LONG ANSWER TYPE QUESTIONS

Q. 1. Discuss the problem of protection of Environment and review in this context the importance of Stockholm Conference of 1972 on the Human Environment.

Ans. The need for the protection of human environment can be legitimately described as the international objective of primary importance. The protection of environment has today gained recognition as the common concern of all the civilized states. Consequently, protection of environment through global and collective efforts constitutes one of the major areas of activity in contemporary times.

The deterioration of environment due to unprincipled use of natural resources, industrialisation, urbanisation, use of pesticides and because of the existence of problems like poverty, poor housing, bad public health, malnutrition and inadequate employment which characterise life in almost all the developing countries, have together compelled the human kind to devise ways and means not only for checking the deteriorating environment but also for recouping the environment through conscious efforts and planning.

All this has given rise to the need for the regulation of behaviour of nations at international level, both for prevention of every future deterioration of environment as well as for the adoption of eco-friendly technologies. This has also given rise to the need to ban certain chemicals and technologies of daily use which have been the main culprits guilty of deteriorating the environment.

The concept of protection of the environment involves the attempt to prevent pollution, particularly global pollution or environmental degradation. One of the accepted rules of International law has been that no state should act in a manner or permit the use of its territory in a way which can be injurious to other states. This rule is taken to mean in contemporary times as the rule which compells every nation not to act in a way as can cause environmental pollution or degradation. Hence it is well within the scope of International Law to enact rules for the protection of environment by all the states individually as well as collectively.

In fact, it was in the 1960s that the humankind began becoming conscious of the need to adopt a convention on Human Environment. On 3rd December, 1968, the UN General Assembly passed a resolution favouring an international conference on human Environment.

STOCKHOLM CONFERENCE ON HUMAN ENVIRONMENT (1972)

Consequently, the UN Convention on Human Environment was held at Stockholm from June 5 to June 16, 1972 and it adopted a Declaration on Human Environment. Seven areas were delimited for securing action directed to protect Human Environment :

1. The Declaration on the Human Environment. The U.N. Conference on the Human Environment 1972 in its section 1 contained the Declaration on the Human Environment. *Starke*, while comparing this declaration with Universal Declaration of Human Rights, 1948, has rightly said, that it "was essentially a manifesto expressed in form of an ethical code intended to govern and influence future action and programmes, both at the national and international levels." The Declaration on the Human Environment stands divided in two parts : The first part contains general observations like man is both creature and moulder of his environment, the protection and improvement of the human environment affects the economic development of the world and the natural growth of population continuously presents problems on the preservation of the environment. The second part of the Declaration contains 26 principles. These principles reflect the fundamental international responsibility of states regarding environmental preservation and pollution control.

2. The Action Plan for the Human Environment. The Action Plan for the protection and enhancement of the environment "was in effect a grouping, in a more or less logical fashion, of all recommendations for international action adopted by the Conference. The Action Plan for the Human Environment was divided into three parts :

(a) An Earth Watch Programme to identify problems of international significance so as to warn against impending environmental crises; (b) Recommendations concerning 'environmental management or in other words the application in practice of what was shown to be desirable or necessary in regard to the environment', and (c) 'Supporting measures' such as education, training, public information and others.

3. The Resolution on Institutional and Financial Arrangements. This resolution recommended the establishment of a 54-member Governing Council for Environmental Programmes. The members of this council were to be elected for three year term on the basis of equitable geographical distribution. However, the U.N. General Assembly on December 1972 established a 58-member Governing Council (instead of 54 members) for Environmental programmes. This Governing Council was directed to keep under review the world environmental situation in order to ensure that emerging environmental problems should receive appropriate and adequate consideration by governments. In order to assist the Governing Council its Executive Director prepares each year a report on the state of the environment. This resolution also recommended the establishment of a small secretariat in the United Nations to ensure a high degree of effective management within the United Nations. The resolution recommended the establishment of a voluntary fund for addition of finances for environmental programmes.

To provide for the maximum efficient co-ordination of UN environmental programmes, the Resolution recommended the establishment of an Environmental Co-ordinating Board.

4. **Resolution on Designation of World Environment Day.** In order to create consciousness among the people for the environmental problems, the Resolution on World Environment Day unanimously recommended that a World Environment Day be observed on 5th June each year.

5. **Resolution on Nuclear Weapon Tests.** A resolution in plenary session condemned nuclear tests, especially those carried out in the atmosphere and called upon states to refrain from conducting such tests as contaminated the environment.

6. **Resolution on Holding of a Second Conference on Environment.** The Resolution recommended that U.N. General Assembly should take initiative to convene a second UN conference on the Human environment at an appropriate time.

7. **Decision to refer to Governments Recommendations for Action at the National Level.** The Stockholm Conference on Human Environment also referred to state governments recommendations for action at the national level.

Besides these measures, the conference recommended that the draft articles of a convention on Ocean dumping be referred for adoption to a conference to be convened by the United Kingdom towards the end of 1972.

Some of the decisions and recommendations of the Stockholm Conference were implemented by the resolutions of the UN General Assembly in its 27th session in 1972. Through one of these resolution, Resolution 2997 (XXVII), a 58-member governing council for the UN Environmental Programmes (UNEP) was established. It was to hold annual sessions. It was to act as leader, catalyst, stimulator and co-ordinator for the environmental action centres being located in different parts of the world. It was to get effected and supervise the implementation of the resolutions and recommendations of the Stockholm Conference as well as of the UN General Assembly.

After the Stockholm Conference and the subsequent establishment of UNEP, a global environment protection movement began taking shape. The Habitat – the UN conference on Human Settlement, provided a great help in this direction.

1975 Ratification of Global Conventions Concerning Environmental Protection

The year 1975 witnessed a big push forward for the environmental protection movement when seven important global conventions were ratified by a number of states. These were :

(1) The Convention on International Convention on International Trade is endangered species of Wild Fauna and Flora (1973).

(2) The Convention on Wetlands of International importance especially as waterfall Habitat (1971).

(3) The Convention concerning the protection of the World Cultural and Natural Heritage (1972).

(4) The International Convention relating to Intervention on the High Seas in cases of Oil Pollution Casualities (1969).

(5) The International Convention on Civil Liability for Oil Pollution Damage, 1969.

(6) The Convention for the prevention of Marine Pollution by Dumping from Ships and Air-crafts (1973).

(7) The Convention for the Prevention of Marine Pollution by Dumping of Wastes and other Matter (1972).

In 1982, the tenth Aniversary of the Stockholm Conference was celebrated and the Nairobi Declaration was adopted. The commitment to observe and implement the decisions taken at the Stockholm Conference was reaffirmed. The UN Convention on the Law of the Seas 1982 also contained provisions for the protection of marine environment. The Earth Summit held at Rio De Janerio 1992 did a good job in strengthening global awareness and efforts towards the preservation of global environment and protection of our planet mother Earth.

Global Climate Change Meet 1997. In January 1997 a three day meet on global Climate change was organised by the Development Alternatives, an NGO, under the UN Framework Convention on Climate Change for developing countries at New Delhi. It explored the possibilities of business collaboration between developed and developing countries for solving problems of poverty, environment and resource management. Ways and means needed for checking the emmission of Green House Gases (GHG) were discussed. It was agreed that a reduction in fuel consumption was the immediate need.

Earlier the first issue of the biennial Global Environment Outlook (GEO) was released in Nairobi, in January 1997. It identified seven major environmental trends in seven regions of the world and called upon the people to give immediate and crucial attention to an effective global environmental governance.

March 1997 Meet of AEC of ELCI. The Alternative Environment Congress (AEC) of the Nairobi based Environment Liaison Centre International (ELCI) was held at Tilonia (Rajasthan) in March 1997. It was attended by 100 environmentalists from 38 countries, who gave a call for delineation of a sustainable and practical approach towards environment protection involving people at the grass root level.

The Kyoto Meet on Climate Change. The Third Conference of the parties to the UN Framework Convention of Climate change was held in Kyoto, Japan, from December 1 to December 11, 1997. One hundred and fifty countries participated in this meet and attempted to draft a treaty that would initiate definitive, tangible and time bound steps to limit the emission of six green houses gases (like CFC) that cause global warming. The failure of the post 1992, *i.e.* post-Earth Summit at Rio de Janerio years to produce something substantial for reducing the emission levels of green house gases had made this Kyoto summit very crucial.

However, at the 11-day Kyoto meet also serious differences nay dissensions appeared between the developed countries on the one hand

and developing countries on the other. The European Union agreed for a 15 per cent reduction and Japan called for a 2.5 to 5 per cent reduction in emission level of GHG (Carbon Dioxide, Nitrious Oxide, Methane, HFCS, PFC and Sulphur Hexafluride). After initial hiccups, the USA offered to make a 5 per cent reduction in emission level provided the developing countries also accepted such a norm. The developing countries wanted that the polluters *i.e.* the developed countries should foot the costs.

After much debates and bargaining the Kyoto protocol was adopted.

KYOTO PROTOCOL (1997) : MAIN FEATURES

After much bargaining and many compromises, the final Kyoto Protocol was adopted on December 11, 1997. The main features of the Protocol were as under :

1. 'Annex 1' countries to reduce emission levels by an average of 5.2 per cent relative to levels prevailing in 1990. (The Annex 1 countries include the 24 original members of the Organisation for Economic Co-operation and Development, members of the EU and 11 Eastern European countries.) Broadly, the US was to cut emission levels by 7 per cent by the year 2012; the 15–member EU by 8 per cent; Canada by 6 per cent and Japan by 6 per cent by the same time. Russia was to stabilise emissions at its 1990 levels; Australia was to be allowed to increase its emission levels by 8 per cent over the same period.

2. Countries of the deveoping world were exempted from making targeted reductions but were to measure their emissions.

3. Cuts were to apply to all six greenhouse gases.

4. The commitment period was to be 2008 to 2012.

5. Inclusion among the cuts of sources and removals of defined 'sinks' or carbon absorbent material was limited to afforestation, reforestation and deforestation since 1990 (US proposal).

6. Acceptance of emissions trading, joint projects implementation and the Clean Development Mechanism (CDM) toward fulfilling emission cuts was udertaken. These three aspects called for 'voluntary' participation from non-Annex 1 or developing countries. The CDM, along with emission trading and joint implementation, was defined in the protocol for funding of project activities in developing countries for mitigating climate changes, that would allow the developed countries to gain credit for investing in developing countries. It was however, not clear whether the CDM would be operated by the World Bank or the Global Environment Facility.

7. There was a complete absence of any mechanism to ensure compliance with commitments or punitive measures. These were to be considered at the next meeting (COP4) in Buenos Aires in 1998.

The Protocol became open for signature by parties between March 1998 and March 1999. It was to be ratified by at least 60 countries and was to be binding on all Annex 1 countries.

Buenos Aires Convention on Climate Change 1998. The fourth session of the Conference of the Parties of the UN Framework

Convention on Climate Change (COP4) was held from November 2-14, 1998 at Buenos Aires, Argentina. The conference was convened primarily to discuss the implementation of the Kyoto Protocol of 1997. The Kyoto Protocol prescribed targets for reduction of emission levels in the case of six GHGs by industrialised nations, which were mentioned in Annexe 1 of the protocol.

COP4 considered communications from various parties detailing national positions on various parameters related to the emission of GHGs, and discussed issues relating to the transfer of technologies, particularly those related to the energy sector. It also debated the three controversial 'flexible mechanisms' Clean Development Mechanism, International Emission Trading, and Joint Implementation. However, the politics and economics of global warring which played a crucial role at Kyoto, continued to dominate the proceedings at Buenos Aires.

Issues raised by the US at Kyoto also burdened the agenda at Buenos Aires. At Kyoto, the US had accepted a 7 per cent cut in the 2008-2012 levels relative to emission levels in 1992. Environmental groups estimated that the US emission levels in 2010 could actually be 20 per cent higher than the 1992 levels. Bargaining by the US had resulted in multiple loop holes in the agreement. The International Emission Trading Regime, for which the US had been vociferously advocating, allowed less polluting countries to sell their quotas to more polluting ones.

The Clean Development Mechanism (CDM) provided for government and private participation to undertake emission reduction. The Joint Implementation scheme allowed parties to take credit for emission abatement projects.

At this conference, the US adopted a hardline market-friendly approach, rebuffing the demands of developing countries led by the G-77 and China that technology transfers be made easier so that objectives of the convention may be achieved.

China, and later India, demanded that distinction be maintained between the luxury emissions' of developed nations and the 'survival emissions' of developing nations.

The question of voluntary commitments for developing countries was raised again at Buenos Aires. Althouth Argentina introduced this in the agenda, the developing countries led by the G-77 and China strongly opposed this. The announcement by Argentina and Kazakistan to assume commitments unilaterally, threatened to split the cause of the developing countries. As such the Kyota Protocol remained virtually unratified. Two more environment meetings were held in November 2000 (at Hague) and July 2001 (at Bonn). However, agreement over Kyoto Protocol could not be effectively reached. But at the same time OECD was successful in adopting environment strategy for first decade of the 21st century. On May 22, 2001 officials from 90 countries signed in Stockholm a UN Treaty under the UN Environment Programme (UNEP). It was aimed at curbing the use of some of the most dangerous and toxic chemicals like aldrin, chlordane, DDT, dieldrin, endrin,

heptachlor mirex, toxaphene, polychlorinated biphenols, hexachorobenzene, dioxin and furans—the dirty dozen chemical pollutants mostly used as pesticides. The treaty tried to regulate the production, import, export, disposal and use of toxic chemicals. It created a strong international control regime in respect of these harmful chemicals.

Protection of Environment continues to be a priority item on the agenda of the 21st century. The most healthy and positive development in the drive towards environment protection has been the increasing human consciousness in favour of this primary objective. The concept of sustainable development, which has found a universal support, also reflects the human commitment to check environmental pollution and to develop and adopt environment-healthy technologies.

Q. 2. Write the types of pollution. Give environmental dimensions between North and South.

Ans. The present pattern of exploitation of the world's resources and resultant environmental problems have started depriving us of the precious gifts of nature. The resources of the planet are fast approaching exhaustion. The post World War triggered massive expansion in world trade and man's harmful impact on environment was manifold. Virtually every aspect of modern existence of man inflicts severe environmental damage in one form or the other upsetting the equilibrium between man and nature. The major areas of concern are as follows :

Land and Ground Pollution

Land pollution is mainly caused by solid waters and chemicals. Disposal of farm and animal manure, agricultural wastes, industrial wastes like flash and cinders, residues of soil like plastics, tin, rubber, glass, demolition of buildings, dead animals, leather remnants, discarded products like automobile and refrigerators form huge quantities of unwanted material some of which is non-biodegradable.

Many chemicals emitted in the air like sulphur, lead etc. also pollute soil. Use of chemical fertilizers and pesticides applied by aerosol sprays also hamper soil regeneration without preventing crop pestilence. Plant and animal life is also disrupted. Many pesticides like chlorinated hydrocarbons, DDT, DDE and DED and Dioxin have been used extensively to control destructive insects and weeds. These chemicals have a high degree of stability and are non-degradable pollutants or degrade over a very long period of time thereby, seriously contaminating the soil and global ecosystem. The dumping of toxic wastes also causes ground pollution. Such practices have to be stopped and governments need to act.

Water Pollution

Water is of paramount importance and rightly considered to be the nectar of life. Despite its abudance, with the increase in population even this vast resource has come to exist as a scarce commodity. Urbanization brings about changes in eecological equilibrium and breeds pollution. Pollutant input load into the lentic and lotic waters is growing beyond

comprehension. Aquatic ecosystems have the ability to assimilate certain amount of wastes material and maintain normal function. But hazardous pollutant spills of substances from industries, domestic-urban sewage and agricultural washouts have assumed alarming dimensions. It is well known that rivers, lakes, ponds and streams consituting surface bodies of water are often used and re-used repeatedly by municipalities, industries and agricultural sector before the water finally flows into the sea. Deep sea dumping of toxic wastes also harms the vast oceans and sea. Water treatment processes effectively reduce the quantities of pollutants but continued pollutant spills tend to degrade water quality.

Air Pollution

Dealing with air pollution is most urgent on man's agenda. Plants, animals and human beings are subjected to alarming increase in total amount and complexity of toxic pollutants. While during the first half of the century particulate matter and sulphur dioxide in smoke constituted main pollutants, a wide spectrum of gases, particulates and biological material has made the scenario grim. Individually and synergistically, such toxic substances and biological materials adversely effect man's health and well being. The polluting substances poison our air and its intake during respiration is most likely to cause respiratory disorders and other diseases. The foul air corrodes metals and building materials and adversely affects industrial units, automobiles and aircrafts. Air is undoubtedly an environmental commodity or very wide implications in environmental quality, maintenance of ecological balance, and survival and continuance of life on this planet. Industrial growth and development, and use of atmosphere for transport and disposal of wastes has reached a peak leading to acid rain. The exploitation of air for military purposes and global supremacy has added to air aberrations. Since growth, development, industralisation and strategic military interests with wide implications in global economy are linked with air, its tailoring, fashioning, exploitation and planning in the political process has become crucial.

Atmosphere Pollution

The atmospheric pollution affecting man's life refers to the upper two layers of the atmosphere. Atmospheric pollution in this text is dealt in three aspects. (1) Global warming, (2) Ozone depletion, (3) Acid rain. Global warming is emission of pollutant gases in the air which alter the heating rates in the atmosphere causing the average temperature of the globe to rise.

The developed world accounted for nearly 80 percent of the total industrial carbon dioxide emission in 1985 and the rest of the 20 per cent originated in the developing world. Moreover, 98 per cent of the chlorofluorocarbons (CFCs) are produced in the rapidly changing world. According to a study in 1980 the U.S. is the largest contributor of CFCs, with developing world contributing just two per cent.

Effects of global warming include an unprecedented rise in global sea levels to the extent of 8 to 25·5 inches by the end of the century if gas

emissions continue at the present rate. Melting of polar ice and glaciers, thermal expansion of seas would cause worldwide coastal flooding, inundation of vast tracts of lands by permanent surging seas, and accelerated erosion of shoreline and beaches. Submerging of coastal wet land is likely to effect the commercial productivity of fisheries. The increase in elevation of the oceans will seriously effect 50 per cent of the earth's population that inhabits the coastal region which might reduce them to ecological refugees. A meter rise in Bangladeh would inundate 11.5 per cent of the country's land displacing 112.3 million people and flooding an area of 12 to 15 per cent of Egypt's arable land in the Nile delta, while another increase by half a meter would submerge 30 to 80 per cent coastal wet land of the United States, which contribute to the fisheries industry. Commercially, such a situation will have socio-economic repercussion. Agricultural production the world over may fall steeply. Projections for rising inland droughts, parched soils, massive heat waves like the one which devastated the American Midwest in the summer of 1988 are consistent in computer models. The temperature increases in Southern Europe and Central North America will be higher than average and will result in reduced rainfall and soil moisture in summer. Tropical climates could suffer severe consequences too.

Global warming if unchecked, is likely to emerge as a major political adversary causing unpredictable disruptions amongst nation states, regionally and globally exacerbating the risk of war. Existence of warm stable climate is also an essential adding to the nation's strength and power. A shift in climate change can virtually upset the strength and productivity of a nation's power.

Regional problems could crop up amongst proximate states if there is loss of low-lying territory, inundation of vast lands by seas resulting in an unprecedented rise of ecological refugees. Comptition over territory and natural resources by them could increase regional tensions.

The world political balance would destabilize unpredictably if the major powers of the world started taking sides in such showdowns generated by green-house driven effects. Indeed there is already evidence that even if the atmospheric composition stabilized as today, the atmosphere was already committed to an additional warming over the next fifty years. However, the early application of existing and emerging technologies can reduce the commitment to global warming, if not eliminate it in the first quarter of the 21st century. The Montreal protocol was a step in this direction. (Vandana, 1992).

Ozone Depletion

The thinning of this layer has generated global concern. For a long time the chemicals that are presently doing utmost damage to the ozone layer were regarded as prodigal, uniquely useful to industries and of no harm to man and environment alike. It was a common belief that neither the seas, land or air we breathe will be polluted nor will it react with other substances in the biosphere. Chlorofluorocarbons (CFC's) are inert substances inexpensive, stable, non-inflammable, non-toxic, easy to