

Roll No.

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).

60x58
grey

Name SHIREEN PRAKASH

Mobile No. _____

Date _____

Signature Shinea Pus

1. Invigilator Signature

2. *Invigilator Signature* _____.

Remarks

SECTION - A

1. A sporting society is always mightier and happier than those which are not.
2. The ultimate freedom comprises self-awareness, conscience, independent will and creative imagination.
3. The end doesn't justify the means.
4. To be beautiful, life does not require to be big.

SECTION - B

1. The migration streams reflected progress in the past, they represent distress in the present.
2. Corruption has become a national culture in India.
3. Industry 4.0 is the biggest game changer of present and future.
4. Lotus catch flies but let hornets go free.

SECTION A

2. The ultimate freedom comprises self awareness, conscience, independent will and creative imagination

"I know but one freedom and that is the freedom of the mind" - Antoine de Saint Exupery.

Freedom in simple terms is liberation from bondage. For a nation, freedom implies independence from foreign rule. It creates the conditions in which nations can chalk out and traverse their own paths to development. Sovereignty and internal and external autonomy come in its wake. However, freedom from external agencies is

* can mention metaphysical idea of freedom too - Nirvana, moksha

not a guarantee for creating a free society. It is only when the society and its members let go of the invisible chains of that bond them can we truly realise the power of freedom. We may be independent nations but we are not autonomous societies. As individuals we are still constrained by narrow mindedness and tradition that prevents us from seeing the larger picture.

True liberation for individuals is only possible when they can establish themselves in their uniqueness, and the right to decide one's own journey to self actualisation is the unique norm for ultimate freedom. They must have the choice and the capability to express themselves without any fear. In this pursuit to happiness, external factors like laws and culture can only do so much. It is the individual and the society that help a member of that have to take the onus of ensuring responsible exercise of rights by all. We must ensure that everyone has equal opportunities for development and

Remarks

* Section (a) & (b) → Good opening = introduction of the topic. Can make it more brief. Not clear where the intro ends. Can end it in a better way.

Traditionally, societies have been unequal in terms of granting resources and opportunities. Freedom, in its highest form, envisages that we unshackle these chains of social stratification and empowers all individuals to embark on their own pursuit to excellence for creating a harmonious and just society and world, responsible exercise of freedom by all of us is essential. As Nelson Mandela has rightly said 'Freedom is not merely to cast off chains, but to live in a way that respects and enhances the freedom of others.' The achievement of ultimate freedom is only possible when individuals are conscientious and self aware, and have the ability to be independent in their thinking.

The first and foremost learning requirement in the journey to ultimate freedom is self awareness. Socrates said 'Know Thyself'. Being aware of one's own thoughts and emotions is important for acquiring ^{a holistic} ~~any~~ world view. Enlightened individuals like Mahatma Gandhi and

section ① & ② → good coverage of 'self awareness' -
can discuss emotional intelligence → avoid long paragraphs
and dragged arguments

ES SCORE

Nelson Mandela continuously undertook a critical self inquiry. It is through analysing one's emotions and thoughts that one can get to know of the subtle pre concerned notions that one has about people and situations. Identifying our strengths and weakness is only possible if we look at ourselves objectively. And when individuals have complete knowledge about themselves, societies will embark on the journey to moral progress and ultimate freedom. For freedom is more internal than external, the chains that bind us have to be unbound by us. A high degree of self awareness fosters self realisation but only when individuals have a strong moral foundation can personal self realisation translate into larger good for the society.

Conscience is the faculty of our mind which comes into play when we pass a judgement on the merit of a particular act. It is our moral compass which helps us in deciding between right and wrong. A strong conscience

Remarks

(3)

is thus necessary for ensuring that not only do we exercise our freedom responsibly but we also enable others who are deprived from freedom to enjoy it. Self realisation coupled with strong conscience has led many people like Rabindranath Tagore, to argue for social reform in India. They stressed on the right of the lower castes' and women to enjoy ^{the} right to a dignified life. Similarly, Martin Luther King and ~~Harriet~~ Sojourner ~~Mandela~~ emerged as the leader of the black movement in America. These were people who did not conform to the prevailing societal norms. They were guided by their conscience which had been shaped through constant critical self-enquiry. Conscientious individuals have always acted as bulwarks against the deprivation from freedom of the vulnerable.

To have the ability to act on sound judgements of our conscience requires that we have an independent will. All individuals must have the choice to

to act as rational agents. As individuals with distinct personalities, we must have the ability to choose our own response to situations and people. Embedded in the right to express our views and opinions freely is the most important manifestation of our independent will. Ultimate freedom entails that in arriving at decisions and judgements, we are not hindered or constrained unduly by external forces or other people. This is important for the development of our personality. One of the most serious limitations to enjoying ultimate freedom is the presence of a herd mentality - individuals simply follow others without engaging in any independent thought processes. This gives rise to ^{an} apathy and ^{an} antithesis to liberation for all. An autonomous individual alone has the ability to act as a change agent in society.

Central to emancipation from one's own limitations is the capacity to

(5)

Remarks

1. section 0 to ⑥ - good coverage of the four key items. Just try to avoid too much explanation.

to engage in creative-thinking. Albert Einstein has said that creative imagination is more important than knowledge. A narrow mind can't give rise to constructive thoughts and feelings. We must broaden our intellect and constantly try to acquire an innovative way of looking at circumstances. While the journey to freedom is filled with obstacles along the way - both internal and external. A creative and imaginative mind can generate the right kind of attitude to face these challenges and one can then find solutions to the problems that others face in their own paths. Application of the mind is more powerful than the application of knowledge. As the rest of the ~~Ensured individuals~~ world laments on what is, ensured individuals think on what it should be. Gandhiji who is the greatest social innovator of all times used his creative imagination to evolve the technique of Satyagraha - which enabled emancipation not only from foreign rule but also from ourselves.

Remarks

- Avoid long paragraphs - divide your argument - atleast two paragraphs a page.

Avoid
ragging
the
point
of
negative

These ingredients of freedom require concerted efforts both within and outside individuals for their realisation. While the governance structures and processes must create the necessary conditions to enable people to embark on the pursuit to happiness. This involves the guarantee of civil rights and entitlements as also ^{fulfillment of} duties and responsibilities. Countries which do not give basic rights to individuals can't ensure holistic development.

However, the real reform has to come from individuals themselves. They must engage in the relentless quest for ultimate freedom. For initiating the necessary qualities for such a quest, education is the most powerful enabler. Education pedagogis must mould self aware and conscientious individuals. Education must be for the hand, heart and mind. Educational institutions must foster the development of strong ethical base in persons. It must give them the autonomy and

Remarks

* section (a) & (b) - good way forward and explanation. Can also talk about solutions at social level - respecting each other's freedom and being tolerant of varied views.

(b) Capabilities to engage in critical thinking
The only journey is the journey within
and the true test of freedom is an
enlightened consciousness. We must
undertake the journey of self discovery
to ultimate freedom.



If you can enrich the essay
by discussing

→ The hurdles to achieving this
freedom:

→ Creative imagination - limited on
internet when
artists express

→ Self awareness, : do not post our
conscience failures on
social media

→ Independent will - continuous inflow
of information through
media manipulates thought

SECTION B: INDUSTRY 4.0 IS THE BIGGEST CHANGING MANNER OF PRESENT AND FUTURE

"The Fourth Industrial Revolution is not just about interconnected and smart machines and systems. Ocurring simultaneously are waves of breakthroughs in areas ranging from gene sequencing to nanotechnology, from renewables to quantum computing. It is their interaction across physical, biological and digital domains that makes the 4th Industrial Revolution fundamentally different from others." ^{good definite} Klaus Schwab, Founder World Economic Forum

In the present era of disruptive technologies, change is the only constant and all of us are variables. The speed and scale of these technological changes has imparted an all pervasive character to Industry 4.0. The 4th Industrial Revolution entails a gamut of technologies ranging from Artificial Intelligence, Internet of things, Cyber physical systems, 3D manufacturing and so on. The most

fragrant outcome of these breakthroughs is enhanced interconnectedness - in other words, they are going to change the way we interact with technology itself as well as with the world.

Industry 4.0 is bringing about paradigm shift not only in manufacturing and industry but has implications over other sectors like health, education, transport, etc. Governance will also be witness to fundamental changes owing to the use of these technologies in service delivery.

(2)

The World Economic Forum predicts that India will need to reskill more than half of its workforce in the backdrop of impending Industry 4.0. Making our workforce Industry 4.0 ready requires reforms in our education pedagogies. We must teach students how to think and not merely what to think - softquisitiveness, creativity and social skills will be in great demand as

How
will
be
way
forward

Remarks

at section ① to ③ - Make clear demarcation b/w intro and body. Keep the intro brief

— Industry 4.0 takes over all lives.

Finally, we must also take into account the ethical implications of these technologies and their impact on the people. Job losses arising out of automation will create social conflicts. The International Labour Organisation has warned of adverse consequences if social security systems do not take respond to such changes. Ensuring that Industry 4.0 is harnessed for human development requires a concerted multistakeholder effort.

Thus, the 4th Industrial Revolution has immense applications in manufacturing and industry as well as social sectors.

People processes and products will be significantly affected by the advent of Industry 4.0 technologies. Pathbreaking changes will take place across the entire value chain. Using artificial intelligence technologies will create intelligent machines to carry out

(a)

tasks more efficiently and with greater productivity than human beings. Robots are already being employed in the automobile industry in activities like spraying ^{paint} and painting cars. Internet of Things (IoT) will allow devices to be tracked, controlled and monitored in real time - eliminating inefficiencies and waste. 3D printing is fundamentally changing the way we create products and is paving the way for customised products and democratisation in manufacturing. These disruptions will certainly need to redundant in large number of jobs but we can use this opportunity to create new higher value added jobs in manufacturing.

Industry 4.0 is also gaining prominence in the banking and financial industry. One of the most significant examples is the use of intelligent robotic assistants in front end jobs in banking like customer information, etc. The use of

big data analytics is improving customer services and also improving lending facilities. The State Bank of India has reported 50% increase in lending to small and medium enterprises using its automated fund flow based system. Financial Technology or fintech is constantly changing the way financial services are delivered. We must use this opportunity to bring about financial inclusion as also increase security and authenticity of transactions.

Health care is another aspect area coming under the influence of new technologies. IoT enabled wearable devices can enable tracking of patients with chronic diseases in real time. The use of artificial intelligence robotics and nanotechnology is rapidly improving disease diagnosis and drug delivery. Big data Analytics tools can be used to monitor disease trends and enable effective disease surveillance. Medical insurance is also a potential area. With universal health

(C)

Coverage still eluding large parts of the global population, these technologies can be used to improve the quality of health care in Sub-Saharan Africa, Asia, etc. There is a great potential in Indian health care system to use Industry 4.0 to transform health care services.

The world is witnessing rapid urbanisation. While urbanisation is crucial for development, it brings with it its own challenges like access to basic amenities, transport, climate change, etc. Technology can provide cost effective solutions enabling a higher quality of living. Increasing interconnectedness that Industry 4.0 heralds can be used to track the delivery of services like water, electricity, waste management, etc. Intelligent transport systems can significantly reduce congestion and lead to lower greenhouse gas emissions. An IoT enabled security apparatus can also reduce crime and lead to faster investigations.

Remarks

* Section (a) to (f) + good coverage of utility of Industry 4.0 but adequate focus should be given to each dimension like

Specially in case of sexual assault, etc. However, data security will also become an area of major concern with critical infrastructural and personal data residing in the network. A strong legislative framework and robust security architecture is essential.

More than 50% of India's workforce is engaged in agriculture, as is the case with other South Asian economies and Sub-Saharan Africa. Indian agriculture is characterised by low productivity and declining real income. Technologies like Artificial Intelligence, Internet of Things, Nanotechnology, gene sequencing, etc have improved efficiency in the entire agricultural supply chain. IoT enabled sensors can be used for optimum utilisation of inputs on the farm field. AI technologies can also improve crop produce marketing. Climate change poses large challenges to agriculture. Biotechnologies can

(e)

make agriculture sustainable and climate resilient. The challenge is to adapt new technologies to Indian agricultural conditions like small size of landholdings. This requires an innovative agricultural ecosystem focused on 'more from less for more'.

Governance processes are also seeing a paradigm change with the use of Industry 4.0 technologies. The government Transport Department in Singapore regularly crunches transport data in order to estimate cost and time effective bus routes and reduce congestion using big data analytics. Similarly, the Indian Tax department has also initiated a project called 'Insight' which uses big data to reduce tax fraud. Land records is another area where such technologies can be used. Artificial intelligence can be used to monitor schemes in real time and enable evidence based policy making.

Thus, Industry 4.0 is poised to

become the biggest game changer of the present and future. However, these technologies also have adverse social implications.

The high magnitude of job losses that Industry 4.0 will entail throws a challenge to policymakers and businesses alike. The small and medium enterprises are likely to be affected the most by these disruptions. However, Industry 4.0 also offers an opportunity to create high-end jobs. To capitalising on this opportunity, we must create a strong industry-academia collaboration. More importantly, our education system has to undergo a fundamental change from focus on rote learning to independent thinking. Creative schools must continuously empower their students to inquire and build creative solutions. This is the only way we can ensure that Industry 4.0 creates minimal disruptions.

Lastly, the possibility of:

adverse ethical implications cannot be ignored. For example, Decisions can be driven by AI impose important ethical issues - ability to take decisions that could cost lives, responsibility of collision etc. The massive amount of data that will be generated is prone to security breaches. Governments and business organisations have to create the appropriate legal and security architecture to tackle these issues.

The use and development of Industry 4.0 for ethical purposes and human development can only be ensured through an ethical workforce. Our research and development workforce must solely be geared towards human welfare. Otherwise we risk massive social upheaval and destruction.

2) Multi-stakeholder efforts is required to ensure that the benefits of Industry 4.0 are available to all sectors of society. This includes

Avoid
negative
impact
with
workforce
+
feel
segments
separate.
+
give
a better
structure
to the
energy!

approach to Industry 4.0 will harness the new forces unleashed by it in a positive and direction set centered around holistic development.

(
5x
125)

You can enrich the essay by discussing

- previous three industrial revolutions
- way forward
 - understanding the social impact of development
 - finding innovative solutions too
 - ensuring equitable benefit to all.

