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ACADEMY - 2019 - MGPEA4

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ACADEMY**GENERAL STUDIES**

Name Of Candidate

Jangam Kuladeep

Email Id.

Roll No.

1910030794

Mobile No.

Date:

07.08.2019

Time Allowed: Three Hours

Maximum Marks: 250

**INDEX TABLE**

Q. No.	Max. Marks	Marks Obtained
Q.1		
Q.2		
<b>Total Marks:</b>		

**Remarks:****INSTRUCTION**

1. Do furnish the appropriate details in the answer sheet (viz. Name, Email, Roll No, Mobile).
2. There are TWO Sections. Each Section has TWO topics printed in English and Hindi. You have to write on 1 topic from Each part.
3. One question in each part is compulsory.
4. The number of marks carried by a question/part is indicated against it.
5. Answers must be written in the medium authorized in the admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided.
6. Word limit in questions, if specified, should be adhered to.
7. Any page or portion of the page left blank in the Question-Cum Answer Booklet must be clearly Struck off.

Start Time| 1:50 PM

End Time| 4:50 PM

Mode Of Examination :

Online  Offline 

ECN CODE:

Evaluation Date:

2nd Floor, IAPL House, #19, Pusa Road, Karol Bagh, New Delhi - 110005

**MARKING SCHEME**

<i>Parameter/Criteria</i>	<i>Aspects Considered</i>	<i>Total Marks</i>	<i>Essay 1</i>	<i>Essay 2</i>
<b>Basic Format</b>	Introduction + Conclusion	10		
	Body	15		
<b>Content</b>	Data/Facts/Interpretation/ Analysis	25		
<b>Organisation</b>	Flow of ideas/ Absence of Deviation from the topic	25		
<b>Language Skills</b>	Punctuation/Grammar/ Sentence Formation/Spellings	25		
<b>Examiner's Discretion</b>	Perception/ Innovation/ Engaging	25		

<i>Parameters</i>	<i>Very Good</i>	<i>Good</i>	<i>Average</i>	<i>Poor</i>
<b>Coherence</b>				
<b>Language</b>				
<b>Handwriting</b>				
<b>Pre-writing</b>				

<b>Very Good</b>	<b>Good</b>	<b>Average</b>
120 and above	100-120	Below 100

SECTION - A

1. India's leaps in space research.
2. Democracy and socialism are means to an end, not the end itself.

'India's leaps in space research'

In 1950s and 1960s, India used to depend on countries like USA, Russia for launching its own satellites through their launch vehicles. Over to 2017, India has successfully put into orbits of different distances, 104 satellites of different countries including USA in one go. The two scenarios highlight the progress of India's space programme in the seven decades of independence. India has emerged successful in its space programme and India's ISRO (Indian Space Research Organisation) is one of the prominent space agencies of the world along side USA, Russia, China, European Union.

Early years after independence, there was a debate among policy makers on whether or not to invest the limited resources in the space

research. Many were of opinion that space research is luxury of rich nations and India should not indulge when there is poverty and need for resources is important elsewhere.

Vikram Sarabhai, regarded as the father of Indian Space Programme reconciled both the concerns and emphasized that India's space research will be to ensure development of its people. Thus the foundation for India's space research was laid.

However, India faced difficulties in the form of technology availability, resource crunch and lack of cooperation from other countries. But, it was due to the visionary leadership of scientists like Vikram Sarabhai, Satish Dhawan, U.R. Rao and Abdul Kalam, India succeeded.

Other factors have also contributed to India's success. Geographical location, that is, India being close to equator, provides a favourable location for satellite launching due to lesser gravitational force at the equator.

Along with this, scientific education and premier institutes of higher education provided the required skilled technical workforce needed. Scientific leadership had a commitment to convert challenges into opportunities and achieve the results required.

India's space research programme evolved in many phases. From Satellite Launch Vehicle (SLV-I) to ISRO's most successful Polar Satellite Launch Vehicle (PSLV), India has come a long way. PSLV has emerged as workhorse of ISRO and being most successful SLV. It has failed only twice in all of its launches.

On the other hand, Russia denied India, the cryogenic technology required to send heavier payloads into space, during the late 1980s. However, India has recently launched GSLV MK-III (GeoSynchronous Satellite Launch Vehicle) with indigenously built cryogenic engine. This has a huge significance, considering India's Human Space flight programme, 2022.

Some of the most successful missions of ISRO are Mangalyaan, NAVIC, Chandrayaan-I, Chandrayaan-II. All these missions highlight India's position in global space research. However, other countries like USA, Russia, China have also achieved the same success.

How then, is India's space programme different and better than other nations? Consider the example of Mangalyaan - Mars Orbiter Mission, where India is the only country to be successful in its first attempt. Also, compared to others, the project cost of India's mission is mere 10% of what it costs for premier agency like NASA.

Apart from the project costs, compared to others, India is at lower level of economic development and cannot afford much resources on such scientific research. Annual budget allocation to ISRO is mere 13% of what NASA of USA gets.

The efficiency, precision and optimum utilisation of resources is what makes India's space research programme so unique. This is a huge success, considering the indigenous nature of such research.

With such feathers in the cap, ISRO is on ambitious plan to launch its first ever Human Space flight programme, Gaganyaan by 2022. Also on the anvil are the Mission Aditya (solar Mission) and recently announced proposal to set up its own space station.

While achieving such success, did India commit to the vision of Vikram Sarabhai? Did it achieve and benefit the common people? How far has it contributed to India's development?

India emerged successful and stuck to the commitment. This is evident in various applications of the satellite India has launched. For example,

India's communication facilities and internet facilities are largely due to INSAT and GSAT satellites.

Also, ISRO's National Remote Sensing Centre (NRSC) is useful and successful in better exploration and mapping of natural resources including valuable minerals and petroleum. Better mapping and discovery of such resources helps in effective and efficient utilisation, contributing to overall growth.

Various satellites launched by India have also helped in disaster management and humanitarian assistance. This also helped in weather forecasting, security purposes. This has ensured both internal and external security.

With initiatives like telemedicine and teleeducation, accessibility and affordability of services to far flung and hinterland areas has become easier. This has led to better utilisation of human resources and thus reducing the poverty levels.

Agriculture is also benefitted to a large extent



due to better forecasting, better recognition of agroclimatic zones and thus informed decision making in the farming practices.

Not only has India's space research helped its own citizens, but also neighbouring countries. For example, SARAC satellite is effective in the disaster management and other facilities for South Asian countries.

Another best example is Indian Regional Navigation Satellite system (IRNSS), an alternative to USA's Global Positioning System (GPS). India has extended such services voluntarily to the neighbouring countries. This will help in better navigation, surveillance and security of the region. Likewise, India has also extended help during 2004 Tsunami, 2015 Nepal Earth Quake using satellites.

Along with such uses, India's ISRO has also become one of the most profitable satellite launching businesses in the world. Its commercial arm, Antrix Corporation is earning profits for the last

many years. This will not only earn forex reserves, but also ensure a place in global space research elite agencies club. India's satellite launching business is so competitive that even countries like USA are seeking its services.

Apart from these, did it contribute to overall space research development? India's space programme has not only led to India's economic development but also scientific research on the global level.

India's Chandrayaan-1 was the first lunar mission to detect traces of water on moon. Along with this, ~~the~~ interplanetary missions like Mangalyaan provided insights into study of mars and scope for habitation in such planets.

Also, multiwavelength telescope, space observatory like ASTROSAT will help in detecting different types of radiations. With India's Chandrayaan-2 already launched, its successful landing at moon's south pole will be a turning point.

It will help in acting as launchpad for other missions for not only ISRO, but also all other nations. This will help in knowing about evolution of earth.

What are the challenges to further development of India's space research? Funding, which is very meagre compared to other space agencies will be a hindrance. Along with this, delays in the execution of projects will lead to cost overruns and thus projects may become unviable.

Also, there are technological challenges like development of capacity for launching huge payloads into distant orbits. This will be a challenge, though ISRO sees it as an opportunity. Along with this, competition from countries like China will be a cause for concern. China, which is cost effective in all the sectors till now will be a huge challenge for India's growth in this sector.

Along with competition from nations, there is

also emerging competition from private players like SpaceX. Big corporates like Amazon are also in the process of entering into space research and other interplanetary missions.

Also, the global competition and rules regarding Global Commons like Outer space have to be followed by all parties. The issue of weaponisation of space and placing of nuclear weapons etc in the space will lead to arms race, as was during the Strategic Defence Initiative by USA in 1980s.

Another major problem is the increasing space debris and no nation being responsible for such space debris, though most of them who have presence, contribute to it. Increasing space debris can become a major problem to upcoming missions, not only of India, but of all other countries also.

Another concern is the uncertainty in the business environment. The example of Antrix-Devas deal will provide insights into the unpredictability and thus hampers business sentiment.

Along with the above, there is lack of conducive ecosystem for quality education and research by the private players, especially in India. With ISRO aiming high, there is a need to shift from manufacturing small satellites to developing new launch technologies as well.

What should be the priorities of India's space research programme in the future? Emphasis should be laid on new launching technologies while manufacturing of small satellites can be given to private players.

Also, there is a need to develop conducive ecosystem by establishing premier educational institutions with industry oriented curriculum for the future needs. Private sector participation has to be encouraged along with focussed priority areas.

Encouraging space studies as a separate discipline with world class curriculum in the public higher education institutions will be a starter.

Along with the above efforts, there is need to increase the funding, considering the lucrative market all over the world and very few players in the race.

India has a huge potential to capture a major share of such market considering the inherent advantages. For this to materialise, better resources along with timely delivery of projects, new innovations and cost optimisation are needed.

From transporting the satellite parts on a bullock cart and bicycle to being the record holder for launching 104 satellites at one go, India has come a long way in space research. This has become possible only because of the commitment and vision of all the people and resources involved.

Only by optimal utilisation and following up the ambitious plans laid down, India can aim to compete and even stand alongside the premier agency like NASA in the future. Being a developing country and problems similar in other

developing countries, India's space research programme will have benefits not only to Indians, but also to all people in the world.

**Feedback**

Feedback to be provided in terms of (1) Introduction (2) Sentence Constructions (3) Paragraph Formation (4) Legibility (5) Deviation from Topic (6) Coverage of dimensions (7) Simplicity / ease of reading





## SECTION - B

1. Knowing yourself is the beginning of all wisdom.
2. Silence of good is more dangerous than the action of evil.

'Silence of good is more dangerous than the action of evil.'

When they came to know about the irregularities in the ongoing construction work of flyovers, Satish, a man with good intentions preferred to stay silent and not to get involved in such wrongdoing. Ravi, on the other hand, chose to participate in the same and further the wrongdoing, as he had his own intentions.

In two years after completion of work, the flyover collapsed and led to death over 20 people. This is a huge loss to the finances and also lives of people. Though both of them were not held responsible by law, it is because of Satish's silence despite knowing the truth, the mishap occurred. Had he spoke about the irregularities, maybe the disaster could have been averted.

This highlights how the silence of good leads to greater damage. By remaining silent, though the person with good intentions saves himself, but doesn't end the problem.

Also, silence many a time can be assumed as endorsing such actions and even becoming a accomplice in such actions. This will eventually lead to people with wrong intentions doing the same wrongs again and again.

On the personal level, the person who chose to remain silent despite good intentions will be indirectly encouraging the evil actions. Further, he will be guilty for not doing anything to avert the possible crisis.

Also silence may do more harm than good, as those performing evil actions will assume their actions to be correct and silence is misconstrued as validation for their actions. Since there is no opposing voice, the problem will persist.

Such silence of good will be very harmful. Silence of good will not lead to any dissent. Dissent is needed for any society to evolve and progress. Only when there is dissent to such evil actions, the wrongdoings are brought to light. Hence, there is action against such evil actions.

However, what exactly is good and what is evil? This is very subjective. An action can be good according to someone, while the same can be perceived as evil by other if it harms his own interests.

Many a time, actions which benefits larger section are qualified to be good, but evil actions can also be against the minority section of people. Their interests too matter. Generally, actions which don't harm others are called good while those harming others are qualified as evil.

Is silence of good always dangerous?  
As illustrated in the initial example, despite knowing the wrong doing, remaining silent will be

more dangerous than evil actions. When a ruler (or) government implements some programme or brings in a new law which is draconian, people with good intentions remaining silent will lead to implementation without any opposition.

When good people speak up and put in their opinion, general public who are unaware of the evil consequences and ignorant will be educated. Thereby, government is forced to look into the opposing voices and consider them while framing rules and policies.

On the contrary, if they remain silent and many such good people are silent, there will be huge resentment building up. There will be a situation where any more evil actions can't be allowed and thus leads to a revolution, for overthrowing the existing evil regime.

Gen in a society, when there are customs and traditions which are inhumane and evil in nature, people from within the society