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Batch : 63

Subject : English Essay.

Plz c time u need to curtail material for three hours

English Essay.

→ Q.6.

Global Warming is an expensive hoax.

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Outline

1. Introduction

1.1. Change in climate due to increase in temperature.

1.2. Industrial Revolution and the use of fossil fuels.

1.3 Role of Inter-governmental Penal on climate change (IPCC)

1.4 IPCC 2023 report on climate Change.

2. Causes.

2.1. Industrial Revolution and setting up industries

Single word do not reflect any sense plz make proper phrases

2.2 Use of Greenhouse gases.

2.3 Deforestation.

2.4. Release of chemicals and other gases.
2.5. Plate tectonic
2.6. Depletion in Ozone layer
2.7. Solar energy
2.8. Volcanism
3. Eff
3.1. Increasing global temperature.
3.2. Thawing glaciers
3.3 Rising Sea le
3.4 Warmest y
3.5 Relentless hurricanes, typhoon, Cyclone, etc
3.6 Heavy rainfalls.
3.7 Higher temperature and Process of decomposition.
3.8 Growing long Season
3.9 Losing Earth Fertility.
4. Combating Global Warming.
4.1. Combating global temperature.
4.2 Earth Summit 1992
4.3 Kyoto Protocol 1997
4.4 Bali Summit 2007
4.5 Copenhagen Summit 2009
4.6 Fifth IPCC 2014 Report

4.7. Paris [illegible] 2015

4.8. Morocco Summit 2016

4.9. Bonn Conference 2017.

4.10. Santiago Conference 2019

4.11. COP 27, Egypt 2022

4.12. COP 28, UAE 2023.

5. How is Pakistan affected by climate change?

5.1. Heavy rainfalls

5.2. Melting of glaciers and floods.

5.3 Extreme weather in winter and summer.

5.4 Rising of sea levels of Indian Ocean.

5.5 Loss of infrastructure, human losses.

5.6 Floods and impact on economy.

5.7 Least contributor towards global warming but hard hit.

6. Solutions.

6.1. Reduction of fossil fuels.

6.2 Growing more forests.

6.3 Using of alternative source of energy.

6.4. Introduction zero carbon technology.

6.5 Green transportation

6.6 Geothermal energy.

6.7 Solar energy

6.8. Latest Technology.

7. Conclusion.

In three hours essay such lengthy outlines are hard to cover

Essay

"We face a true planetary emergency. The climate crisis is not a political issue, it is a moral and spiritual challenge to all of humanity.

(Al Gore Nobel Peace Prize Winner 2007)

Global warming is the expected slow, gradual warming of the lower layers of the Earth's lower atmosphere by the increasing concentrations of man-made greenhouse gases, primarily carbon dioxide, and to a lesser extent methane. These gases trap infrared radiation, which is the "heat radiation" that cools the Earth. The burning of fossil fuels, mainly petroleum and coal, produces carbon dioxide as one of the by products. As of 2003, the concentration of

carbon dioxide is over 50% higher than it was before the start of the Industrial Revolution in the late 1800s. This has become a major threat to all forms of life on earth and the situation is worsening each passing day.

In view of the devastating effects that global warming has started to have on life, the problem has become a global concern forcing attention from all concerned. To bring all the information together, the United Nations formed a group of scientists called International Panel on Climate Change (IPCC). The January-September global surface temperature ranked the warmest in the 175-year record at 1.28°C above the 1901-2000 average of 14.1°C. According to NEERI's statistical analysis, there is a 99.8% chance that 2025 will rank as the

warmest year on record. Following are the impact of global warming on people and ecosystem.

1. Every 0.5 degree C of global temperature rise, for example, will cause clearly discernible increases in the frequency and severity of heat extremes, heavy rainfall events and regional droughts.
2. About half of the global population currently contends with severe water scarcity for at least one month per year.
3. 950 million people across the world's dry lands face compounding water stress, heat stress and desertification.
4. According to the IPCC, developing countries alone will need $127 billion per year by 2030 and $295 billion per year by 2050 to fight with the Climate change.
5. The IPCC finds that there is a more than 50% chance

the global temperature rise will reach or surpass 1.5 degrees C between 2021 and 2024. Following are the causes of global warming:

More and more industries and factories are set up in this modern world to meet the needs of human beings. These big factories need large amount of fuels like coal, petroleum for power and electricity required by the machines to work. Burning of these fuels release large amount of carbon dioxide which absorbs the [illegible] sun making it [illegible].

One of the first things scientists learned is that there are several greenhouse gases responsible for warming, and man-made vehicles emit them in a variety of ways. Most come from the combustion of fossil fuels in cars, factories and electricity production. The [illegible]

the most warming is carbon dioxide, also called CO_2. Other contributers include methane released from landfills and agriculture, nitrous oxide from fertilizers, gases used for refrigeration and industrial processes, and the loss of forests that would otherwise store CO_2. Naturally occuring greenhouse gases ha[illegible] mean warming effect of a[illegible] The major greenhouse gases are water vapour, which causes about 36-70 percent of greenhouse effect, carbon dioxide (CO_2), which causes 9-26 percent, methane (CH_4) which causes 4-9 percent, and Ozone (O_3) which causes 3-7 Percent.

Fossil fuels are burned on a day-to-day basis and they contain high percentage of carbon, Coal and Petroleum and many other gases. So burning of these fuels release large amount of [illegible] carbon which has entombed inside the [illegible]

The Carbon that is emitted by burning these fuels is the extra carbon which is not a part of the cycle. So, Carbon dioxide being the greenhouse gas is provided in excess in the atmosphere which again leads to global warming.

The use of forests for fuel is one cause of deforestation, but in the first world, our appetite for wood and paper products, our consumption of livestock grazed on former forest land, and the use of tropical forests lands for commodities like palm oil plantations contributed the mass deforestation of our world. Forests remove and Store carbon dioxide from the atmosphere, and this deforestation release large amount of carbon dioxide, as well as reducing the amount of Carbon capture on the planet. Deforesting increases the severity of global warming as well.

Carbon dioxide released from the human conversion of forests and grasslands into farmland and cities. All living plants store carbon dioxide. When these plants die and decay, carbon dioxide is released back into the atmosphere. As forests and grasslands are cleared, enormous amounts of stored carbon enter the atmosphere.

In the last half of the 20th Century, the use of chemical fertilizers has risen dramatically. The high rate of application of nitrogen-rich fertilizers has effects on the heat storage of cropland, and the run-off of excess fertilizers creats 'dead-zones' in our oceans. In addition to these effects, high nitrate level in groundwater due to over-fertilization are cause for concern for human health.

Over the course of millions of years, the motion of tectonic plates reconfigures global land and ocean areas and generates topography.

This can affect both global and local patterns of climate and atmosphere ocean circulation. The topography can influence climate. The existance of mountains can cause orographic precipitation. Humidity generally decreases and diurnal temperature swings generally increase with increasing elevation. Mean temperature and the length of the growing season also decrease with increasing elevation.

The ozone layer is the layer outside atmosphere which protects the surface of the Earth from the harmful ultraviolet and infrared radiations causing dangerous diseases like skin cancer. Ozone layer depletion is also one of the causes of global warming, entering of harmful gases which helps in heating up the earth but other greenhouse gases like carbon dioxide, methane, that helps in heating up and also tear up the ozone layer making an "Ozone Hole". Mostly the CFCs

damage the ozone layer so the Ozone layer depletes due to these gases which allow the UV radiations to enter the earth making the earth more warm than normal and affects the temperature leading to global warming.

Over the following approximately 4 billion years, the energy output of the sun increased and atmospheric composition changed, with the oxygenation of the atmosphere being the most notable alteration. The luminosity of the sun will continue to increase as it follows the main sequence. These changes in luminosity and the sun's ultimate death as it becomes a real giant and then a white dwarf, will have large effects on climate, with the red giant phase possibly ending life on earth.

Volcanism is a process of conveying material from the crust and mantle of the earth to

its surface. Volcanic eruptions, geysers, and hot springs are examples of volcanic processes which release gases and particules into the atmosphere. Eruptions large enough to effect climate occur on average several times per century, and cause cooling for a period of a few years. The eruption of Mount Pinatubo in 1991, the second largest terrestrial eruption of the 20th century affected the climate substantially.

Presently, the scientific consensus on climate change is that human activity is very likely the cause for the largely shifed onto ways to reduce further human impact and to find ways to adapt to change that has already occured. Of most concern in these anthropogenic factors is the increase in CO_2 levels due to emissions from fossil fuel combustion, followed by aerosols and cement manufacture. Other factors, including land use, ozone depletion, animal

agriculture and deforestation, are also of concern in the roles they play both separately and in conjunction with other factors in affecting climate.

Following are the effects.

1. Global temperatures will increase between 2 and 11.5 degrees Fahrenheit by the end of the century over Pre-industrial levels.
2. A best-guess temperature rise is between 2.2 and 7.1 degrees Fahrenheit, though the high end remains possible.
3. Sea levels are projected to rise between 7 and 23 inches by the end of the century.
4. If recent melting in Greenland and Antarctica continues, sea levels could rise an additional 4 to 8 inches.
5. Temperature and sea levels will continue to rise for centuries even if greenhouse gas emissions are stabilized today.

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6. Eleven of the last [illegible] years rank among the 12 warmest years in the instrumental record, which stretches back to 1850.

7. Observational evidence suggests an increase in strength in the North Atlantic since 1970 that correlates with an increase in sea surface temperature.

8. In some projections, Arctic sea ice will disappear in the late summer by the later part of this century.

9. It is very likely that hot extremes, heat waves, and heavy rains will continue to become more frequent.

10. The Gulf Stream, which brings warm waters to the North Atlantic, may slow.

11. Higher air temperature will also be felt in the soil, where warmer conditions are likely to speed the natural decomposition of organic matter and to increase the

rates of other soil processes that affect fertility.

12. Conditions are more favourable for the proliferation of insects pests in warmer climates. Longer growing seasons will enable insects such as grasshoppers to complete a greater number of reproductive cycles during the spring, summer, and autumn.

In recognition of the threats mentioned above, the world is trying to respond to the phenomenon of global warming and is slowly but surely taking necessary steps. In this regard, several international forums are of key importance. The United Nations Conference on Environment and Development was held in 1992 known as Earth Summit 1992. One hundred and seventy-two governments participated, with 108 sending their heads of state or government. The issues addressed included:

1. Systematic scrutiny of patterns of Products, particularly the production of toxic components, such as lead in gasoline, or poisonous waste including radioactive chemicals.
2. Alternative sources of energy to replace the use of fossil fuels which are linked to global climate change.
3. New reliance on public transportation systems in order to reduce vehicle emissions, congestion in cities and the health problems caused by polluted air and smog.
4. The growing scarcity of water.

An important achievement was an agreement on the climate change convention which in turn led to the kyoto protocol.

The kyoto Protocol is a Protocol to the United Nations Framework Convention on Climate Change (UNFCCC), aimed at fighting global warming. The UNFCCC is an international environmental treaty with the goal

of achieving the "stabilization" of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." The Protocol was initially adopted on December 11, 1997 in Kyoto, Japan and entered into force on February 16, 2005. Under the Protocol, countries commit themselves to a reduction of four greenhouse gases and two groups of gases produced by them and all member countries have generel Commitments. These countries agreed to reduced their collective greenhouse gas emissions by 5.2% from the 1990 level Emission limits do not include emissions by international aviation and shipping, but are in addition to the industrial gases, chlorofluorocarbons, which are dealt with under the 1987 Montreal Protocol on substances that Deplete the Ozone layer.

The 2007 United Nations Climate change Conference 2007 took place at the 2nd International

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Conference Centre, Nusa Dua, in Bali, Indonesia, from December 3-15, 2007. Participants from over 180 countries attended, together with observers from intergovernmental and non-governmental organizations. The conference encompassed meetings of several bodies, including the thirteenth Conference of the Parties to the United Nations Framework Convention on climate change, the 3rd meeting of the Parties to the Kyoto Protocol, together with the other subsidiary bodies and a meeting of ministers. Negotiations on a successor to the Kyoto Protocol dominated the conference. A meeting of environment ministers and experts held in June called on the conference to agree on a road-map, timetable and concrete steps for the negotiations with a view to reaching an agreement by 2009. It has been debated whether this global meeting on climate change has achieved anything significant at all.

Initial EU Proposal called for global emissions to peak in 10 to 15 years and decline "well below half" of the 2000 level by 2050 for developing countries and for developed countries to achieve emissions levels 20-40%.

The United Nations Climate Change Conference took place at the Bella Centre in Copenhagen, Denmark, December 18, 2009 known as Copenhagen Summit 2009. According to the Bali Road Map, a framework for climate change mitigation beyond is to be agreed there. The Key Points of the Copenhagen Accord are following:

1. A commitment to reduce global emissions in order to limit the increase in global temperature to below 2°C and to achieve the peaking of global and national emissions as soon as possible.
2. Developing countries must make commitments to reduce greenhouse gas emissions, and developing

Countries must report their plans to curb greenhouse gas emissions to the UN.

3. New and additional resources, totaling nearly $80 billion, will be allocated to poorer nations. Additionally, it is expected that an annual amount of $100 billion will be provided to these countries in the near future to support their development and address various challenges.

4. A Copenhagen Green Climate fund will be established under the UN Convention on climate change, to direct some of the money to climate-related projects in developing countries.

5. Projects to reduce greenhouse gas emissions in developing countries will be subject to international monitoring if they are internationally funded.

6. Implementation of the accord will be reviewed and an assessment will be made of whether the goal of keeping global temperature rise within 2°C needs to be strengthened to 1.5°C.

The essential points of the deal were brokered by US President Barack Obama with representatives of China, India, Brazil and South Africa. Mr. Obama also consulted with the leaders of France, Germany and the UK. Most countries at the conference gave it their support, but some countries were resolutely opposed, including Venezuela, Bolivia, Ecuador and cuba.

A Primary focus of the Durban conference was to secure a global climate agreement as the Kyoto Protocol's first commitment Period was about to end. It was also expected to focus on "finalising at least some of the [illegible] Agreements" reached at the 2010 conference, such as 'co[illegible]operation on clean technology', as well as forest protection adaptation to climate impacts, and finance, the Promised transfer of funds from rich countries to poor in order to help them protect forests, adapt

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to climate impacts, and green their economies.

The Intergovernmental Panel on climate change published its Fifth Assessment in 2014, summarising the work of thousands of scientists across the world. The message was, in the panel's own words, "unequivocal" concentrations of carbon dioxide and other greenhouse gases are now higher than they have been for nearly a million years, long before human society began. The burning of fossil fuels is the main reason behind this increase. Without strong action, temperatures are very likely to exceed the 2°C target that governments have agreed to. This will [illegible] consequences including sea level rises, heatwaves, loss of snow and ice cover, disruptions to agriculture and food production, and greater extremes of drought and rainfall.

In its 2013 report, for the

first time the IPCC put [redacted] the total amount of Carbon that can be emitted, [redacted] target [redacted] would require the emission of no more than 880 gigatonnes of Carbon. This is, in effect, a global Carbon budget. Yet, by 2011, 531 gigatonnes, or nearly two-thirds of the total budget, had already been spent. Emissions must peak soon, and then decline steeply, to stay within the 2c limit.

At the Paris summit in December 2015, 196 countries met to sign a new climate change agreement. But how likely is it that it will be meaningful and make a difference to climate change action on the ground? Not only is a deal possible but, with the right political leadership, it can lead to ambitious outcomes that will have real impact on tackling climate change. Parties to the UN Framework Convention

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on climate change reached a landmark agreement on December 12 in Paris, charting a fundamentally new course in the two-decade-old global climate effort.

Culminating a four-year negotiating round, the new treaty ended the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to their best efforts and to strengthen them in the years ahead. It includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts, and undergo international review.

The agreement and a companion decision by Parties were the key outcomes of the conference, known as the 21st session of the

UNFCCC conference of the Parties.
Together, the Paris Agreement and the accompanying COP decision outline the following goals:

Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees.

Establish binding commitments by "parties to make" nationally determined contributions and to pursue domestic measures aimed to achieving them.

Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs and to undergo international reviews.

Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new higher goal to be set for the period after 2025.

In Bonn conference on climate

Climate change 2017 which was held in Bonn, Significant Progress was made on the so called implementation guidelines for the Paris Agreement commonly known as the Paris Rulebook. which are the details that will determine how the Agreement will work in practice. COP23 resulted in the Fiji Momentum for Implementation, which reinforced the need for urgent action and increased ambition Parties will need to finalise the implementation guidelines at COP24.

At COP23, the Fijian Presidency announced its approach to the Talanoa Dialogue known formerly as the facilitative Dialogue. The Talanoa Dialogue is an inclusive and participatory Process designed to allow countries to access the Progress made so far toward achieving the long-term of the Paris Agreement, and to help them increase the ambition of their Nationally Determined

Contributions by 2020. The Talanoa Dialogue is a precursor to the global stocktakes that will take place every five years, beginning in 2023.

A rift began to emerge between developed and developing countries over Pre-2020 action. On the first day of the conference, developing countries, including China and India, asked for an agenda item to discuss this issue, which refers to the emission cuts that developed countries are required to make prior to 2020 under the Kyoto Protocol. Developed countries resisted this request, arguing that this issue was best discussed in other forums. In the [illegible] Parties agreed to hold additional [illegible] dialogue sessions in 2[illegible] and [illegible] review [illegible] progress on reducing emissions, as well as produce two assessments on climate finance in 2018 and 2020. Several European countries, including the United Kingdom, Germany and Spain, ratified the Doha Amendment

during COP23. Also during COP23, Syria announced that it would sign the Paris Agreement, leaving the United States as the only country that has rejected the pact.

The COP27 climate summit in Sharm el-sheikh, Egypt concluded with a historic breakthrough to help vulnerable countries deal with losses and damages from the impacts of climate change. But the talks also disappointed many stakeholders by not taking any significant new steps to curb emissions, which are critical to limit temperature rise to 1.5 degrees C. and avoid a far more dangerous world.

In COP28 [illegible], a rapid decarbonisation of the energy system is the key to keeping the goal of 1.5°C within reach. The Global cooling Pledge for COP28 includes 66 national governmental Signatories committed to working together with the aim of reducing

cooling-related emissions across all sectors by at least 68 per cent globally relative to 2022 levels by 2050.

whereas effects the Pakistan are concerned, following are below:

According to the Karachi Tidal station, an increase in the mean sea level at a rate of 1.1 mm/yr has been recorded during the past 100 years. The avaging sea continues to engulf the surrounding land, and consumes 80 acress a day on an averag. Six subdivisions of Thatta, which were previously considered extremely properous due to extensive agriculture are now amongst the poorest parts of the country due to the engulfment by the sea.

As an ill effect of global warming, the annual mean surface temperature in Pakistan has been steadily increasing during the past century. A rise in mean temperature of 0.6-1c in the coastal area along with a 0.5 to 0.7% increase in solar radiation

over southeen half of country has been observed.

Pakistan's economy has been crippled heavily by devastating and repetitive floods during the last decade. In the past 10 years, Pakistan has been hit by floods almost every year. However, the floods of 2010 and 2011 have emerged as the biggest catastrophes in the country's history. The flood resulting in approximately 1,781 deaths, injured 2,966 people and destroyed more than 1.89 million homes.

A drought is a period of abnormal dry weather due to the lack of rainfall. The chief characteristic of a drought is a decrease of water availability in a particular period and over a particulary area. Pakistan's economy has been affected heavily by the continuous spell of droughts for the last many years, particularly in the provinces of Balochistan and Sindh. The drought in these areas

has reduced the river flows, resulting in drying up of the irrigation canals, leading to a severe agricultural deprivation.

Following are the suggestions to tackle global warming:

Dramatically reducing our use of fossil fuels, especially carbon intensive coal, is essential to tackle climate change. There are many ways to begin process. Key action steps include not building any new coal burning power plants, initiating a phased shutdown of coal plants starting with the oldest and dirtiest, and capturing and storing carbon emissions from power plants. While it may sound like science fiction, the technology exists to store carbon emissions underground.

Taken together, tropical deforestation and emissions from agriculture represent nearly 30 percent of the world's heat-trapping emissions. We can fight global warming by reducing emission

from deforestation and forest degradation and by making food production practices more sustainable.

Using alternative sources of energy is more clean and renewable. They are least effects if we produce electricity from alternative sources of energy. Multiple studies have shown that renewable energy has the technical potential to meet the vast majority of our energy needs. Renewable technologies can be deployed quickly, are increasingly cost-effective, and create jobs while reducing pollution.

Because nuclear power results in few global warming, but nuclear technology poses serious threats to our security and, as the accident at the Fukushima Daiichi Plant in Japan illustrates to our health and the environment as well.

Research into and development of the next generation of low-carbon technologies, new

materials for solar cells, harnessing energy from novel sources like bacteria and algae, and other innovative areas could provide important breakthroughs.

Geothermal energy has been used for thousands of years in some countries for cooking and heating. It simply power derived from the earth's internal heat. This thermal energy is contained in the rock and fluids beneath earth's crust. It can be found from shallow ground to several miles below the surface, and even farther down to the extremely hot molten rock called magma. These underground reservoirs of steam and hot water can be tapped to generate electricity to heat and cool buildings directly.

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