Chapter 10

Environmental Issues

Solutions (Set-1)

SECTION - A

School/Board Exam. Type Questions

Very Short Answer Type Questions :

1. In which year was the air (Prevention and Control of Pollution) act amended to include noise as air pollution?

Sol. 1987.

2. Name the city in our country where the entire public road transport runs on CNG.

Sol. Delhi.

3. What is the raw material for polyblend?

Sol. Bituminous coal and polythene.

4. Expand FOAM.

Sol. Friends of Arcata Marsh.

5. What is cultural eutrophication?

Sol. The accelerated rate of eutrophication or natural ageing of lakes mediated by man's activities like effluents from industries and home.

6. List any two adverse effect of particulate matter on human health.

Sol. (i) Difficulty in breathing.
(ii) Irritation and inflammation of lungs.

7. What is the best device which removes particulate matter from air?

Sol. Electrostatic precipitator.

8. When was the Environment Protection Act passed?

Sol. 1986.

9. Name the catalyst used in catalytic converters.

Sol. Platinum, palladium and rhodium.

10. Name the greenhouse gases.

Sol. CO_2, CFC, CH_4 and N_2O.

Short Answer Type Questions :

11. Explain biomagnification.

Sol. It refers to increase in concentration of toxicant at successive trophic levels. This happens because a toxic substance accumulated by an organism cannot be metabolised and excreted.

12. Why are trees and shrubs planted near walls of buildings?

Sol. The plants growing near the boundary wall act as barriers for sound pollution and acts as dust catches.

13. What are the features of septic water?

Sol. (i) Organic pollution

(ii) Dissolved oxygen low

(iii) High BOD

14. What are the three major kinds of impurities of waste water in domestic water?

Sol. (i) Suspended particles – Sand, silt and clay

(ii) Colloidal particles – Faecal matter, cloth and paper fibre.

(iii) Dissolved materials – nutrients

15. What is algal bloom?

Sol. Excessive growth of planktonic or free floating algae which imparts a distinct colour to water bodies, causes deterioration of water quality and fish mortality.

16. What is the main effect of sewage from hospitals?

Sol. It contains many undesirable pathogenic microorganisms whose disposal without proper treatment may cause out break of many diseases like dysentery, typhoid, jaundice, cholera.

17. What is thermal pollution?

Sol. Heated or thermal waste waters flowing out of electricity generating units is thermal power plants, are the source of thermal pollution. It reduces the number of organisms sensitive to high temperature and may enhance the growth of fishes and plants in extremely cold areas but only after causing damage to indigenous species.

18. What are the main objectives of FOAM?

Sol. (i) Treatment of water.

(ii) Maintaining high level of biodiversity

19. What are Ecosan toilets?

Sol. Ecosan toilets is a sustainable system of handling human excreta using dry composting toilets. This is a practical, hygienic, efficient and cost effective solution to human waste disposal.

20. What are e-wastes? What is their best method of disposal?

Sol. Irreparable computers and other electronic goods are e-wastes.

Disposal methods:

(i) Buried in land fills.

(ii) Incinerated

(iii) Exported to developing countries

21. What is the best method to combat soil pollution?

Sol. Organic farming, where waste products from one process are cycled as nutrients for other process. This allows maximum utilisation of resources and increase the efficiency of production.

22. How has DDT caused decline in bird population?

Sol. DDT concentration increases at each trophic level which is called biomagnification. This is highest at the level of fish eating birds. DDT interferes with its **calcium metabolism**, causes thinning of eggs shells and decline in bird population.

23. What is snow blindness?

Sol. In human eye cornea absorbs UV-B radiation and a high dose of UV-B causes inflammation of cornea called **snow blindness** which is permanent damage to cornea.

24. What is joint forest management?

Sol. The idea of the government to work closely with local communities for protecting and managing forests. In return for their services to the forest they get benefit of various forest products like fruits, gum, rubber, medicine and thus forests are conserved in sustainable manner.

25. What are the two main causes of radioactive pollution?

Sol. (i) Accidental leakage as in Three Mile Islands and Chernobyl Accident.

(ii) Non-safe disposal of radioactive wastes.

26. What was the objective of Montreal Protocol.

Sol. To control the emission of ozone depleting substances.

27. List two examples of improper resource utilization.

Sol. (i) Soil erosion and desertification.

(ii) Water logging and soil salinity due to faulty irrigation methods.

28. Define slash and burn agriculture.

Sol. This method is practised in the north eastern states of India. The farmers cut down trees of the forest and burn the plant remains. The ashes used as fertiliser and the land is used for farming or cattle grazing.

29. What is reforestation?

Sol. It is the process of restoring a forest that once existed but was removed at some point of time in past.

30. Describe Chipko Movement.

Sol. This movement was started to protect the forests of India, in Garhwal Himalayas. In 1974 the local women, showed enormous bravery in protecting trees from the axe of contractors by hugging them.

Long Answer Type Questions :

31. What is organic farming. Discuss the benefits of organic farming.

Sol. Integrated organic farming is a cyclical zero waste procedure where waste products from one process are cycled in as nutrients for other processes. This allows maximum utilisation of resource and increase in efficiency of production.

It includes bee keeping, dairy management, water harvesting, composting and agriculture in a chain of processes which support each other and allow an extremely economical and sustainable venture.

There is no need to use chemical fertilisers for crops as cattle dung are used as manure. Crop waste is used to create **compost** which can be used as natural fertiliser or can be used to generate natural gas for satisfying the energy needs of farm.

32. Write short note on electronic waste. List the various sources of e-wastes and the problems associated with disposal of e-waste.

Sol. Discarded unusable electronic gadgets such as computers, mobile phones circuits, television sets etc. form electronic waste. These contain harmful toxic substances like heavy metals to which unskilled manual workers remain exposed.

33. What are the basic characteristics of a modern land fill site? List any three and mention the reasons for their use.

Sol. (i) Plastic or clay lines which contain leachate things.
(ii) Covering of waste to prevent its blowing away by wind.
(iii) Installation of land fills gas extraction system to extract gas for power use.

34. How does an electrostatic precipitation work?

Sol. This device removes 99% particulate matter. It has electrode wires that are maintained at several thousands volts which produce a corona that releases electrons. These collecting plates are grounded and attract the charged dust particles. The velocity of air between plates must be low enough to allow dust to fall.

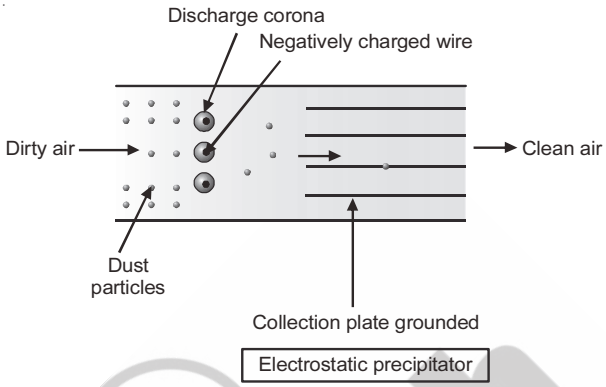


Fig. : Electrostatic precipitator

35. W.r.t. following diagram answer the following questions

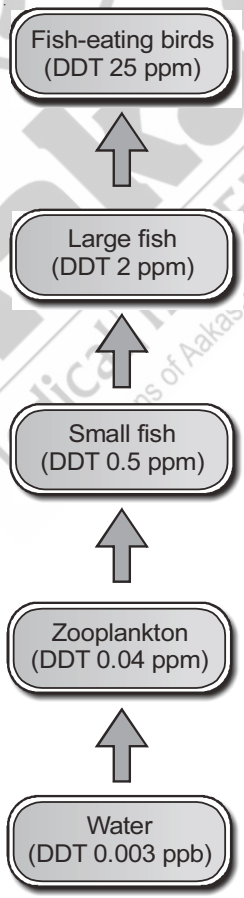


Fig. : Biomagnification of DDT in an aquatic food chain

(i) What ecological term is used to describe DDT accumulation?

(ii) List the effect on birds.

(iii) Will DDT accumulation lead to eutrophication?

(iv) Does it effect BOD.

(v) Name disease caused by accumulation of any heavy metal.

Sol. (i) Biomagnification

(ii) It interferes with calcium metabolism and causes thinning of egg shells.

(iii) No

(iv) No, as it is non-biodegradable.

(v) Minamata disease due to mercury.

36. Write a short note on various environmental laws.

Sol. (i) Environment Protection Act 1986.

(ii) Air (Prevention and Control Pollution Act) 1981 (Amended in 1987 to include noise as an air pollutant).

(iii) Water prevention and control of Pollution Act 1974.

37. Write a short note on

(a) Greenhouse effect

(b) Ozone depletion

Sol. (a) **Greenhouse effect :** The main greenhouse gases are :

(i) **CO_2 :** It contributes to 60% of total global warming. It is produced due to excessive combustion of fossil fuels biomass burning and deforestation.

(ii) **CH_4 :** It contributes to 20% of total global warming. Major source are paddy field, enteric fermentation in cattle and wetlands.

(iii) **CFC :** They are synthetic compounds of carbon and halogen used in aerosol refrigeration, air conditioner etc. It contributes 14% of global warming.

(iv) **N_2O :** It contributes to 6% of global warming. It comes from burning of N_2-rich fuel.

(b) Ozone hole formed over **Antarctica** : CFC's and other ODS released by Europe, Russia, Japan and North America reach the stratosphere. They drift towards poles and reach there below the advert of winter. In winter months the temperature over **Antarctica** is extremely low (–85°C). It results in the formation of ice clouds. Antarctica air now does not mix with the rest of the global air. It circulates along the polar vortex.

Ice clouds provide catalytic surface for CFC's and other ODS to release chlorine and other radicals that can react with ozone.

However during winter's polar areas do not receive sunlight and no catalytic breakdown of ozone occurs. With the beginning of spring availability of sunlight causes release of chlorine from CFC's. It reacts catalytically with ozone and degrades it. As a result ozone concentration decreases drastically producing the effect of ozone hole. As the summer approaches the hole disappear due to free mixing of antarctic air with the rest of the world. UV radiation of wavelength shorter than UV-B, are almost completely absorbed by Earth's atmosphere, given that the ozone layer is intact. But, UV-B damages DNA and mutation may occur. It causes aging of skin, damage to skin cells and various types of skin cancers. In human eye, cornea absorbs UV-B radiation, and a high dose of UV-B causes inflammation of cornea, called **snow-blindness** cataract.

38. Fill in the blanks

(a) Non biodegradable pollutant are created by _____ .

(b) According to CPCB particles that are responsible for causing great harm to human health are of _____ diameter.

(c) CNG is _____ .

(d) Worlds most problematic weed _____ .

(e) _____ and _____ cause biomagnification.

Sol. (a) Humans

(b) 2.5 μm

(c) Butane

(d) *Eicchornia*

(e) Hg, DDT

39. Match the columns

	Column I		**Column II**
a.	UV	(i)	Biomagnification
b.	Biodegradable organic matter	(ii)	Automobiles
c.	Mercury	(iii)	Eutrophication
d.	Phosphates	(iv)	Snow blindness
e.	Catalytic converter	(v)	BOD

Sol. a(iv), b(v), c(i), d(iii), e(ii)

40. Discuss the effect of sewage on important characteristics of water.

Sol.

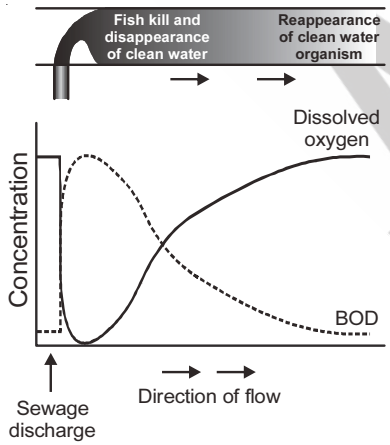


Fig.: Effect of sewage discharge on some important characteristics of a river.

41. Explain how people of Arcata California have controlled water pollution.

Sol. The people of Arcata along with Humboldt University have created an integrated waste water treatment within a natural system. The cleaning occurs in two stages.

(a) Conventional sedimentation, filtering and chlorine treatments.

(b) Development of six connected marshes over 60 hectares of marshland. Plants, algae, fungi and bacteria were seeded into this area which neutralise, absorb and assimilate pollutants.

42. Discuss the effects of sound pollution. How can we combat noise pollution?

Sol. It causes sleeplessness, increased heart beat, altered breathing pattern stress.

Steps which can reduce noise pollution.

(i) Sound absorbent materials in industries.

(ii) Honking free zones.

(iii) Permissible sound levels of crackers and loudspeakers.

43. What are (a) Ecosan toilets and (b) Polyblend?

Sol. (i) It is a sustainable system for handling human excreta using dry composting toilets. It is a practical, hygienic, efficient and cost effective solution to human waste disposal.

(ii) Polyblend is a fine powder of recycled modified plastic. It is mixed with bitumen to lay roads.

44. What is the objective of Montreal Protocol and Kyoto Protocol?

Sol. Montreal Protocol: Protection to stratospheric ozone by agreeing to limit the production of use of ODS, phasing out of ODS and helping the developing countries to implement use of alternatives of CFC.

Kyoto Protocol : Mitigate climate changes. It requires countries to take appropriate measures to reduce their over all greenhouse gas emission to a level at least 5% below 1990.

45. How can soil degradatation be controlled?

Sol. (i) Reforestation

(ii) Crop rotation

(iii) Adequate drainage

(iv) Artificial bonds or covering area with suitable vegetation.

SECTION - B

Model Test Paper

Very Short Answer Type Questions :

1. Which type of UV-radiations can be lethal to organisms?

Sol. UV-B, UV-A

2. Name any three gases contributing to greenhouse effect.

Sol. CO_2, CH_4, N_2O

3. Why are owners of motor vehicles equipped with catalytic converters adviced to use unleaded petrol?

Sol. Because the lead in petrol inactivates the catalyst.

4. Which act included noise as an air pollutant?

Sol. Air (Prevention and Control of Pollution Act) which came into force in 1981 but was amended in 1987 to include noise as an air pollutant.

5. Integrated waste water management project in Arcata is being managed by _____.

Sol. FOAM.

6. What is polyblend?

Sol. Polyblend is a fine powder of recycled modified plastic which was developed by Ahmed Khan's company to lay roads along with bitumen.

7. What is the forest cover in India?

Sol. 19.4%

8. Name the green house gases.

Sol. CO_2, CH_4, CFC and N_2O

Short Answer Type Questions :

9. How is nuclear waste stored?

Sol. Nuclear waste is stored in suitably shielded containers buried within rocks about 500 m deep below the earth surface.

10. Define El-Nino effect.

Sol. Increase in the level of greenhouse gases has led to the increase in temperature of Earth by 0.6°C. This has led to deleterious changes in the environment resulting in odd climatic changes (El-Nino effect).

11. What is snow blindness?

Sol. Inflammation of cornea caused by high doses of **UV-B** radiation is called snow blindness.

12. Explain Jhum cultivation.

Sol. Farmers cut down the trees of the forest and burn the plant remains. The ash is used as fertilizer and the land is then used for farming or cattle grazing. After cultivation the area is left for several years to allow its recovery. The farmers then move on to other areas and repeat this process. This is also called as slash and burn agriculture.

13. Write down the composition of waste water.

Sol. The composition of waste water:

99.9 % – Water

0.1% – Impurity : (i) Suspended solids – *e.g.,* sand, silt, clay

(ii) Colloidal material – *e.g.,* fecal matter, bacteria, cloth, paper fibres

(iii) Dissolved materials – *e.g.,* nutrients (nitrate, ammonia, phosphate, sodium, calcium)

14. What gases cause stratospheric ozone depletion? What is the result of this depletion?

Sol. Chloroflourocarbons result is the ozone depletion.

It has resulted in the formation of a large area of thinned ozone layer commonly called as ozone hole. UV-radiation of wavelength shorter than UV-B are almost completely absorbed by earth atmosphere given that the ozone layer is intact.

15. Name and define these environment-related terms.

(i) DDT accumulated in a three-step food chain will be maximum in secondary consumer.

(ii) Pertaining to cause algal bloom.

Sol. (i) Biomagnification : It is defined as increase in concentration of toxicants at successive trophic levels.

(ii) Eutrophication : Nutrient enrichment of its water.

Short Answer Type Questions :

16. Name any two sources of electronic wastes. Mention any one way each of its disposal in developing and developed countries.

Sol. Irreparable computers electronic goods are known as e-wastes.

In developing countries : recycling of e-wastes involve manual participation thus exposing workers to toxic substances present in e-wastes.

In developed countries : half of the e-wastes are exported to developing countries mainly China, India and Pakistan where metals like copper, iron, silicon, nickel and gold are recovered during cycling process.

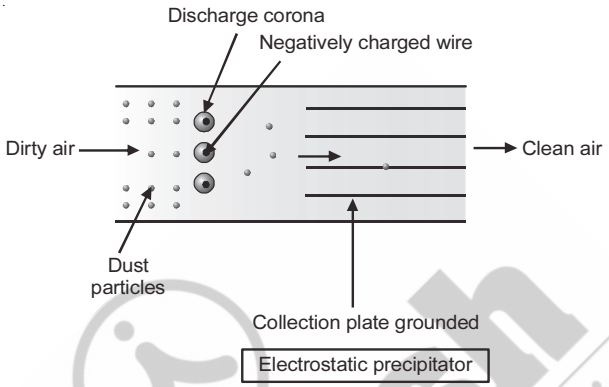
17. Particulate and gaseous pollutants along with harmless gases are released from thermal power plants.

    (i) Name any two harmless gases released.

    (ii) Name the most widely used device of removing particulate pollutants from air. Explain how the device is used?

Sol. (i) O_2 and N_2

(ii) **Electrostatic precipitator :** It has electrode wires that are maintained at several thousand volts which produce a corona that releases electrons. These electrons attach to dust particles giving them a net negative charge. The collecting plates are grounded and attract the changed dust particles. The velocity of air between the plates must be low enough to allow the dust to fall.



18. State the causes and effects of thermal pollution.

Sol. Heated waste water from power plants and industries which raises the temperature of water to a harmful level causes thermal pollution.

Effect : It speeds up the biodegradation of organic matter which results into ecological imbalance of the river and streams. It eliminates or reduces the number of organisms sensitive to high temperature and may enhance the growth of plants and fish in extremely cold areas only after causing damage to indigenous flora and fauna.

19. Explain two ways of improper resource utilisation that can cause degradation of natural resources.

Sol. Improper resource utilisation practices include:

(i) Human activities like overcultivation unrestricted grazing, deforestation and results in desertification.

(ii) Poor irrigation facilities lead to improper drainage which causes water logging. This draws salt to the surface of the soil. This increased salt content is not good for the growth of crops.

20. Explain joint forest management.

Sol. Joint forest management : It was introduced by the Government of India in 1980 to realise the significance of participation of local communities in protection and management of forests. In return for their services to the forest, communities get benefit of various forest products like fruit, gum, rubber, medicine etc. This helps in conserving forests in a sustainable manner.

21. (a) What is the norm set by Euro II for petrol and diesel vehicles?

    (b) Which cities of India to meet Euro IV norms by April, 2010? Which Euro specification are followed in other cities?

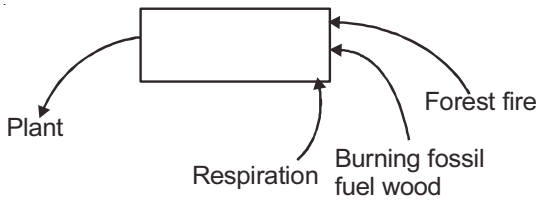
Sol. (a) According to Euro II norms sulphur should be controlled at 350 ppm in diesel and 150 ppm in petrol. Aromatic hydrocarbons should be contained at 42% of the concerned fuel.

(b) Delhi, Mumbai, Kolkata, Chennai, Banglore, Hyderabad, Ahmedabad, Pune, Surat, Kanpur and Agra.

Other cities of India should comply with Euro III emission norms by 2010.

Long Answer Type Questions :

22. The following diagram shows simplified biogeochemical cycle.



(i) Name the compound whose cycle is depicted.

(ii) In what way do vehicles add this compound to the atmosphere?

(iii) What adverse effect does its excess have on the environment?

(iv) Cite an event which depicts this effect in the modern times.

(v) Suggest two ways of reducing this effect.

Sol. (i) CO_2

(ii) Burning of fossil fuel (combustion)

(iii) Global warming

(iv) Melting of polar ice caps, rising sea level

(v) (a) Planting of trees

(b) Cutting down use of fossil fuels.

23. (i) What is good Ozone? Give its location also.

(ii) What unit is used to measure the thickness of ozone layer in air column?

(iii) What damaging effect does it have?

(iv) What is the cause of the above phenomenon?

Sol. (i) The good ozone is found in the upper part of the atmosphere called the stratosphere, and it acts as shield absorbing UV radiation from the sun,.

(ii) Dobson unit

(iii) It can cause the harmful UV-rays to reach earth surface which has adverse effect on the health of human beings. UV-rays are responsible for mutation, cancer, snow blindness or inflammation of cornea.

(iv) Release of CFCs, depletes the good ozone layer of stratosphere.

❑ ❑ ❑

Solutions (Set-2)

Objective Type Questions

(Air Pollution and its control)

1. Compressed Natural Gas (CNG) is

(1) Butane (2) Ethane (3) Methane (4) Propane

Sol. Answer (3)

CNG is methane.

2. The electrostatic precipitator can remove over _____ particulate matter.

(1) 99% (2) 100% (3) 89% (4) 45%

Sol. Answer (1)

The electrostatic precipitator can remove over 99% particulate matter.

3. Find **incorrect** statement w.r.t. catalytic converter

(1) Platinum-palladium and rhodium as catalysts (2) Lead in petrol activates the catalysts

(3) Reduced the emission of poisonous gases (4) CO and NO_x changed to CO_2 and N_2 gas

Sol. Answer (2)

Lead present in petrol inactivate the catalysts.

4. Among the 41 most polluted cities of the world, Delhi ranked

(1) First (2) Fourth (3) Second (4) Third

Sol. Answer (2)

Among 41 most polluted cities, Delhi ranked 4th city of the world.

5. By the end of 2002 in Delhi which step is completed for reducing vehicular pollution?

(1) Phasing out of old vehicles (2) Uses of unleaded petrol

(3) Buses were converted to run on CNG (4) Use of catalytic converters

Sol. Answer (3)

Buses were converted to run on CNG.

6. Euro-II is emission norms for reducing

(1) O_3 and CO (2) NO_2 and N_2O

(3) Sulphur and aromatic hydrocarbons (4) CO_2 and particulate matter

Sol. Answer (3)

Euro-II is emission norms for reducing sulphur and aromatic hydrocarbons.

7. Most hazardous pollutant of automobile exhaust is

(1) Mercury (2) Copper (3) Arsenic (4) Lead

Sol. Answer (4)

Lead because it interferes with haem synthesis, oxygen and glucose metabolism and causes anaemia, vomiting, convulsions, madness etc.

8. The major source of noise pollution, world wide is due to

(1) Transport system (2) Oil refineries and thermal power plants

(3) Sugar, textile and paper industries (4) Office equipment

Sol. Answer (1)

The major source of noise pollution, worldwide is due to transport system *e.g.* 150 dB or more sound generated by take off of a jet plane.

9. Pollutants which can be removed by a scrubber

(1) Particulate matter (2) Unburnt hydrocarbon

(3) SO_2 (4) Sewage

Sol. Answer (3)

Pollutant which can be removed by a scrubber is SO_2.

10. In automobiles catalytic converters change unburnt hydrocarbons into

(1) Methane (2) Carbon dioxide and methane

(3) Carbon monoxide (4) Carbon dioxide and water

Sol. Answer (4)

In automobiles catalytic convertes change unburns hydrocarbons into CO_2 and H_2O.

(Water Pollution and its control)

11. World's most problematic aquatic weed is

(1) *Trapa* (2) *Azolla*

(3) *Wolffia* (4) *Eichhornia*

Sol. Answer (4)

Eichhornia because their offsets grow very rapidly and creates havoc, so very difficult to get rid off.

12. Match the column

	Column I		**Column II**
a.	Environmental Protection Act	(i)	1988
b.	Air (Prevention and Control of Pollution) Act	(ii)	1987
c.	Water (Prevention and Control of Pollution) Act	(iii)	1981
d.	Montreal Protocol	(iv)	1974
e.	National Forest Policy	(v)	1986

(1) a(v), b(ii), c(iv), d(i), e(iii) (2) a(v), b(iii), c(iv), d(ii), e(i)

(3) a(i), b(iii), c(iv), d(v), e(ii) (4) a(i), b(ii), c(iv), d(v), e(iii)

Sol. Answer (2)

Environment (Protection) Act	–	1986
Air (Prevention and Control of Pollution) Act	–	1981
Water (Prevention and Control of Pollution) Act	–	1974
Montreal Protocol	–	1987
National Forest Policy	–	1988

13. Ramesh Chandra Dagar includes _____ for case study of organic farming.

(1) Bee-keeping (2) Dairy management (3) Water harvesting (4) All of these

Sol. Answer (4)

Ramesh Chandra Dagar includes dairy management, Bee-keeping and water harvesting for organic farming.

14. The domestic sewage in large cities

(1) Has a high BOD as it contains both aerobic and anaerobic bacteria

(2) Is processed by aerobic and then anaerobic bacteria in the secondary treatment in Sewage Treatment Plants (STPs)

(3) When treated in STPs does not really require the aeration step as the sewage contains adequate oxygen

(4) Has very low amounts of suspended solids and dissolved salts

Sol. Answer (2)

The domestic sewage in large cities is treated by aerobic and then anaerobic bacteria (Anaerobic sludge digestor) in secondary treatment of sewage.

15. Prime contaminants leading to cultural or accelerated eutrophication are

(1) Fecal matter and paper fibres (2) Sand and clay

(3) Phosphates and nitrates (4) Nitrates and sulphates

Sol. Answer (3)

Nutrient enrichment of water body by phosphate and nitrates leads to eutrophication.

16. Ecosanitation is

(1) Sustainable system for handling human excreta

(2) Sustainable system for handling agricultural wastes

(3) Sustainable system for handling industrial effluents

(4) Sustainable system for handling biomagnification

Sol. Answer (1)

Ecosanitation is sustainable system for handling human excreta.

17. In an aquatic food chain, if water body is having 0.003 ppb of DDT, its maximum concentration can be observed in

(1) Large fish (2) Phytoplanktons (3) Fish eating birds (4) Small fish

Sol. Answer (3)

Fish eating birds with 25 ppm DDT

Small fish – 0.5 ppm

Large fish – 2 ppm

Phytoplanktons – 0.04 ppm

18. Algal bloom in a lake

(1) Increases CO_2 level (2) Leads to oxygen depletion

(3) Kills fishes (4) All of these

Sol. Answer (4)

Kills fishes by oxygen depletion.

19. Thermal pollution is more prevalent near

(1) Hot water springs (2) Coal based power plants

(3) Temperate zones (4) Tropical zones

Sol. Answer (2)

Thermal pollution is more near coal based power plants.

20. In a polluted lake

(1) BOD and DO are high (2) BOD is high and DO is low

(3) Both are low (4) BOD is low and DO is high

Sol. Answer (2)

In a polluted lake BOD is high and DO is low.

(Solid Wastes)

21. Hospital wastes are

(1) Hazardous and disposed by incinerator (2) Non-hazardous and disposed by incinerator

(3) Hazardous and disposed into water (4) Non-hazardous and disposed into water

Sol. Answer (1)

Hospital wastes are hazardous therefore disposed by incinerator.

22. The raw material for making polyblend is

(1) Bitumen (2) Plastic film waste

(3) Recycled plastic (4) Any biodegradable waste

Sol. Answer (2)

The raw material for making polyblend is plastic wastes.

(Agro-chemical and their Effects)

23. Integrated organic farming has been adopted in India by

(1) Ramesh Chandra Dagar (2) Ahmed Khan

(3) Panduranga Hegde (4) Amrita Devi

Sol. Answer (1)

- ❖ Ramesh Chandra Dagar – Organic farming
- ❖ Ahmed Khan – Plastic waste
- ❖ Panduranga Hegde – Conservation of forest
- ❖ Amrita Devi – Conservation of forest

(Radioactive Wastes)

24. During the past century, the temperature of earth has increased by

(1) 15°C (2) 33°C (3) 0.6°C (4) 1.6°C

Sol. Answer (3)

During the past century, the temperature of earth has increased by 0.6°C.

25. What percentage of forest for hills has been recommended by National Forest Polices (1988) of India?

(1) 33% (2) 67% (3) 19.4% (4) 23%

Sol. Answer (2)

National Forest Policy 1988 of India for hills, forest percent recommended is 67% and 33% for plains areas.

(Greenhouse Effect and Global Warming)

26. Recognizing the deleterious effects of ozone depletion an international treaty known as _____ was signed at _____

(1) Montreal Protocol, Canada

(2) Kyoto Protocol, Brazil

(3) Earth Summit, Montreal

(4) World Summit, South Africa

Sol. Answer (1)

Montreal Protocol, Canada

27. Snow blindness is caused by

(1) UV-A (2) UV-B

(3) X-rays (4) UV-C

Sol. Answer (2)

Snow blindness caused by UV-B.

(Ozone Depletion in The Stratosphere)

28. Which of the following is **correct**?

(1) CFC is discharged in the lower part of the atmosphere, move upward and reach stratosphere

(2) Montreal protocol was signed to reduce CO_2

(3) Ozone hole is a small pore created in tropospheric ozone layer

(4) Jhum cultivation is a method of afforestation

Sol. Answer (1)

- Montreal protocol – Ozone depletion
- Ozone hole – Stratosphere
- Jhum cultivation – Deforestation

(Deforestation)

29. Govenment of India has introduced a concept to work closely with local communities for protection and management of forests called

(1) Chipko movement

(2) Jhum cultivation

(3) Joint Forest Management

(4) Appiko movement

Sol. Answer (3)

Joint Forest Management (JFM).

30. Match the column

	Column I		Column II
a.	Ozone thickness	(i)	UV-rays
b.	CFC	(ii)	Refrigerater
c.	El Nino effect	(iii)	Temperature increase
d.	Skin cancer	(iv)	Dobson unit

(1) a(i), b(ii), c(iii), d(iv) (2) a(ii), b(iii), c(iv), d(i) (3) a(iv), b(ii), c(iii), d(i) (4) a(iii), b(iv), c(ii), d(i)

Sol. Answer (3)

Ozone thickness	–	Dobson unit
CFC	–	Refrigerator
El Nino effect	–	Temperature increase
Skin cancer	–	UV-rays

31. Chipko movement is related to conservation of forests in

(1) Garhwal Himalayan (2) South India (3) Rajasthan (4) Gujarat

Sol. Answer (1)

Chipko movement is related to conservation of forest in Garhwal Himalaya.

32. Jhum cultivation leads to

(1) Afforestation (2) Deforestation (3) Soil pollution (4) Conservation of forests

Sol. Answer (2)

Jhum cultivation lead to deforestation.

33. Overcultivation and unrestricted grazing are examples of

(1) Improper resource utilisation (2) Deforestation

(3) Jhum cultivation (4) Greenhouse effect

Sol. Answer (1)

Over cultivation and unrestricted grazing are examples of improper resource utilization.

34. Consider the following statements

a. 40% of the forest has been lost in tropics.

b. JFM was introduced in 1965 by the UNCED.

c. Bishnoi community belongs to Odisha who played a major role in conservation of forest.

d. Chipko movement started in Garhwal Himalayas.

(1) a & c are correct (2) b & c are incorrect (3) c is correct (4) c & d are correct

Sol. Answer (2)

JFM was introduced in India in 1980.

Bishnoi community belongs to Rajasthan.

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