



Blue Print (As per PU Board)

Topic	1 mark questions	2 marks questions	3 marks questions	5 marks questions	Total Marks
Environmental Issues	3	2	-	3	22

One mark questions

1. **Ozone layer in the stratosphere becomes thinner due to release of CFC's. Give a scientific reason for this?**

Answer: UV rays act on CFC's and realise cl atoms which act as catalysts., degrade ozone and releases. Molecular oxygen

2. **What are indicator species? OR what are bio indicators?**

Answer: certain species whose presence or dominance foretell or predict the change in the environmental in the near future

3. **Expand FOAM?**

Answer: Friends of Arcata Maesh.

Two marks questions

4. **Explain the effects of air pollution**

Answer: carbon monoxide pollutant Inhalation of co combines with haemoglobin of blood to form carboxy haemoglobin which reduces O_2 carrying capacity of blood

SO_2 – causes chlorosis, defoliation in leaves.

5. **What is Jhum cultivation?**

Answer: The farmer cut down trees of the forest and burn the plant remains. This ash is used as fertilizer and the land is used for farming or cattle grazing and the area is left for several years to recover since the recovery time is very less today due to increased population it also leads to deforestation.

6. **Define the terms soil erosion and desertification**

Answer: (1) Soil erosion: The process of removal of top most fertile soil is called soil erosion

(2) Desertification: The process of converting fertile land into large uncultivable barren lands is called desertification

Three marks questions

7. **Why is waste considered as hazardous and the major environmental issue?**

Answer: The wastes have increased immensely in the present time due to anthropocentric activities. As the industrialization produces maximum residues the nature is not able to degrade it completely in the given period of time. Hence they accumulate and cause adverse effects to organisms including man. To overcome the havoc, wastes are compressed and buried underground which may be hazardous in the future days. Alternative method is incineration but yet risk of air pollution.

8. **Note on a case study of plastics.**

Answer: Ahmed khan a plastic sack manufacture in Bangalore managed to find the ideal solution to the ever increasing problem of accumulating plastic waste. Polyblend a fine powder of recycled and modified plastic was mixed with bitumen that is used to lay roads. It enhanced water repellent properties and helped to increase road life. Using khans technique by the year 2002 more than 40 kms of road has already been laid.

9. **(a) What is greenhouse effect?**

(b) What are greenhouse gases? Depict

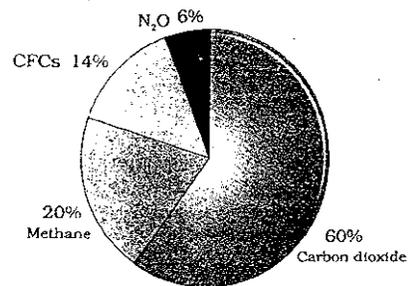


Answer: diagrammatically relative contribution of greenhouse gases to total global warming.

Answer: (a) Greenhouse effect is naturally occurring phenomenon that is responsible for heating of the earth surface and atmosphere due to absorption of incoming radiations by greenhouse gases

(b) The atmospheric gases which are responsible for greenhouse effect like CO_2 , CH_4 are called greenhouse gases

Diagram showing relative contribution of green house gases to total global warming



Five marks questions

10. Describe the participation of people in the conservation of forests in India by taking Bishoni community incident and chipko movement as examples. Add a note on joint forest management

Answer: In 1731, the king of Jodhpur in Rajasthan asked one of his ministers to arrange wood for constructing a new palace. The minister and workers went to a forest near a village, inhabited by Bishnois to cut down trees.

The Bishnoi community is known for its peaceful co-existence with nature. The effort to cut down trees by the kings was thwarted by the Bishoni's

A Bishnoi woman Amrita Devi showed exemplary courage by hugging a tree and daring kings men did not heed to her pleas and cut down the trees along with Amrita Devi. Her three daughters and hundreds of other Bishnois followed her and thus lost their lives saving trees.

Chipko movement: One significant movement in the conservation is the chipko movement of gashwal Himalayas. In 1974, local women showed enormous bravery in protecting trees from the axe of contractors by hugging them. This practise of hugging trees to prevent their felling is called chipko movement

Joint forest management (JFM): Realising the significance of participation of local communities, the government of India in 1980's has introduced the concept of Joint forest management so as to work closely with the local communities for protecting and managing forests and forest resource. In return for their services to the forest, the communities get benefit of various forest products (fruits, gum, rubber, medicine etc.) and thus forest can be conserved in a sustainable manner

11. Explain five effects of water pollution

- BOD:** Release of sewage into water bodies decreases dissolved oxygen by microbes for degradation of organic matter and cause mortality of fish and other aquatic organisms
- Spread of disease:** Sewage contains many pathogenic micro-organisms that spread serious disease like dysentery, typhoid, jaundice, cholera etc.
- Algal bloom:** Presence of large amounts of nutrients in water causes excessive growth of planktonic algae called algal bloom that changes the colour of water and deterioration of water quality and result in fish mortality
- Eutrophication:** Release of nutrients such as nitrogen and phosphorous causes eutrophication which leads to the excessive growth of aquatic weeds like water hyacinth (*Eichhornia crassipes* - Terror of Bengal)
- Bio magnification:** The general increase in the concentration of toxic substances such as mercury, cadmium copper, lead etc at successive trophic levels in food chain is called bio magnification.

12. (a) What is air pollution? Mention its effect and control measures

(b) Write a short note on a case study of controlling vehicular Air pollution in Delhi.

Answer: Pollution of air is called air pollution or atmospheric pollution

(a) Effects of air pollution

- Gaseous pollutants cause acid rain which harms plants and animals
- Ozone depletion, greenhouse effect, global warming
- Co reduces the oxygen supply to the tissues



- Particulate pollutants causes respiratory problems, cancer and damage to CNS in man and in animals

Controlling of air pollution:

- Use of automobiles should be minimized and catalytic converters should be fixed in automobiles
- Pollutant free fuels should be developed for automobiles
- Industries and factories should be located away from human habitation.
- Use of fossil fuels like petrol, diesel coal etc. should be minimized.
- Filters and precipitators should be used in chimney of the factories
- Particulate pollutants can be removed by using scrubbers.

(b) Delhi in 1990, ranked fourth among the 41 most polluted cities in the world. It has the highest concentration of air pollutants in the country. Due to this public interest litigation (PIL) was filed in the supreme court of India under its directives, the government was asked to phase out diesel to compressed natural gas (CNG) by the end of 2002

Advantages of using CNG

- Burns very efficiently unlike petrol or diesel very little remains unburnt.
- It is cheaper and also cannot be siphoned over by thieves
- Cannot be adulterated like petrol or diesel.

Disadvantages of using CNG

- Difficulty is laying down pipelines for delivery of CNG through distribution points.
- Ensuring uninterrupted supply. The stringent rules were laid by government of India to cut down vehicular pollution
- Euro II norms - stipulate that sulphur be controlled to 350 ppm in diesel and 150 ppm in petrol
- Aromatic hydrocarbons are to be contained at 42 % of the concerned fuel
- Bharat stage II equivalent to euro II norms which is already in place in Delhi, Mumbai, Kolkata etc. was to be applicable to all auto mobiles through-out the country by 1 April 2005
- All automobiles should have met euro III norms. Due to all the efforts made, the air quality of Delhi has significantly improved. According to an estimation substantial fall in CO_2 and SO_2 level has been found in Delhi between 1997 and 2005.