

Paper solution

Subject: Environmental Studies

Question Paper No.: GT-3639

Examination: TE Extc. revised Dec. 2010

Q.1

A. Acid rain: -When fossil fuels such as coal, oil, & natural gas are burned, chemicals like sulfur dioxide & nitrogen oxide are produced. These chemicals react with water and other chemicals in the air to form sulfuric acid, nitric acid and other harmful pollutants like sulfate and nitrates. These mixes with rain water are called as acid rain.

Effects:-

1. Washes nutrients in soil
2. Toxic substances like AL, Mercury occur
3. Creating holes in waxy coating of leaves
4. Water reservoirs becomes acidic
5. Effects wildlife which result in distorted food chain

B.

Bioprospecting

Biopiracy

1	Bioprospecting is search for biological resources and accompanying indigenous knowledge--- primarily for the purpose of commercial exploitation	1	Biopiracy is the illegal appropriation of life ---microorganism's plants and animals (including humans) and the traditional cultural knowledge that accompanies it.
2	Bioprospecting identifies	2	Biopiracy is appropri

biological resources and traditiona l knowledg e with commerci al potential	tes these resources and knowledg e without obtaining prior informed consent (PIC) or awarding just compens ation
--	--

C. Cyclone mitigation:-

They are large, revolving, vortices in the atmosphere extending horizontally from 150-1000km & vertically from the surface from 12-14km Avg.5-6 tropical cyclones form in Bay of Bengal & Arabian Sea.

Effects:-

- Winds very strong
- Torrential rains
- High storm tides

Effective mitigation policies:-

- Installation of early warning systems
- Developing communication infrastructure
- Developing shelter belts
- Developing community cyclone shelters
- Constructing of permanent houses
- Training & education
- Land use control and settlement planning

D. Fundamental principals of environment:-

- Productive value of nature

- Aesthetic / recreation value of nature
- Option value of nature

E.

Nuclear fission		Nuclear fusion	
1	Splitting of nucleus of the atom the resulting energy can be used for a variety of purposes	1	Collecting of nucleus of the atom the resulting energy can be used for variety of purpose
2	80% nuclear energy is released	2	1 % nuclear energy is released
3	Occurrence in nuclear reactor	3	Occurrence on sun

F. Sustainable development:-Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It includes social development & economic opportunity on the one hand, and the requirement of the environment on the other.

Sustainable development

Healthy Environment

Healthy People

Q.2

A) Women and child welfare in India:-

Diseases regarding child and women's in India:-

- Pneumonia
- Gastrointestinal condition
- Diarrhea
- Measles

Environmental Studies (GT-3639)

- Malaria
- Poverty - Environment - malnutrition
- Malnutrition
- Uncontrolled reproduction
- Education and socio economic status

Development regarding child and women's in India:-

- Balika samridhdhi Yojana
- Indira Mahila Yojana
- Mahila samridhdhi Yojana
- Rashtriy Mahila kosh
- Short homes for women's and girls
- Integrated child development services(ICDS)
- Balwadi Nutrition program
- Children act 1960in India(Amended in 1997)

B) Causes of global warming:-

- Green house gases
- Industrialization
- Population
- Deforestation
- Fossil fuel combustion

Effects of global warming:-

- Increase temperature 0.3°C per decade
- Flooding of many coastal areas (lands and Iceland's)
- Increase water vapour in area
- Dislocation of agricultural land
- Increase storm

- Increase Health problems

Q.3 A) Effect of water pollution:-

- Physical Effect
- Oxidation Effect
- Toxic chemical Effect
- Chemical nutrients Effect
- Microorganism Effect
- Radionuclide Effect

B) Role of I.T. in Environment:-

- Bioinformatics & osteoporosis
- Role in genome sequencing
- DNA database to government Dept
- WHO maintain there websites with disease information
- Information about new drug on website
- New surgery techniques on internet use by any doctor from world
- Telemedicine and distance medicine is possible

Q.4

A. Public awareness about environment:-

- We can play major role in environment management
- We can reduce wastages of natural resources and we can act as watchdogs that inform the government about sources that lead to pollution and degradation of the environment.
- Public awareness medium: - mass media, newspaper, radio, & TV strongly influence public opinion.
- Politicians in democracy always respond positively to a strong publically supported movement
- NGO make influence politicians to make green policies

- Various activities from student, peoples.

B. **Soil erosion:** - soil erosion can be defined as the movement of surface litter and topsoil from one place to another.

How it happened: -erosion is natural process often caused by wind flowing water it is greatly accelerated by human activities such as farming, construction overgrazing by livestock, burning of grass cover, and deforestation.

The loss of the topsoil makes soil less fertile and reduces its water holding capacity. The topsoil which is washed away, also contributes to water pollution by clogging lakes and increasing the turbidity of the water.

Types of soil erosion: -the ways by soil lost is as

- 1) Water erosion
- 2) Wind erosion
- 3) Landslide or slip
- 4) Stream bank
- 5) Deformation and overgrazing

Q.5 A) Noise: - Noise is undesirable and unwanted sound. Not all sound is noise. What may considered as music to one person may be noise to another. It is not a substance that can accumulate in the environment like most other pollutants

Effect on human health: -

- 1) Auditory effects
- 2) Speech interference
- 3) Sleep interference
- 4) General annoyance
- 5) Task interference(working efficiency)
- 6) Behavioral effects
- 7) Emotional and person logical effects
- 8) Acoustical privacy
- 9) Pathological effects

B. Disaster management: - answer regarding to following points

- Floods
- Earthquake
- Cyclones
- Landslide ,etc

Q 6 A) effect of deforestation:-

- Soil erosion
- Expansion of desert
- Decrease in rainfall
- Loss of fertile land
- Effect on climate
- Lowering of water of table
- Economic losses
- Loss of flora and fauna
- Loss of biodiversity
- Loss of medicinal plants
- Environmental changes

B. Grassland ecosystem: -

1) Types of grassland in India: -

- Himalayan postures
- Terai
- Semi arid plains of western India, central India& Deccan
- Shola grasslands

2) Habitats

3) Food chain, web

4) Biotic and abiotic things

Forrest ecosystem: -

1) Types of forest in India

Environmental Studies (GT-3639)

- Coniferous forest
- Evergreen forest
- Deciduous forest
- Thorn forest
- Mangroves forest

2) Habitats

3) Food chain, web

4) Biotic and abiotic things

Q.7 A) Fifteen principle of environment education: -

1. Need for information
2. Need to change the way in which we view our own environment
3. Need to create concern for our environment
4. For sustainable development
5. For proper utilization of resources
6. For avoid degradation of resources
7. Aware our next generation
8. Increase different values of nature
9. Justice to every living thing
10. Recovery of problematic issues
11. Finding new sustainable resources
12. Finding new sustainable technology
13. Take action as environment friendly
14. Give help to NGO or any person who doing environmental friendly work
15. Economically , environmentally stability

A. Benefits of biological diversity: -

- Timber
- Fishery
- Food

Environmental Studies (GT-3639)

- Medicinal value
- Genetic value
- Tourism
- Poor indigenous people
- Pollution control