### INDEX TABLE

<table>
<thead>
<tr>
<th>Q. No.</th>
<th>Maximum Marks</th>
<th>Marks Obtained</th>
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<tbody>
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Total Marks Obtained:

Remarks:

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### INSTRUCTIONS

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).

2. There are TWENTY questions printed in ENGLISH & HINDI.

3. All questions are 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. No marks will be given for answers written in medium other that the authorized one.

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.
## EVALUATION INDICATORS

1. Contextual Competence  
2. Content Competence  
3. Language Competence  
4. Introduction Competence  
5. Structure - Presentation Competence  
6. Conclusion Competence  

**Overall Macro Comments / feedback / suggestions on Answer Booklet:**

1.  
2.  
3.  
4.  
5.  
6.  

All the Best
1. There are many challenges in sustainably scaling up renewable energy in India. Analyse. Also, discuss what can be done to address these challenges.

(150 words) 10

भारत में नवीकरणीय ऊर्जा को संयोजनीय रूप से बढ़ाने में कई चुनौतियाँ हैं। विशेषतः कीजिए।
एक साथ ही, चर्चा कीजिए कि इन चुनौतियों से निपटने के लिए क्या किया जा सकता है।

Renewable Energy forms 20% share of the current energy production in India with the aim being to increase it up to 40% by 2030.

There are many challenges in scaling up:

1. **Solar**
   - land acquisition & a concern
   - lack of raw material
   - cheap imports & poor quality

2. **Wind**
   - need skilled labour to setup, operate & maintain
   - availability of land to setup wind farms
   - seasonal nature
   - lack of viability in remote areas with difficult terrain
Others

- low demands
- intermittent supply making it difficult to sell
- environmental concerns in offshore wind power plants

Steps to address the challenges

* Hybrid power generation - e.g. National Solar - Wind Hybrid policy
* Land pooling & land banks to ease setting up plants
* Private investment to boost up setting up production
* Public awareness generation & fiscal incentives to start using Renewable Energy

In order to meet the INDC targets under Paris Deal, it is imperative that renewable energy is given a sustained push.
2. The policies and indicators introduced by the government, in recent times, to finance urban development in India are key in addressing the existing challenges. Discuss with special reference to municipal bonds.

(150 words) 10

हाल ही में, भारत में शहरी विकास का विषय पोषण करने के लिए सरकार द्वारा आरंभ की गई नीतियां और संकेतक वर्तमान जुनौतियों से निपटने हेतु महत्वपूर्ण हैं। नगरपालिका बंडगत्रों (मुनिसिपल बॉंड) के विशेष संदर्भ के साथ चर्चा कीजिए।

Increasing Urbanisation (higher decadal growth in urban population in 2011 as compared to rural) brings with it the challenges of inclusive growth & development like

- Lack of Infrastructure → Housing
  → Public Parks
  → Transport

- Lack of social services like water, sanitation

- Lack of employment & environmental concerns.

The major challenge in facing these issues is the lack of available financing to fund the projects as urban local bodies find it...
difficult to fund projects.
Governments have come up with steps to
fix the problem like:
- NITI Aayog city-wise development index.
- City GDP data
- Municipal Bonds
- They let the municipal bodies borrow
  funds from the market at reasonable
  rates to carry out the development
  activity.
- Liberty to use as funds are not tied up
  (PROS)
- Increased capital availability in light of
  poor financial conditions
  - Promotion of healthy credit culture
  among cities & incentives to the investors
  due to higher returns.
- Mumbai & Pune have taken a lead in establishing
  the bond market & tapping the advantages.
  Other cities also need to follow suit.
3. With a number of issues continuing to be a roadblock, a large section of India's rural population is still 'financially excluded'. Discuss. Analyse how these issues can be addressed and the measures taken by the government and RBI recently in this regard. (150 words) 10

The holy trinity of JAM- Jandhan, Aadhar, Mobile forms the basis of financial inclusion in India. However, there are several issues continuing to be a roadblock:

- **NPA’s**: The banking sector is reducing their lending capability.
- **Lack of digital & financial literacy**: Amongst the rural population.
- **Poor infrastructure particularly in remote areas**: Connecting to internet in brick & mortar buildings.
- **Poor UX in apps**: Which doesn't cater to the local language.
Addressing issues:
- Microfinance growth to cover up for NPAs in banking sector
- SHG promotion
- Education programmes to help rural folks
- Promotion to mobile banking, in local language

Steps taken by RBI:
- Priority Sector Lending: MSMEs to be a part of sector
- Vattiya Saksheepa Athiyogam: to promote financial literacy
- Banking Correspondents (Bank Mitras) for mobile banking
- Core Banking Solutions through Post Office

It is imperative to promote rural financial inclusion to fully realise the 4th industrial revolution and financial revolution in the country.
4. What do you understand by the term 'Environmental Accounting'? Discussing the rationale behind introducing environmental accounting, highlight its status in India. 

(150 words) 10

'पर्यावरणीय लेखांकन' पर से आप क्या समझते हैं? पर्यावरणीय लेखांकन आरंभ करने के आवश्यकता की चर्चा करते हुए, भारत में इसकी स्थिति पर प्रकाश डालिए।

Environmental Accounting is the concept of identifying & calculating the impacts of human activities on the environmental health & taking them into consideration for future development planning.

Rationale:
- There is only one Earth & it can't be damaged irreversibly.
- Sustainable Development - we don't inherit Earth but borrow it from the future generation.
- Negative impact of human activities on Environment can have a long-term affect which needs to be accounted for where a measuring the benefits.
It is believed that there is a cost of negative environmental impact of development process. India is increasingly making Environmental Accounting a key feature in public policy formulation.

- **INDC Targets**: 175 GW Renewable Energy
  - Energy Conservation Business Codes to reduce efficiency
  - **UJALA Scheme**: LED energy efficient LED bulbs
  - Firms contribute CSR funds to for environmental projects
  - India is member to SDGs

Thus environmental accounting is on a healthy rise in India, showing the importance of environment holds in human development.
5. While access to irrigation is important, efficiency of water use is equally, if not more, crucial. Examine.

Nearly 60% of the Indian agricultural land is rainfed. Lack of irrigation plays a big role in poor agricultural productivity, farmer marginalisation, groundwater depletion.

Hence, there are other concerns equally important:

* India is water stressed (~1500 m³ per person per year)

* Groundwater is depleting at fast rate (~40 cm per year)

* Rivers are running dry & monsoon vagaries are increasing.

Therefore, the need to increase efficiency of irrigation is paramount.

- Canal ~ 30% efficiency = most prevalent
- Tubewell ~ 65% efficiency = huge wastage.
Drip & sprinkler - 90% efficient but very costly.

Efficiency will help in:
- Better productivity: more crop per drop
- Less water depletion
- Equitable access
- Sustainable agriculture
- Water conservation for long term

Irrigation is crucial for agriculture which is crucial for food security. However, water is equally important to achieve food security. Thus, wastage of water needs to be reduced & efficient irrigation needs to be promoted.
6. For a holistic approach to disaster risk reduction, there is a need to mainstream indigenous traditional knowledge and link it with modern technologies. Analyse.

(150 words) 10

Disaster Risk Reduction is a critical element of the Sendai Framework which acknowledges the role of both stakeholder society in mitigating disaster risk.

Although modern technologies have taken a centre stage in DRR activities, it is very critical to mainstream indigenous traditional knowledge.

- Awareness about local terrain
- Natural bodies which can help in coping with the challenges.
- Many times animals like dogs can...
sense the earthquakes before the tremors arrive & can act as a guide.

So local weather patterns can be used to inform people quickly.

Modern technology though far superior is prone to disruptions such as communication failure or machinery failure. In such events, the traditional knowledge comes to the rescue. 

Hence it is important for the state to include such knowledge in its disaster mitigation plans.
7. What do you understand by food irradiation? Highlighting some of its unique applications, examine its relevance for India. (150 words) 10

खाद्य विक्रिय (food irradiation) से बाप क्या समाहल है? इसके कुछ विशिष्ट अनुप्रयोगों पर ध्यान दें, भारत के लिए इसकी प्रासंगिकता का परीक्षण कीजिए।

Food irradiation is the process of cleaning food with the help of light technology.
Whereas misuse of technology has abetted the spread of fake news, it is with the aid of technology that this menace can be curbed. Elaborate.

(150 words) 10

Technology is a double edged sword - each good we bring with it a mit potential misuse.

Although social media was considered as a harbinger of participative democracy & increased awareness, it has unfortunately taken the shape of a tool to spread fake news.

- Mass communication in one go: e.g. WhatsApp
- Provides anonymity: e.g. Fake accounts, tunneling, blockchain
- Viral spreading of fake news
- Lack of critical thinking by the masses & accepting what is being shared
- Cost effective & less time consuming
Such actions have led to draconian acts like mob lynching, in which government has asked WhatsApp to control such events. Technology is the cure to this issue as well:

- Mass communication can be used to spread public advisories.

- AI & Machine learning can be used to verify the news items to inform the user, thus saving his/her time & effort.

- Automatic spam filtering &

- DeepNet to identify the trolls & rumormongers & put them to justice.

Technology can be a boon or bane. It depends on a means to empowerment. Ultimately, it depends on the user how he/she wants to wield the sword.
9. Explain the salient features of the recently established Defence Planning Committee. How can it help in credible defence preparedness?

Defense planning committees are very crucial to establishing credible defence preparedness.

- It helps in better coordination and policy making.
- Allocating the funds in a systematic manner.
- Mobilization of resources.
- Better command & control to guide in case of a defence operation.
10. Recent reports of Maoist leaders having amassed huge assets in property and cash underlines the significance of probing the funding network as part of counter-terrorism efforts. Discuss.

Money Laundering & Terrorism go hand in hand, for one feeds on the services provided by the other. This is clearly evident in the recent reports of Maoist leaders amassing huge assets in property & cash.

Terrorism Funding

- State sponsored → eg ISI giving to terrorist groups in Pakistan
- Non-state sponsored → eg Black Money Laundering through smuggling, extortion, trafficking & taxing the poor

Counter-Terrorism efforts must rely on intelligence operations to frame the terrorist areas postings.
keeping a check on arms supply etc.

Funding has become a very critical part of any terrorist organization. It helps in

- procuring latest arms & ammunition
- sustaining the activity while laying low
- spreading propaganda
- recruitment of vulnerable youth by luring them into terrorist activities.

Thus probing the funding network has become a very critical link in counter-terrorism efforts as seen. As

**Govt steps**

- FIU-IND - to track the bank accounts, card details, transactions to identify suspicious accounts

- NATGRID - it'll also include financial data in the intelligence grid

- SAMADHAN - it has a "No Access to Funding" component also.
11. Not only do services MSMEs contribute mightily to the overall GDP growth, they have a powerful, multiplier impact on the local economies as well. Elaborating on the statement, highlight the problems faced by service sector MSMEs. How can the government make it easier for MSMEs to start and grow a business?

MSMEs are increasingly touted as the panacea for Indian economic growth due to their inclusive nature, huge employment potential, low skill requirements, etc.

MSME industries like leather, textile help to employ numerous people. But their growth is incomplete without improvements in services MSMEs which provide forward linkage of the market.

Benefits of services MSMEs:
- Forward linkages → decentralised
- Employment opportunity → connect rural
- Assistance to MSME industries
Some of the services MSMEs are identified in the Champions of Services Sector like transportation etc.

Challenges faced
- lack of policy support
- people unwilling to join due to low pay grade
- fragmented nature & no economies of scale
- poor infrastructure
- more focus on high tech & services like Banking etc.
- lack of regulations

Steps needed to be taken
- provide linkages to different MSME Industries
- promotion of MSME Industries which will themselves demand services
- credit availability to start the services
- easier regulations & norms to promote 
  Ease of Doing Business
- foreign market integration & protection
  from influx of foreign goods
- Insurance schemes to boost risk taking
  abilities

The falling investment rate in India can
be tackled with the help of a flourishing
MSME sector due to its multiplier effect
in the economy. It promotes emergence
of a new middle class which makes the
business self-sustaining. With increased
development, it can help in raising the
exports & thus boost the overall GDP growth.
12. Contract Farming has many advantages, however it suffers from market failures. Elaborate. What can the government do to correct problems that lead to contract failures? Also, discuss whether the Model Contract Farming Act, 2018 is a step in the right direction. (250 words) 15

Contract Farming is a pre-agreed contract between a farmer and a buyer to produce and sell a particular crop at a particular price. It helps in

- Protecting farmers against falling prices
- Boost agricultural productivity
- Credit to the farmers to undertake modernisation
- Reduces wastage of food

However, there are many challenges to contract farming:

- It can lead to disturbed cropping patterns
- It can lead to unsustainable farming practices.
- Market Failure
  - Crash in prices due to surplus production
  - Surcharge
  - Prices will not be beneficial to the contracted farmers
  - Poor quality enforcement of standards may force the buyer to illegally terminate the contract

Correcting Contract Failures

* Better infrastructure like storage & transportation to avoid wastage, especially perishable crops
* Irrigation facilities to avoid crop failure which can push the farmer into debt too
* Market monopsony to ensure that neither buyer nor the seller are prone to heavy losses
* Establishing quality standards like AGMARK so that both farmers & buyer can agree on a common ground
legal support to farmers to protect them from unscrupulous contractors

Model Contract Farming Act 2019

- allows FDI in contract farming
- No selling of farmers' land to the contractor in any situation
- Access to insurance schemes of the government
- Integration in global supply chain

It can be seen that steps like letting the farmer avail insurance facilities & protecting them from getting exploited are steps in right direction.
13. Suggest the measures needed to improve the employability of labour force as well as increasing number of employment opportunities in light of structural changes being brought by disruptive technologies.

(250 words) 15

Indian economy is facing double dilemma in employment sectors.

- At one end are unskilled labours looking for jobs.
- At other end are high end jobs looking for skilled labours.

Hence neither the labour force is employable nor there are desired employment opportunities.

Improving emp adding to this conundrum is the surge in disruptive technologies like Artificial Intelligence, Automation, Robots etc which are posing even more threats to the ever increasing labour force in India.
Changes being brought about

- Demand for high skilled jobs
- Demand for specialist jobs in a particular task
- Demand for greater productivity at lower wages (due to huge availability)
- Increasing formalisation of the workers with casual labourers and contract workers on the rise.

Measures to improve

- Linkage between industry and academia to promote vocational learning
- Skilling centres and accreditation framework
- Basic liberal labour laws which incentivise
industry to hire more number of workers

- Better quality of educational institutes

- frameworks eg SANKALP & STRNE schemes

- foreign collaboration to boost improve labour quality

- promotion of services MSMEs to absorb labour

The fruits of demographic dividend can be reaped only when the unemployed labour force meets the demands of the industry

Hence skilling of labour force as well as new job opportunities need to be conjured up.
14. India's trade policy in agriculture, marred by ad-hocism and pro-consumer bias, has constrained realization of export potential, and prevented the farmers from reaping the benefits. Examine the statement and discuss ways, including government initiatives, to improve agricultural exports.

(250 words) 15

It is an irony that despite being an agrarian economy with 50% population employed in agriculture, there is only 17.1% contribution to GDP by the sector. Two of the main reasons for such poor contribution are AD-HOCISM IN TRADE POLICY:

- Protection before LPG reforms in 1991
- Sudden opening up of the sector to leave it vulnerable to imports
- Curbs on exports in order to keep domestic prices down
- Free Trade Agreements with countries hurling Indian farmers.
- Agreements to import pulses from foreign countries like Madagascar thus leading to crash in prices

(ii) PRO-CONSUMER BIAS
- lack of export freedom keep
- bringing huge production to make
  the local prices low
- Stockholding limits to curb inflation

RESULTS
- Farmers' income are very low
- Exports are poor & huge trade deficits
  seen in products like oil seeds at the
  expense of promoting cereal crops
- Huge wastage of food grains

PROMOTING EXPORTS
- Allied sector & agro-processing industry development
- Tie up with agriculture which has huge
  export potential
- Promoting better quality of food grains in order to meet international standards.
- Removing limits on exporting food grains, thus getting competitive international prices

**INITIATIVES**
- 100% FDI in food processing
- FSSAI & AZMARK standards to certify product quality
- NMOOP to promote oil seeds & oil palm cultivation
- SAMPADA scheme to boost horticulture
  - Setting up Mega Food Parks

Thus, a holistic approach of integrating farmers with the global supply chain is important to boost export and reap benefits.
15. Is currency exchange rate a suitable measure of relative economic performance of countries? Despite improving macro-economic fundamentals, trade deficit in India continues to widen. Bring out the factors responsible for this situation. (250 words)

क्या सुदर विशेष दर देशों के साथ-साथ आर्थिक प्रदर्शन की एक उपयुक्त माप है? मैत्री इकाई विश्व फाउंडेशन्स (समय-आर्थिक आधारों) में सुधार के बावजूद, भारत में व्यापार घाटा निरंतर बढ़ा है। इस स्थिति के लिए उत्तरदायी कारकों को प्रस्तुत किए जाएं।

Currency Exchange Rates (ER) fluctuate based on the demand & supply of a currency in world economy. There are debates about its suitability as an efficient measure to compare economies.

But it is not suitable.

- countries can manipulate ERs using fixed system as done by China for a long time (by increasing domestic debt).

- ER are no measure of the domestic price levels of an economy. It is better measured using Purchasing Power Parity Index.
eg India can have ER of Rs 70/USD but a consumer goods basket worth 1 USD maybe only 45 USD. Thus showing India’s GDP on better terms.

- Export drive the ER but they are not full representation of the domestic basket of consumer goods.

**TRADE DEFICIT IN INDIA**

It has increased from 0.67% in 2016-17 to 1.9% in 2017-18 despite controlled inflation (5.2% in 4-27 band), controlled fiscal deficit (5.5%) & good economic growth (>6.5% amongst world’s highest).

Reasons for increased Trade Deficit

- Global oil prices have surged up due to
Production cuts by OPEC countries to
India imports 80% of its oil demands.

Quantitative Easing in US is being rolled
back leading to higher interest rates wi
leads to US outflow of foreign

currency from India.

China’s steel exports are being routed to
India due to US-China trade war.

Exports in India have suffered in recent
years due to demonetisation & initial

GST disruptions.

Poor fiscal management in countries like Turkey
have led to depreciation of INR.

Though trade deficit is increasing, it can only
be seen as a correction of earlier falling
oil prices & surging foreign reserves. As long as
macroeconomic features are stable, there is no need to worry.
16. It will take much more than relief packages to address the problems being faced by the sugar industry in India. Discuss.

Sugar industry in India is linked to sugarcane producing regions as well as imported raw sugar. It has been facing a plethora of problems:

- falling sugar prices leading to lower profit generation
- high FRP to sugarcane farmers further severs the balance sheet of sugar mills
- oil prices have been lower than ethanol product as byproduct isn't in demand, thus leading to surplus raw sugar in the mills
- farmers also suffer due to no payments
* Compulsory Tate packaging has led to deterioration of packed sugar which ends up as waste.

* Competition from bajraas Gud (35%)

* Injury

* Poor technology in the mills, high operating cost, lack of investments are other factors.

**Relief Packages**

- Government has more often than not resorted to relief packages to bail out the industry of UP Sugar Mills.

**ISSUED**

- One time solution
- Doesn't tackle the root cause
- Government intervention doesn't stop
- Relief not sufficient for both mill owners & farmers.
WAY FORWARD

Ranganath Committee had issued guidelines in 2013, which have to be implemented as soon as possible.

* Complete government deregulation
* Ease packaging requirements
* 5-10 sharing between farmers & mill owners along with profit sharing
* Capital subsidy schemes to upgrade machinery.

Revenue Expenditures in form of one-time relief packages never help if they don't tackle the capital investment which is the need of the hour for the industry.
17. NAPCC, almost 10 years old and formulated with lofty objectives, has not served as the best answer to cope with the impacts of climate change. Critically discuss.

NAPCC was launched in 2007-08 with a view to cope with the impacts of climate change in India. It has a sub-committee to promote NRM on sustainable agriculture.

**Failure** - Many areas still struggle with drought & floods.
- Heatwave deaths are there.
- Islands are also in threat of submergence.

**Successes** - Increased awareness.
- Climate change in policy making.
- Disaster specific mitigation plans developed.
- Climate resistant crops promoted.
18. Proliferation of nuclear weapons and the threat of their use are key concerns for global security nonetheless existing international arrangements seem to be ineffective. Comment. Also, identify the salient features of India's policy in this context and discuss whether India should join the NPT in the current form.

(250 words) 15

Started in the Cold War era as a credible
deterrence to war, nuclear weapons
have become the major threat to global
peace & security.

Increasingly countries are become protectionist
in reacting to nuclear rhetoric as seen
in the recent case of North Korea &
USA. Before that Pakistan in the 2000s

- Nuclear Nonproliferation Treaty
- Limiting the production
- Increase of nuclear arsenal

EXISTING ARRANGEMENTS
- **Nuclear Suppliers Group**
  - for responsible sharing of nuclear technology & keeping an eye on nuclear armaments of a country.

- **United Nations Treaty**
  - to demilitarize & destroy the nuclear warheads

**ISSUES**

- NPT is discriminatory against the countries & only allows the big-5 to keep nuclear arsenal.

- UN Treaty isn't signed by the nuclear states & thus proving ineffective.

- NSG is more or less linked to NPT & doesn't guarantee any credible deterrence.

**INDIA'S POLICY**

Ever since Pohang I & II, India has reiterated its stance of nuclear
Defence & promotion of national interest & safety. It has no-first-use principle.
Also much of the tech nuclear technology in India is used for power generation.
India's credibility was acknowledged by the US in 2005 nuclear-deal.

JOINING NPT - India shouldn't join NPT in its current form as it has always stated. It is discriminatory & against a mutually inclusive world order. It's terms should be altered to either allow others or swallow even the big 5 to hold nuclear weapons.
19. The maritime security domain requires collective multilateral and regional cooperation to combat non-traditional threats. Discuss in the context of threats in the Western Indian Ocean and the recent amendments in the Djibouti Code of Conduct.

(250 words) 15

India has a vast coastline (rc 7500 km) which is facing increased traditional & non-traditional threats like:

- piracy
- terrorism
- smuggling
- submarine warfare
- threats to intelligence operations
- Indian fishermen - string of pearls

The importance of this domain can be was dearly realised after the 26/11 Bombay attacks.
A collective multilateral & regional cooperation is needed to tackle the emerging threats.

- Many hidden locations for terrorists like sandbars, uninhabited & islands
- Contiguous borders without any clear demarcation
- Difficulty to patrol the region continuously due to the nature of the region.
- Multilateral cooperation is needed to protect from encircling influences of China specifically in Sri Lanka, Maldives & Djibouti which is threat to India's sovereignty.
- Pirates are affecting the fishermen & ships of all the regions equally.
- Lack of awareness amongst fishermen puts
unnecessary
from an utile which can be solved only
by mutual cooperation eg India Pakistan.
- Also protection of biodiversity is possible
by mutually inclusive use as against once
to exploit the marine resources.

Amendments to Djibouti Code of Conduct:

* mutual respect for sovereignty rights
* no military naval expansion

Western Indian Ocean is critical to Indian
safety hence it is important to boost
up the defences in the region.
20. India's space programme was initiated with the vision of utilising outer space for peaceful purposes, however with changing times it has the potential to play a significant role in strengthening security capabilities of India. Discuss with adequate examples.

Implementing the Indian Space Programme is one of the most successful with its PSLV rockets, Mangalyaan launch proving India's credibility as a space giant.

- Started as a space programme to understand the details of the atmosphere - Rohini Series
- Sounding rockets
- Moved towards communication satellites like INSAT
- Meteorological satellites like GSAT
- Navigation clusters like IRNSS
- Exploration missions like Chandrayaan, Mangalyaan, Aditya L1

Thus, the programme has always looked for peaceful utilisation of outer space.

**CHANGING TIMES**

There are increasing threats like cyberattacks, missile attacks, Army incursions where launching the satellite technology is very important as seen during the Kargil conflict when India couldn't obtain the satellite imagery permission.

The importance can be observed in:
- Missile technology - the engines developed for satellite launches can be used for missiles also.
- **CARTOSAT** provides the regional mapping which can be used to identify potential hotspots.

- **RNSS cluster** can be used for GPS navigation information which will help in army mobilisation.

- Communication satellites are crucial in establishing contacts in war during army operations & disaster management.

- **South Asia Satellite** was a signal for regional cooperation, which acts as a symbol & promotes goodwill.

Thus starting as a mere peaceful programme has now reached the heights of a security necessity.