- c) Protozoa
- d) Helminth

Ans: b) Viruses

23) BOD is a measure of

- a) Industrial wastes passed into water bodies
- b) amount of carbon monoxide combined with haemoglobin
- c) extent of pollution with organic matter
- d) amount of oxygen required by plants during night.

Ans: c) extent of pollution with organic matter

24) Full form of BOD is.....

- a) Biodegradable Oxygen Demand
- b) Biological Oxygen Demand
- c) Biochemical Oxygen Demand
- d) Bandwidth on demand

Ans: c) Biochemical Oxygen Demand

25) 5 days biochemical oxygen demand is taken at temperature of

- a) 0°C

b) 15°C

c) 20°C

d) 25°C

Ans: c) 20°C

26) Which of the following is an indicator of organic water pollution?

a) BOD

b) pH

c) Eutrophication

d) Salinity

Ans: a) BOD

27) In mass spectrometer, the sample gas is introduced into the highly evacuated spectrometer tube and it is ionised by electron beam.

a) True

b) False

Ans: a) True

28) How is COD calculated?

a) Waste water is oxidised chemically using sodium in acid solutions

b) Waste water is oxidised chemically using dichromate in acid solutions

c) Waste water is oxidised chemically using bromine in acid solutions

d) Waste water is oxidised chemically using strontium in acid solutions

Ans: b) Waste water is oxidised chemically using dichromate in acid solutions

29) **Select the wavelength range corresponding to UV-visible region.**

a) 400-800 nm

b) 200-800 nm

c) 25 μm-2.5 μm

d) 2.5 μm – 1mm

Ans: b) 200-800 nm

30) The GC trace obtained after an experiment is called....

a) chromatograph

b) Chromatogram

c) Chromatophore

d) graph

Ans: b) Chromatogram

Unit II:

1) Which is the most input of waste causing marine pollution?

- a) Pesticides
- b) Pipes directly discharge waste into the sea
- c) Death of aquatic organisms
- d) Climatic conditions

Ans: **b) Pipes directly discharge waste into the sea**

2) Why ship accidents cause marine pollution?

- a) Because if the ship carrying passengers to collapse it results in the death of many people
- b) Because ship is very huge in its size
- c) Dredged material which carries heavy metals cause marine pollution
- d) Ship materials stuck inside the marine organisms

Ans: **c) Dredged material which carries heavy metals cause marine pollution**

3) What is the reason that oil pollution attracts the greatest attention?

- a) Because of the volume
- b) Because of the density
- c) Because of the mass
- d) Because of the visibility

Ans: **d) Because of the visibility**

4) In which process, due to the increase of nutrients in the water, leads to the formation of algal bloom?

- a) Eutrophication
- b) Infiltration
- c) Percolation
- d) Subduction

Ans: **a) Eutrophication**

5) What are the sources of toxic wastes in marine life?

- a) Metals from mining
- b) Industries
- c) Pesticides from farms
- d) All of above

Ans: **d) All of above**

6) How nutrients impacts the marine population?

- a) Increase the amount of Algae
- b) Lower oxygen
- c) Kills the marine life
- d) All of these

Ans: **d) All of these**

7) What are the sources of plastics in the marine environment?

- a) Disposal by people
- b) Plastic Industry
- c) Thrown overboard by ships
- d) All of these

Ans: **d) All of these**

8) Which parts of the oceans are polluted?

- a) Coastal Areas
- b) Deeper part of the Ocean
- c) Surface Areas
- d) Fishing Areas

Ans: **a) Coastal Areas**

9) What is yellow curve represents in the following figure?

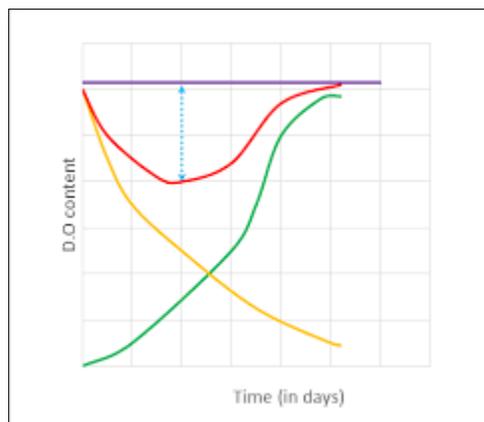


Figure: Oxygen sag curve

- a) Deoxygenation curve
- b) Reoxygenation curve
- c) Oxygen sag curve
- d) Equilibrium concentration of oxygen

Ans: **a) Deoxygenation curve**

10) 20. In the concept of self purification of natural stream, complete the following phrase. Solution to pollution is_____

- a) Control
- b) Dilution
- c) Reuse
- d) Recycle

Ans: **b) Dilution**

11) All the oil spills are notorious oil spills except

- a) Deepwater Horizon, 2010
- b) Love Canal Disaster
- c) Exxon Valdes, 1991
- d) Gulf War, 1991

Ans: **b) Love Canal Disaster**

12) Eutrophication by sewage pollution refers to the...

- a) Nutrient enrichment of freshwater bodies
- b) Nutrient depletion of freshwater bodies
- c) Toxic chemical accumulation in freshwater bodies
- d) Heavy metals accumulation in freshwater bodies

Ans: **a) Nutrient enrichment of freshwater bodies**

13) The pollution zones in the river are divided into how many types?

- a) 3
- b) 4
- c) 6
- d) 8

Ans: **b) 4**

14) In which pollution zone of the river, growth of algae reappear?

- a) Zone of degradation
- b) Zone of recovery
- c) Zone of active decomposition
- d) Zone of clean water

Ans: **b) Zone of recovery**

15) In which pollution zone of the river, the dissolved oxygen reduced to 0?

- a) Zone of degradation
- b) Zone of recovery

- c) Zone of clean water
 - d) Zone of active decomposition
- Ans: **d) Zone of active decomposition**

Unit 3

1) What is called when an industry removes water from a source and then returns the heated water to its source?

- a) Water pollution
- b) Soil pollution
- c) Air pollution
- d) Thermal pollution**

2) Which one of the following can cause thermal pollution?

- a) Residential houses
- b) Power plants**
- c) Death of marine organisms
- d) Oil spill

3) What is the effect of warmer temperature to the fishes?

- a) Increase the metabolism**
- b) Decrease the metabolism
- c) Stabilize the metabolism
- d) Increase the solubility of oxygen

4) What is the disadvantage of control measures of thermal pollution by passing the heated water?

- a) Water is lost due to leakage
- b) Water is lost due to absorption
- c) Water is lost due to dilution
- d) Water is lost due to evaporation**

5) Growing industrial activities is one of the reasons for thermal pollution.

- a) True**
- b) False

6) How does soil erosion cause thermal pollution?

- a) By making natural water bodies to hold in its normal level
- b) By polluting the water bodies
- c) By avoiding sunlight to fall on the water bodies
- d) By making natural water bodies to rise beyond their normal level**

7) What is a thermal shock?

- a) Sudden raises of temperature to abnormal level
- b) Sudden cooling of temperature to abnormal level
- c) Temperature don't change
- d) Temperature change only due to environmental factors

8) What is the main effect of thermal pollution to the oxygen solubility in water bodies?

- a) They increase the solubility of oxygen in water bodies
- b) They maintain the solubility of oxygen in water bodies
- c) They reduce the solubility of oxygen in water bodies
- d) They don't cause any affect in solubility of oxygen to the water bodies

9) Which of the following is the main reason for thermal pollution?

- a) Bio fuels
- b) Organic farming
- c) Eco friendly vehicles
- d) Power plants

10) How does an artificial lake help in solving thermal pollution?

- a) It stores heated water
- b) It gives a good aesthetic view
- c) It helps to breed fishes
- d) It is used during the summer season where water scarcity cause

11) What is called for the useless heat from hot water recycled by industries?

- a) Cooling towers
- b) Recycling
- c) Heat pump
- d) Co-generation

12) Generally how many types of cooling towers are there?

- a) One
- b) Two
- c) Three
- d) Four

13)Runoff from paved surfaces can cause thermal pollution.

- a) True
- b) False

14) Growing industrial activities is one of the reasons for thermal pollution.

- a. True
- b. False
- c. May be True or false
- d. Can't say

15) What type of cooling system is used in the large power plants?

- a) Cooling ponds
- b) Natural flow system
- c) Cooling towers
- d) Single deck system

16) How does outside air enter into the wet cooling system?

- a) Air vents
- b) Louvers
- c) Tuyeres
- d) Vacuum

17) How is water circulated throughout the dry cooling tower system?

- a) Finned tubes
- b) Metal pipes
- c) Porous tubes
- d) Swirling tubes

18) In which system is Cooling of hot water is done on tray as step by?

- a) Mechanical draught cooling system
- b) Hyperbolic cooling tower
- c) Atmospheric cooling tower
- d) Wet cooling tower

19) In India largest thermal power station is located at

- (a) Kota
- (b) Singrauli
- (c) Chandrapur
- (d) Neyveli

20) With reference to fly ash, which of the following is/are true?

1. Fly ash causes heavy metal pollution in water bodies.
2. Fly ash is used for making bricks and land fill.
3. Fly ash affects vegetation

Select the correct answer from the following codes

- a. Only 1
- b. Only 1 and 2
- c. Only 2 and 3
- d. 1,2 and 3

Answer: d

21) The best coal suitable for the production of energy is_____.

- a. Lignite
- b. Bituminous
- c. Anthracite
- d. Peat

22) Name the system that is mainly employed for the disposal of fly ash.

- a. Pneumatic
- b. Hydraulic
- c. Both (a) & (b)
- d. Steam jet system.

23) What is the superior quality of coal called?

- a. Anthracite
- b. Coke
- c. Bituminous
- d. Peat

24) The coal with highest ash content is?

- a. Lignite
- b. Steam coal
- c. Coking coal
- d. Bituminous coal

25) The major content of coal in India is_____.

- a. Dust
- b. Ash
- c. Fly ash
- d. Cinder

26) On which factor does the calorific value of coal depend on?

- a. Ash content.
- b. Size of coal particles
- c. Moisture content.
- d. Volatile material.

27) The elements that are combustible in the fuel are

- a. Carbon and hydrogen.
- b. Carbon, hydrogen and ash.
- c. Carbon, hydrogen and sulphur.
- d. Carbon, nitrogen and ash.

28) What is the percentage of ash content in Indian coal?

- a. 5 %
- b. 10 %
- c. 20 %
- d. 30 %

29) Which of the following is the essential element for the combustion of fuel?

- a. Oxygen
- b. Correct fuel air ratio.
- c. Proper ignition temperature.
- d. All of these.

30) What is pulverised coal?

- a. Non smoking coal.
- b. Coal free from ash.
- c. Coal broken into fine particles.
- d. Coal which burns for long time.

31) Why is pulverised coal used?

- a. Better burning.
- b. Increased calorific value of coal.
- c. Medium size units.
- d. Less radiation loss

32) What is the important factor in fuel selection?

- a. Cost of fuel.
- b. Calorific value
- c. Both (a) & (b).**
- d. None of these.

33) Ash handling system is mainly divided into _____ systems.

- a. Mechanical handling
- b. Pneumatic
- c. Hydraulic
- d. All of these**

34) Why is it important to prefer ash handling systems?

- a) Coal ash produced destroys the machinery by entering into them
- b) Coal ash produced annually accounts for thousands of tones**
- c) Coal ash can be reutilized for some other purpose
- d) Coal ash affects the health of people working at plants

35) Large amount of coal is transported by _____

- a) railway**
- b) sea or river ways
- c) road transportation
- d) by airlifting

Unit- IV : Introduction to Radioactive Pollution

1) What is the major problem in nuclear plants?

- a) Drawing out energy
- b) Fusion of particles
- c) Disposal of nuclear waste**
- d) Handling of fuel

2) Moderate liquid nuclear wastes are disposed into _____

- a) Deep pits**
- b) Buried underground
- c) Left into rivers
- d) Left into deep oceans

- 3) Which type of disposal of nuclear waste is cheapest and easiest method of all?
- a) **Ground**
 - b) Air
 - c) Space
 - d) Water
- 4) Absorption of radioactive element by human, affects their offspring's.
- a) **True**
 - b) False
- 5) The effects of radioactive pollutants depends upon
- a) Rate of diffusion
 - b) Energy releasing capacity
 - c) Rate of deposition of the contaminant
 - d) **All of these**
- 6) Exposure to ionizing radiation can cause cancer. T Cells that normally proliferate more rapidly are most sensitive to ionizing radiation The process of destroying cancer cells with the help of radiation is _____
- a) **radiotherapy**
 - b) physiotherapy
 - c) uroplasty
 - d) rehabilitation.
- 7) The efficiency of a nuclear power plant in comparison to a conventional thermal power plant is
- (a) same
 - (b) more
 - (c) **less**
 - (d) may be less or mote depending on size
 - (e) unpredictable
- 8) The most commonly used moderator in nuclear plants is
- (a) heavy water
 - (b) concrete and bricks
 - (c) graphite and concrete
 - (d) deuterium
 - (e) **graphite**

9) Moderator in nuclear plants is used to

- (a) reduce temperature
- (b) extract heat from nuclear reaction
- (c) control the reaction
- (d) cause collision with the fast moving neutrons to reduce their speed
- (e) moderate the radioactive pollution

10) The nuclear energy is measured as

- (a) MeV
- (b) curie
- (c) farads
- (d) MW
- (e) kWhr

11) The first nuclear power plant in India is located at

- (a) Kota
- (b) Kalapakkam
- (c) Tarapur
- (d) Barailly
- (e) Kerala

12) The unit of radio-activity is

- (a) electron-volt
- (b) electron-ampere
- (c) curie
- (d) MeV
- (e) AMU

13) Where was the first use of nuclear bombs which cause death to the millions of lives?

- a) Karachi
- b) Melbourne and Sydney
- c) Hiroshima and Nagasaki
- d) Tokyo

14) Where was the first control fission of an atom carried out?

- a) India
- b) Japan

- c) Russia
- d) **Germany**

15) Which was the first country to develop an atomic bomb?

- a) Russia
- b) **United States**
- c) China
- d) Japan

16) Nuclear energy is only harmful.

- a) True
- b) **False**

17) When did Chernobyl disaster occurred?

- a) 1976
- b) **1986**
- c) 1996
- d) 2000

18) Which State in India nuclear accident took place?

- a) **Tamil Nadu**
- b) Karnataka
- c) Gujarat
- d) Rajasthan

19) Which one of the following medical condition caused by the high exposure of radiation?

- a) Kidney stone
- b) AIDS
- c) **Mutation**
- d) Blood pressure

20) What is the main purpose of nuclear energy?

- a) To kill the enemy nation
- b) To waste the excessive energy
- c) **To use it as an alternate source of energy**
- d) To cause mutation for people who are working

21) Approximately how many percentage of electricity produced by nuclear power in the world?

- a) 10
- b) 14

c) 17

d) 20

22) Which is the main source of nuclear radiations?

a) Nuclear power plant

b) Sunlight

c) Atmospheric air

d) Volcanoes

23) Which radioactive cause cancer in thyroid gland?

a) U-235

b) U-238

c) I-132

d) C-12

24) The use of nuclear energy in the war had devastating effects on humans and on the earth.

a) True

b) False

25) When did Hazardous waste management act enacted in India?

a) 1988

b) 1989

c) 1990

d) 1991

26) Who is responsible for safe disposal of the generated hazardous waste?

a) Generator

b) Receiver

c) Waste facility

d) TSDF

27) What is the goal of Hazardous Waste Management Unit?

a) Protect health and environment by risks of HW

b) Chemical analysis

c) Import

d) Export

28) landfills are engineered for liquid waste.

a) True

b) False

29) Which form of shipment is common for transport of hazardous waste?

- a) Rail
- b) Road**
- c) Air
- d) Inland water

30) Initially which energy was approved as a non-polluting way for generating electricity?

- a) Water energy
- b) Nuclear energy**
- c) Solar energy
- d) Soil energy

31) Which of the following problem occurs due to the use of nuclear energy?

- a) Accidental leakage**
- b) Formation of compost
- c) Formation of gobar gas
- d) Generation of electricity

32) Which of the following causes mutations at a very high rate?

- a) Automobiles
- b) Compost
- c) Fertilizers
- d) Radiation**

33) At which dose is nuclear radiation considered lethal?

- a) Low dose
- b) Moderate dose
- c) High dose**
- d) No dose

34) Which of the following is an extremely potent pollutant?

- a) Wastewater
- b) Pesticide
- c) Electronic waste
- d) Nuclear waste**

35) dispose of which waste are the deep pits dug in desert areas or in the sea bottom?

- a) Agricultural waste
- b) Industrial waste
- c) Radioactive waste**
- d) Sewage waste

36) Which of the following element is most hazardous to humans?

a) Phosphorous

b) Sulfur

c) Carbon

d) Uranium