

# ESSAY MOCK TEST

Time Allowed: 3 hrs.

Max. Marks: 250

## Instructions to Candidate

- Both sections are compulsory.
- Attempt one essay from each section.
- Each essay carries 125 marks.
- Write each essay in about 1000-1200 words.
- After finishing the first essay, attempt the next on a fresh Page.
- Any page left blank in the answer-book must be crossed out clearly.

*(Examiner will pay special attention to the candidate's grasp of his/her material, its relevance to the subject chosen, and to his/her ability to think constructively and to present his/her ideas concisely, logically and effectively).*

## Remarks

Name Himani Singhal

Mobile No. \_\_\_\_\_

Date 30/10/18

Signature Himani

1. Invigilator Signature [Signature]

2. Invigilator Signature \_\_\_\_\_

## Section-A

④ The relationship between Human Intelligence and Artificial Intelligence (HI+AI) will necessarily be one of symbiosis.

Ram is a hardworking farmer in a remote village. But still his output used to be low. Often the output was dependent on monsoon and sometimes hit by natural calamity. But since he has been introduced to new technologies like high yielding seeds, drones to detect right amount of fertiliser and <sup>their</sup> spraying and solar powered handpumps, production from his land has more than doubled. Further he uses e-NAM facility to estimate the demand. This fetches him high price for his crops.

new are  
phone technology  
to  
AI ? related to

The story of Ram depicts that  
Human Intelligence and hardware combined

Remarks

with artificial intelligence can work wonders. What is artificial intelligence? What is human intelligence? Is there a relationship between the two? What kind of relationship is there? Let us see.

### Relationship between HI and AI : A

#### Window of opportunity

Human Intelligence refers to intellect of human brain. The way humans use their intelligence for various tasks. And artificial intelligence is ability of machines to do tasks without (help of humans) be more clear.

Technology has always been an enabler for man. From the time of first industrial revolution, till fourth industrial revolution today, relationship between man and machines has been mutually beneficial. Even though there have been concerns

about machines replacing humans and subsequent rise in unemployment, but with right steps, these concerns can be taken care of. Now? the relationship between human intelligence and artificial intelligence synergistic let us see.

Economically, artificial intelligence like robots can help in augmentation of labour capacity. For example, this was seen in first industrial revolution that led to mass production. Robots can perform routine tasks. Thus enabling human intelligence to focus on core complex tasks. Similarly, dangerous tasks in hazardous industries can be safely performed by robots. (add suitable examples -

All this will significantly improve productivity and competitiveness of industries.

Remarks

Another benefit is reduction in pollution and subsequent costs for industrialists with the help of machines.

has  
be significant  
in automation

But to achieve all this, human intelligence is also needed in the form of skilled workers. <sup>capital for</sup> Investment in research and development of AI will have to be provided by humans. And further machines can work only when a human opens its switch. By working together, both AI and HI will gain.

Similarly in agriculture, drones can help determine amount of fertiliser needed, spray fertiliser thus contributing to health of soil as well as the farmer. This precision agriculture can raise agricultural productivity leading to food security.

Remarks

But this also needs farmers who are well trained in new technologies. Further this requires change in (mindset) } explain to shift to smart agricultural techniques. Support from government is equally vital. Thus, the result can be high productivity agriculture with climate <sup>change</sup> resilience.

So socially too, combination of HI and AI can be beneficial. Training and skilling will generate jobs in newly <sup>emerging</sup> technologies. This will lower <sup>unemployment</sup> that will be lost - in society. Thus helping the society to reap demographic dividend.

Gender equality and development of smart cities can benefit humans greatly. Driverless cars, drones for traffic management, crowd control are some technologies that can help human

Intelligence is needed here too, to effectively adopt these tools. This will also enable Inclusive growth.

Politically, techniques like big data can help governments achieve good governance. Data can be used to analyse needs of various sections particularly weaker sections. Example - use of AEC data for various benefits to poor use of Aadhar technology to plug leakages in subsidies. The result will be efficiency in use of public money. Thus, benefitting leaders as well as citizens.

Another example is use of data analysis for calculating income tax returns and tax evasion under Project Insight by Ministry of Finance. Use of demonetization data on cash deposits has

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created fear in the minds of tax evaders and led to increase in direct taxes collection. This is mutually beneficial relationship between AI and H.I.

Internationally, ability to utilise AI effectively will determine prosperity of nations. To illustrate, a world Bank report stated that big data, AI will be the factors that will determine competitiveness of nations. Thus, nations like USA, India and China are investing in development of AI based economy.

Above all, use of AI can be beneficial only with ethical intellect of humans. Machines like driverless cars cannot differentiate between stress situations and normal situations. This can be done only with human intelligence. Misuse of new

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50

50



techniques from hackers, terrorists' needs to be prevented. Thus, only ethical human intelligence can help in extracting maximum benefit from artificial intelligence.

Way forward - ensuring relationship between HI and AI to be symbiotic

Firstly, there is a need to train and skill workers in AI. A NITI Aayog study highlights only 4% AI researchers in India. If India and other nations have to develop into an AI garage, skilled researchers and investment in R & D is the need of the hour.

Then government and private sector support is needed to ensure wider acceptability of new technologies. Fear associated with job losses needs to be tackled.

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Affordability is another essential aspect to ensure that fruits of growth are equally distributed. Government subsidy, large scale investment to bring economies of scale can help in this. Collaboration with technologically advanced nations like USA can also be done.

Further, proper infrastructure and security can help develop trusts in AI. Use of quantum cryptography, hack proof communication technology can prevent misuse by hackers and anti-social elements.

Relationship between HI and AI if not necessarily symbiotic can be made symbiotic through careful actions. This is the need of the hour if nations have to scale new heights of growth and not leave behind its poor population like Ram.

## Section-8

④ we can evade reality, but we cannot  
elude the consequences of evading reality

"Air pollution" leads to 6 lakh deaths  
"in India" annually" - says a World Bank  
report. Man is said to be an intelligent  
species. But sometimes he uses this intellig-  
ence, indiscriminately, prioritising own  
vested interests over others. Thus he evades  
reality, many a times. Example - industries  
causing water pollution, gender inequality,  
misuse of science and technology etc.

But can he evade the consequences of  
reality? NO. But then, why does he evade  
reality? Because he does not fear the  
consequences. How it can be tackled?

Let us see.

Reality

answer  
this question  
after advance  
analysis

Evading reality and its consequences

Economically, nations are vying for high growth rates. But often forget that this growth has to be inclusive. For instance, <sup>in</sup> India, growth rate has been more than 6% since 1991 reforms. But rates of poverty, inequality are still high. This has consequences in the form of concentration of wealth in the hands of few.

For instance, an oxfam report states that top 1% of population cornered 58% increase in wealth in 2017. This has led to inequitable spread of fruits of economic growth. Jobless growth has consequences for the society as well. Let us turn our attention to it.

Lack of inclusive growth, leads

to unemployment in society and increase in rate of crimes, often societies also evade reality of status of women. This leads to perpetuation of gender discrimination and gender divide. In India, this can be seen when girls are discriminated in terms of education and health. Restrictions on working outside and wage gap are also seen.

The result is low status of women, low female literacy and workforce participation. Higher crimes against women are also reported in NCRB reports. Thus society faces weak development as a consequence of evading its reality.

Poor sanitation is another reality that is easily evaded. For instance open defecation rate in India is much higher than its neighbours

Remarks

like Bangladesh. The consequences are affecting our own children with diarrhoea, typhoid, stunting and malnutrition. This lowers productivity for the future labourers as well as nation.

Politically too, India faces issues of criminalisation of politics, corruption and poor governance. These have been neglected for long. The number of parliamentarians with criminal background are more than half as per Association of Democratic Reforms. Supreme Court also recently asked government to frame a law against PMLA.

The citizens and politics are as a result, facing the brunt of evading reality. This can be seen in the form of misuse of public money, use of black money in elections, development of VIP

culture. Misappropriation of resources has without perpetuated in absence of any effective punishment. The result is poor governance, law and order problems and violation of citizens' fundamental rights.

Another sphere where we are easily and deliberately evading ability is environmental degradation. Environmental protection is a directive principle as well as a fundamental duty. But its evasion in the form of industrial pollution, deforestation and overuse of groundwater etc is rife.

The consequences are not difficult to evade however. As an IPCC report (1.5°) states that rise of temperature beyond 1.5°C will lead serious repercussions in the form of rise in sea levels,

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increased frequency of cyclones, floods and draughts. In India, <sup>recent</sup> Kerala floods are an example of this.

These disasters can be prevented by use of technology. But this is ignored. Rather misuse of science and technology is another evaded reality. This has led to use of science for destruction of human race. For example, in Nagasaki and Hiroshima in 1945.

Anti-social elements are using technologies like bitcoins for smuggling, drug trafficking and hacking. This was seen in WannaCry and NOT Petya ransomware attacks, in 2017.

Unethical use of science is a serious consequence of evading its effects of technology. Thus there



are concerns about commodification of babies with designer babies developed through gene editing technology. Similarly, there are concerns about ill effects of genetically modified food on human health and environments. These need to be tackled to prevent adverse consequences.

Way ahead - Turning attention to reality

As the essay depicts, reality and its consequences cannot be evaded. There is a need to develop mechanisms so that man realises repercussions of his actions and not avoid it.

Governments need to be proactive here. In case of social issues, these laws with punishments are needed

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to reduce social evils like gender discrimination. Beti Bachao, Beti Padhao is one such scheme.

Similarly, sanitation is a necessity for a healthy India, this needs active steps like Swachh Bharat Abhiyan that has been successful in lowering open defecation significantly. Such target based schemes will help in keeping the government as well as citizens to be on their foot and not evade reality.

Another area where both punishment and ambitious goals can help is environmental protection. Punishments like coal cess, fines on polluting industries are effective in preventing negative externality of economic growth on environment.

steps like encouragement to

renewable energy are also important to avoid severe consequences. For instance International solar Alliance, Paris climate change agreement and India's Nijawale Yojana (for clean LPG gas cylinders) are commendable in this direction.

Political issues and economic issues can be tackled through right laws and policies. For instance, act against bar criminals in politics. Inclusion of gender component, and welfare of marginalised sections in schemes can be helpful, example gender budgeting.

Reality is the real picture of our economy, society, environment and other spheres. Evading it cannot be the solution. As it is said, closing a wound worsens it. This is applicable on reality. Thus, we need to accept it and take action to rectify it.

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## Section A

Throughout your essay, this confusion permits whether or not you understand what exactly is artificial intelligence and how it contrasts with other technological developments -

see, (in theory), how humans control functioning of AI - and how AI can, conceptually speaking, go out of control of human beings -

you also need to write adequately about dangers of AI -

Finally, explain how AI needs to be politically regulated to confine it to selected areas so that it doesn't displace human beings -

overall, you are suggested to read more about artificial intelligence -

## Section B

Analysis can be made more rigorous -

Here, try to pick examples from history how evasion of reality haunted later on -

Moreover, detailed analysis of why we evade reality! at individual, organizational, societal, national, civilizational level? Analyze psychology behind it! Contrast with character traits of those who bravely face reality - and how one can be proactive in foreseeing consequences and take remedial measures -