

## NOA CSS LAHORE CAMPUS

Name Garmad Noor Subject Essay  
Batch 43 Paper Full length  
Roll # 40 Date 20/01/2023  
Hall 01 Extra S. \_\_\_\_\_

(1) Has technological advancement become a threat for mankind?

→ Thesis Statement :

Technological advancement has revolutionized human life and positively impacted social, economic, medical and strategic aspects of life increasing harmony among the residents of <sup>the</sup> globe, allowing them to prevent wars. Although, some manageable threats, due to the rapid advancement of technology have been faced, but these can be addressed by mutual cooperation and implementation of agreed, effective policies; towards which humans are gradually progressing.

## → Outline:

- (I) Technological advancement and threat: Understanding the concepts and their inter-relation
- (II) Technological advancement: A historic timeline
- (III) Technological advancement: Not a threat, rather beneficial for mankind
  - (A) Social benefits
    - (1) Increased connectivity
    - (2) Enhanced sharing of information
    - (3) Better access of education and awareness
    - (4) Improved standards of life
  - (B) Economic advantages
    - (1) Greater efficiency in economic processes
    - (2) Higher utilization of capacity
    - (3) Better profit and income
  - (C) Medical advancement

- (2) Timely inspection of health hazards
- (a) Speedy solution to global hazards
- (3) Decreased mortality
- (4) Higher life expectancy
- (D) Strategic deterrence prevents war
- (E) Resource sharing in global village

- (IV) Technological advancement: Posed manageable threats
- (A) Ominous climate change
  - (B) Swelled arms reserves
  - (C) Prevailed social indifferences among global nations

Human has historically tend to improve its life in one aspect or another. The urge to improve and advance has let the human to learn, and make resources to its use and benefits. The pre-asiatic human has continued its advancement through asiatic,

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ancient, feudal, pre-industrial and industrial era; with industrial era being witnessed now-a-days. The transition from one era to another has been made possible through better technology. Technological advancement has revolutionized human life and positively impacted social, economic, medical and strategic aspects of life increasing harmony among the residents of the globe, allowing them to prevent wars. Although, some (management) manageable threats, due to <sup>the</sup> rapid advancement of technology, have been faced, but these can be addressed by mutual cooperation and implementation of agreed, effective policies; towards which humans are gradually progressing.

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Technology refers to the practical aspects of science, that make human life easier. The advancement of technology is a concept indicating to improved (i.e.) development and utilization of scientific knowledge to make life comfortable. Internet, communication, entertainment, etc. are all impacted by the advancement of science and technology. It is a continuous, dynamic process that will continue its evolution with humans.

Threat is regarded as an aspect or entity that risks the existence of human being in short or long term. A school of thought in the world is of the opinion that technological advancement is a threat for humankind due to increase

in the production of disastrous equipment, socio-psychological impacts and other factors, which is far away from the truth. Historic review supports the beneficial impact of advancement.

Human has technologically advanced since the earliest times known to the humans of current time. The speed of advancement was appreciably increased with the (mā) mother of all inventions - wheel and axle - after which, humans have never tend to look backwards. 20<sup>th</sup> century witnessed industrial revolution that exponentially increased the human and technological development. The industrial revolution is further divided into five phases. Throughout the witnessed five phases, automation

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has increased, decreasing the manual, human effort required to carry out a task. Late 2010s are regarded as the years for the fifth phase of revolution, which utilizes robotics ~~for~~ in operations, also referred as Industry 5.0. Today, humans enjoy automated operations not only in the economic aspects, but also domestic, health, social and other aspects of life. The advancement of technology has increased connectivity among humans.

The interconnectivity among the residents of the globe has observed a rise with the progress of technology. The scientific inventions introduced humans with communication media in the form of mobile, print,

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social and electronic. As the time has progressed, the access to media has expanded among global population, bringing more people in touch with each other.

According to a survey, over 3 billion users interact with each other on daily basis using social media only; the number of people present on social media ~~are~~ is even greater. Similarly, other forms of media are utilized to interact including mobile communication, video calling, SMS, etc., which are all enabled by the progress of technology. Due to increased interconnectivity, the world is enabled to share information and experience with each other for others to get benefitted from them.



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Quick sharing of information has been ensured by technology, which improved human response to hazards and threats. These include better forecasting and informing the concerning nation of natural threat like cyclone, hurricane, etc. The country (India) is well informed of approaching calamity and <sup>enabled to</sup> take a proactive approach to deal with the situation accordingly. A recent example in this context is of novel COVID-19. The information shared by China not only enabled other countries to take precautionary measures in time, but also provided with other important information like symptoms, measures to take, etc. Otherwise, the virus would have ~~proved~~ proved to be more fatal.

than it has been. Similarly, the sharing of information regarding dengue among Islamabad and Colombo, allowed the former to effectively manage the disease. The sharing of global information gives a rise to educational (opportunities) development and awareness.

Education is an important social indicator of any society. The technological progress has provided humans with greater education opportunities. One can enrol itself in a variety of institutes, offering a variety of medium to deliver knowledge. Apart from that, skill development opportunities have increased on an individual due to the advancement in science and technology. The sharing of research

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and information have allowed the humans to avoid unwanted circumstances, which increases the awareness among humans regarding rights, responsibilities, ethics, good, bad, etc. Due to the progress, humans are able to raise voices for their counterparts all over the world. Other than that, technological advancement has made life easier for humans.

The technological progress has improved economic, political, social and individual standards of life for humans. Increased income, luxurious lifestyle, automation, awareness, etc. have contributed to the improvement of life standards. The human of today's world has greater facilities and lesser



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responsibilities as compared to the human of the past. The journey that was covered in months and days is now covered in hours. The capital that human used to earn in months and years is now earned in merely weeks and months. The advancement of technology has enabled human to control the household or ~~space~~ living space temperature as per liking regardless of external temperatures. The increased income due to progress in science has allowed humans to afford all the facilities.

The technological advancement has boosted the efficiency of economic processes which has increased the economic prosperity of humankind.

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The automation has replaced the manual operation resulting in greater efficiency. The machines can perform the required task in lesser time as compared to humans and eliminate the risk of medical complication due to the process being performed by a human like injury, etc. German brands like BMW, Volkswagen and others produce their vehicles by utilizing state-of-the-art technology in their processes which has boosted the organization's efficiency and the lead time to deliver the final product. Another added benefit of the technology in the production setup is higher utilization time as compared to human.

Unlike humans, machines do not require in between rest, hence, they can perform efficiently for a prolonged period of time. The extension in working hours increases the capacity utilization of the installed unit, which alludes to higher number of units produced in a given period of time. In this regards, Toyota is well-known to deliver a huge number of quality products as compared to any other ~~car~~ stakeholder in the competition. The utilization and method of production has been included in 'The Toyota Way' by John Chiller. Greater capacity utilization is desired by any investor as it indicates to

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greater returns on the investment once made. The machines only require periodic maintenance, for which the operation is halted for a nominal duration. Higher production increases the overall profit and income of the organization.

The utilization of technology has increased the profit and ultimately earning of the entity. An analysis of the global economies reveals that industrialized nations equipped with (last) latest technology have greater income than those with outdated or no technology. All the economies of the world, in an exclusive, trillion dollars club, are

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equipped with modern technology. These include America, China, Japan, Germany and Russia. The countries are well-known for their technological products and services, including electronics, auto-mobile, etc., which have boosted their economies exponentially as compared to technologically deprived countries. Not only this, the technology has advanced medical science to a great extent from inspection to diagnosis.

The technological advancement has allowed humans to timely inspect the hazardous foreign agent in the body and accordingly take necessary steps. From



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viruses to tumours, every agent harmful to human health can be recognized and treated, unlike in the past. These include cancers, tumours, hepatitis, organ failure, and other health complications. The equipment has been developed accordingly not only to inspect, but also to monitor the health of the patient and diagnose as per the requirements. Apart from the inspection and diagnosis, precautionary can ~~be~~ also be ensured, that are revealed upon human by research and development empowered by the advanced technology. The phenomenon has made humans capable to address and provide speedy solutions to the global health hazards.

The scientists and researchers were able to develop vaccination for COVID-19 in a duration of less than a year due to the available technology. Unlike in the past when it took years for the concerned ones to develop vaccination for polio and other diseases like Congo virus, while the public continued to suffer for a prolonged time. The time to reach the solution for COVID has been cut down due to advanced tools and research equipment available to different countries. Apart from medical field, technology enables humans to devise solutions for other global hazards or disasters, which depict that technological advancement has not become a threat for

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mankind, rather it has provided solutions to many existing issues of mankind while making the life easier. Better solutions to diseases have decreased the mortality rate.

Over past few decades, the death rate of the world ~~of~~ has significantly dropped down due to better health facilities and knowledge. Not only better management of diseases, but also of disasters has dropped the death or mortality rate. For instance, in the past, over 100000 people used to die across the world due to medical complications and natural disasters, which has now dropped down to less than 10000, witnessing a ~~drop~~ difference.

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of 90 percent. The lowered mortality rate has been made possible by the Technology and the advancement it has witnessed particularly in recent times. The lower mortality rate has increased the life expectancy of humans all across the world.

The life expectancy of humans has hiked as compared to that in past. A comparison of early 21<sup>st</sup> century <sup>data</sup> to the latest data reveals the average global life expectancy has raised from 57 years to 61 years. The highest life expectancy is that of Japan. ~~Average~~ Japanese get to live 87 years on average, which used to be 83 years in early 2000s. The life expectancy of America has increased from 77 years

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in 2000s to 82 years currently. Pakistan has witness an increase of 10 years from 57 years to 67 years from 2000s to 2022.

The prolonged life on Earth is due to better health-related facilities and decreased mortalities in war or war-like conditions due to strategic deterrence.

The development of arms, weapons and nukes is often regarded as the dark side of technological advancement and the biggest threat to mankind. But, an analytical review of the history exhibits the opposite. The development of weapons has prevented wars as a significant decrease in such situations has been observed - particularly among nuclear capable nations.

The ~~are~~ arms and weapons have ensured the territorial sanctity of the countries. Deterrence is ensured for the capable country as the prospect enemy is well aware of possible consequences, which was not the condition in the past. 14<sup>th</sup> and 15<sup>th</sup> century have witnessed great conflicts and wars among European countries, which is not the case as of now, rather the technological advancement has allowed the countries to share resources with each other.

Despite the fact that only a fraction of nation possesses the technology in the world, but majority of the global population gets benefitted with it due to sharing which is also enabled by the advancement of

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technology. From vaccination to medical equipment, gadgets to electronics, manufacturing to production facilities, every aspect is shared even with the technologically deprived nations, who would have been unable to take advantage of technology if not shared. COVID-19 vaccine, for instance, was developed by merely 10 countries, but the whole global population was vaccinated due to technologically empowered sharing of resources. The poor management of human to utilize technology has led to some adverse impacts that threaten humankind, but these are manageable and that too by effective utilization of technology. Climate change

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is the foremost in this regards.

"The climate is both the easiest and the hardest issue humans face these days. It is the easiest because we know what we need to do. We must lower the emission of Greenhouse Gases. It is the hardest because the greater emitters are not willing to lower the emission in economic race."

- Greta Thunberg

The advancement of technology - particularly in the second half of 20<sup>th</sup> century - is regarded as the main reason of rapid increase in global temperature,



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but it is not the advancement of Technology, rather unmonitored human activities that have resulted in 1.9 degree Celcius warmer temperature than pre-industrialization time. Added to that, technological advancement allowed the humans to become aware of the climatic change. As per United Nations Organization (UNO), the globe is projected to be 2.1 to 2.9 degree Celcius warmer by 2030 if humans continue to degrade the surrounding at the same rate. The climatic change can be catered by ensuring certain policies at global level, which are also powered by the advancement of science and technology. The mitigating steps include reducing emission, shift to renewables.

and ensuring sustainable processes which are all possible due to the advancement humans have witness in technology, and these can be further efficated by Technological advancement.

"The issue of climate change has already been solved. We have the facts and the solution. We just need to wake up and work."

- Greta Thunberg

Another threat that technological advancement has posed, other than climate change, is the arms reserves. Technologically and strategically advanced countries have invested their capital in raising arms and weapons, even

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at the cost of basic necessities being compromised in the quest of raising arms, but it is humanitarian strategies and insecurities that are to be blamed, rather than technological advancement. Nevertheless, the unnecessary of arms and weapons in such a great number has been realized by ~~the~~ different nations, and international agreements have been signed to reduce the reserves. Due to the agreements, America and Russia have reduced their number of nukes significantly. Gradually, the world will advance towards further reduction of (their) its weaponaries, and shift towards the uplifting of the deprived global community by ensuring basic social standards to all of the population.

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The social indifferences among nations are often linked with disproportionate technological development across the world, which has supported certain nations, making them richer and others poorer. But, it is the progress of technology that has highlighted the global condition, and compelled the globe to advance towards global betterment. In this regard, Sustainable Development Goals (SDGs) are of high importance as these have been adopted by UNO and agreed by majority of the nations. The 17 SDGs are aimed to remove poverty, prevail education, gender equality, ensure water and food security, and employment to all the residents of the world without any discrimination.

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Further SDGs compel the parties to shift towards sustainability and betterment of environment and marine life, and all of these are to be made possible by ~~the~~ technological advancement witnessed and to be witnessed by the globe. Hence, the advancement of technology is a solution to many problems of the humans, not a threat for mankind.

Technology has always tend to improve human life and will continue to do so. It is rather human utilization or extent of utilization that results in adverse effects for humankind and other inhabitants in the globe. Empowered by technology, humans must seek to devise effective and practical policies;

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and ensure their implementation to ~~considerable~~ mitigate the risk identified and associated with the advancement of science and technology.

"Winning should be at the heart of every strategy."

- A.G. Lafley

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