

PERFECT 7

FORTNIGHTLY CURRENT AFFAIRS

July 2022 / Issue-2

Useful for UPSC and State PCS exams



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AUGUST 2022
SCHEDULE



14th
August

PRELIMS

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21st
August

MAINS

Timing :
GS Test : 9:00am-12:00 Noon
Essay Test : 1:00pm-4:00pm

28th
August

INTERVIEW

Personality Test by a Panel of Retd. & Working Bureaucrats and Professors

SYLLABUS

PRELIMS & MAINS

*(TOPIC : Economy, Budget & Economic Survey,
Current of April 2022)*

Source :

*NCERT-6th to 10th & Current Affairs
(Dhyeya Class Notes + Magazine Perfect-7 +
Open Sources + Government Document)*

SYLLABUS

ESSAY

*(TOPIC : Issues relating to poverty and hunger,
Health, Education, Human Resource,
Aptitude and foundational values for Civil Services,
Empathy, tolerance and compassion
towards the weaker sections)*

Source : Open Source, Dhyeya Booklet



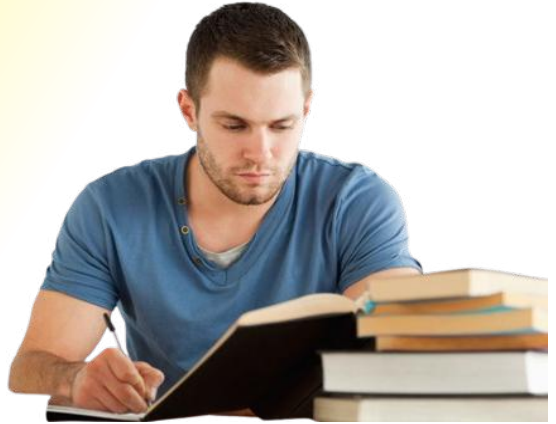
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Director's Message

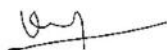


Mr. Vinay Kumar Singh

The guiding philosophy of the institute, throughout, has been creation of knowledge base. Dhyeya IAS inculcates human values and professional ethics in the students, which help them make decisions that are good not only for them, but also for the society, for the nation, and for the world as a whole. To fulfil its mission in new and powerful ways, each student is motivated to strive towards achieving excellence in every endeavor. It is done by making continuous improvements in curricula and pedagogical tools.

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Yours very truly,



Vinay Kumar Singh
CEO and Founder



Mr. Q H Khan

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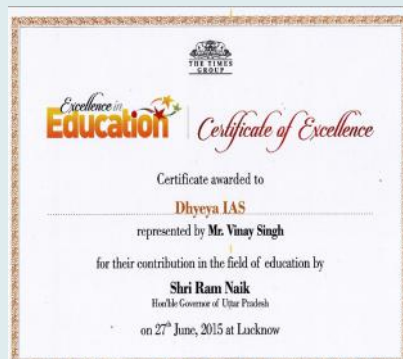
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Yours very truly,



Q H Khan
Managing Director

PREFACE



Current Affairs has an important role in the examinations conducted by Union Public Service Commission and State Public Service Commissions. It is necessary for the candidate to have knowledge of relevant information on issues of national and international importance. Perfect 7 Magazine is being presented fortnightly in front of the students to fulfill this requirement. Preparation of civil services exam is only completed when candidates have holistic knowledge and analysis of the dynamic nature of the current affairs. 'Perfect7' keeps this vision and approach and understands the multidimensional need of students at the content level, so this magazine has presented the current affairs with relevant issues of general studies. Keeping in mind the mains exam, current articles on 7 burning issues, Ethics Case Studies, Biographies of important personalities, coverage of most useful topics of various sections of General Studies and the most important current affairs issues are being covered for Preliminary Examination in which emphasis is being given on environmental, ecology, art and culture, science and technology, economy issues. A short section on Terminology will also be part of Perfect 7 Magazine.

Brain boosters with 7 themes based graphics are being presented in a concise form to enhance the conceptual understanding of the students. Apart from this, updated information on Global Initiatives, Global Institutions, Structure of Organizations, Functioning, Important Reports, and Indices will be included in this magazine, which is asked prominently in the Civil Services Examination. To give emphasis on facts and analysis, keeping in view the trends of new nature of questions in Preliminary and Main Examination of Civil Services, an inclusive magazine is being provided to the students so that they can give the right direction to their preparation by understanding the new requirements of Civil Services Examination. We hope that Perfect 7 in its new form will prove to be very useful. Your suggestions are always welcome.

Vinay Kumar Singh
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PERFECT 7

FORTNIGHTLY CURRENT AFFAIRS

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 by Mr. Qasim Ali
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7 IMPORTANT ISSUES



Future of Gig Economy in India

Why in News ? :

According to a recent report by NITI Aayog, the size of the Gig Economy is continuously increasing in India, and it will expand continually in the future. The report named 'India's Booming Gig and Platform Economy' contains statistics estimating the size of India's gig economy; recommendations on how the sector could be improved, financial inclusion of gig workers could be ramped up, and so on.

Gig Economy- Basics:

Gig workers are those engaged in livelihoods outside the traditional employer-employee arrangement. They can be broadly classified into the platform and non-platform-based workers. Platform workers work based on online software apps or digital platforms such as Swiggy, Ola, etc. While non-platform gig workers are generally casual wage workers and own-account workers in the conventional sectors, working part-time or full-time.

The rapidly burgeoning gig workforce is ushering in a new economic revolution globally. India – with its demographic dividend of the half-a-billion labor force and the world's youngest population, rapid urbanization, widespread adoption of smartphones, and associated technology – is the new frontier of this revolution. The gig economy has proven its resilience and potential in the wake of the Covid-19 pandemic by unlocking jobs in the millions and keeping com-

munities connected. The gig economy – transforming how we move, work, and live – not just impacts how we do business but also affects our GDP.

Present and Future of Gig Economy in India:

- The report 'India's Booming Gig and Platform Economy' by NITI Aayog estimates that in 2020-21, 77 lakh workers were engaged in the gig economy. They constituted 2.6% of the non-agricultural workforce or 1.5% of the total workforce in India. The gig workforce is expected to expand to 2.35 crore by 2029-30. The gig workers are expected to form 6.7% of the non-agricultural workforce or 4.1% of the total livelihood in India by 2029-30.
- There is a growing demand for gig work. The employment elasticity to GDP growth for gig workers was above one from 2011-12 to 2019-20 and was always above the overall employment elasticity. The higher employment elasticity for gig workers indicates the nature of economic growth, which created greater demand for gig workers while not generating commensurate demand for non-gig workers. This also points towards a greater conversion of non-gig work to gig work.
- Gig work is expanding in all sectors. Regarding industrial classification, about 26.6 lakh gig

workers were involved in retail trade and sales, and about 13 lakh were in the transportation sector. About 6.2 lakhs were in manufacturing and another 6.3 lakhs in finance and insurance activities.

- Gig work may accentuate skill polarisation. About 47% of the gig work is in medium-skilled jobs, about 22% in high-skilled, and about 31% in low-skilled jobs. The trend shows the concentration of workers in medium skills is gradually declining and that of the low skilled and high skilled is increasing.

Opportunities Related to Gig Economy:

- The gig sector has low-entry barriers and hence holds enormous potential for job creation in India.
- Around 300 cities of varying sizes in India are serviced by various gig workers operating across sectors like ride-hailing, home-based services, food/ grocery/ medicine delivery, logistics fulfillment, and e-commerce, covering the broad ambit of urban services, and making the mobility of workers and clients across markets hassle-free.
- The technological intervention in this space has contributed to the uptick in demand and hence the associated earnings opportunities.
- There is an emerging positive

trend that suggests women are more likely to take up platform-based gig jobs after their education and marriage.

- Often, the platform companies which provide earning opportunities for those associated with them take significant steps in skilling these workers as well. This is to assure uniform standards in quality of service while also achieving upskilling of workers in an otherwise highly unorganized labor economy.

Challenges Related to Gig Economy:

- Access to internet services and digital technology can be a restrictive factor for workers willing to take up jobs in the gig and platform sector.
- Lack of job security, irregular wages, and uncertain employment status for workers are significant challenges in the gig and platform sector.
- The uncertainty associated with irregularity in the available work and income may lead to increased stress and pressure for workers.
- The contractual relationship between the platform owner and the worker is characterized as other than one of employment. Platform gig workers are termed “independent contractors.” As a result, platform gig workers cannot access many of the workplace protections and entitlements.
- Workers engaged in remunerative activities with digital platforms may face stress due to pressures resulting from algorithmic management practices and performance evaluation based on ratings.

Way Forward:

- Platform India initiative, built

on the pillars of Accelerating Platformization by Simplification and Handholding, Funding Support and Incentives, Skill Development, and Social Financial Inclusion, like the immensely successful Startup India initiative, may be introduced.

- Access to institutional credit may be enhanced to bolster the Government’s existing efforts to promote financial inclusion through financial products specifically designed for platform gig workers and those interested in set-up their platforms. Venture capital funding, grants, and loans from banks and other funding agencies should be provided to platform businesses of all sizes at the pre-revenue and early revenue stages.
- It is crucial to strengthen industry linkages and enable candidates undergoing skill training to receive on-the-job training. Examples of such outcome-based skilling are seen in the National Apprenticeship Training Scheme of the Ministry of Education and the National Apprenticeship Promotion Scheme and Dual System of Training initiative of the Ministry of Skill Development and Entrepreneurship.
- By integrating the Skill Development and Employment/ Social Security portals such as E-Shram and National Career Services portals of the Ministry of Labour and Employment, the Udyam portal of the Ministry of Micro, Small & Medium Enterprises, and the ASEEM portal of the Ministry of Skill Development & Entrepreneurship, a one-stop solution could be afforded for a large number of workers in India.
- Platform businesses can undertake partnerships with civ-

il society organizations (CSOs) and non-governmental organizations (NGOs) to promote the legal/ economic/ social rights of women and especially those from marginal and vulnerable backgrounds, thereby increasing their potential to take up non-traditional livelihoods.

- Along the lines of measures introduced to mitigate the challenges posed by the Covid-19 pandemic by platforms such as Ola, Uber, Urban Company, Swiggy, and Zomato, measures for paid sick leave, health access, and insurance may be adopted by platforms as a part of their workplace or work engagement policies for all the workers they engage, round the year. This will have positive implications for offering a social security cover to platform workers employed by these firms.
- Along the line of Indonesia’s initiatives in offering accident and other insurance to workers through digital mechanisms, ride-hailing, delivery and e-commerce platforms may adopt such a model for providing accident insurance to all delivery and driver-partners and other platform workers across India. These may be offered in collaboration with the private sector or government, as envisaged under the Code on Social Security, 2020.

Conclusion:

Gig work is bound to expand due to the technological possibilities in numerous production spaces. At the same time, it also allows workers to transcend the limitations of work time and workspace. Given this potential of gig work, the future would see a growing prominence of such work.



The Growing Influence of BRICS

Context:

Prime Minister Narendra Modi attended 14th BRICS summit virtually on 23 - 24th June 2022 and said that the influence of the grouping has grown as it has undertaken structural changes.

Introduction:

Recently 14th BRICS (Brazil, Russia, India, China, South Africa) Summit hosted by China, took place virtually on 23-24 June 2022 under the theme of "Foster High-quality BRICS Partnership, Usher in a New Era for Global Development".

While addressing the summit virtually Prime Minister of India said that "The influence of the grouping has increased over the past several years. We have undertaken structural changes in BRICS in the last few years that has increased the influence of this institution".

Evolution of BRICS:

- The leaders of BRIC (Brazil, Russia, India, and China) countries met for the first time in St. Petersburg, Russia, on the margins of G8 Outreach Summit in July 2006. Shortly afterwards, in September 2006, the group was formalised as BRIC during the 1st BRIC Foreign Ministers' Meeting, which met on the sidelines of the General Debate of the UN Assembly in New York City.
- After a series of high level meetings, the 1st BRIC summit was

held in Yekaterinburg, Russia on 16 June 2009.

- BRIC group was renamed as BRICS (Brazil, Russia, India, China, South Africa) after South Africa was accepted as a full member at the BRIC Foreign Ministers' meeting in New York in September 2010. Accordingly, South Africa attended the 3rd BRICS Summit in Sanya, China on 14 April 2011.
- The countries in the group hailed it as an alternate grouping of emerging economies.

Significance of BRICS:

- Five of the major developing nations in the world are represented by the BRICS (Brazil, Russia, India, China, and South Africa), accounting for 41% of the world's population, 24% of its GDP, and 16% of its commerce.
- BRICS countries have been the main engines of global economic growth over the years. Over a period of time, BRICS countries have come together to deliberate on important issues under the three pillars of political and security, economic and financial and cultural and people to people exchanges.
- The BRICs called for the reform of multilateral institutions in order that they reflect the structural changes in the world economy and the increasingly central role that emerging markets now play.

- The BRICS also allows India and China to modulate their rivalry within the setting of a small grouping, even when bilateral relations remain rocky.
- The BRICS nation offered a source of foreign expansion for firms and solid returns for institutional investors. They also focused on some regional issues, including the problems related to Libya, Syria, Afghanistan and Iran (Indigenous nuclear program).
- The BRICS countries also sought to create favourable conditions for barrier-free trade.
- BRICS nations have taken many initiatives in areas such as digital technology, customs cooperation, counter-terrorism and space, will not only benefit citizens, but also enable the institution to remain relevant in the coming years.

BRICS will play a major role in post covid recovery because the countries in the group like India-China are among the fastest growing economies and have huge demographic dividend.

Initiatives taken by the BRICS:

New Development Bank - During the Sixth BRICS Summit in Fortaleza (Brazil) in 2014, the leaders signed the Agreement establishing the New Development Bank (NDB - Shanghai, China). It has so far approved 70 infrastructure and sustainable development projects worth. NDB, unlike

the World Bank or the International Monetary Fund, affords equal voting and shareholding rights to all Brics countries.

Contingent Reserve Arrangement:

Established in 2015, It is a framework for the provision of support through liquidity and precautionary instruments in response to actual or potential short-term balance of payments pressures. The objective of this reserve is to provide protection against global liquidity pressures. The CRA is generally seen as a competitor to the International Monetary Fund (IMF) and along with the New Development Bank is viewed as an example of increasing South-South cooperation.

BRICS Payment System:

BRICS countries are trying to create a payment system as an alternative to the SWIFT payment system. This has taken on a new urgency as post Ukraine war, Russia has been frozen out of SWIFT.

Customs Agreements:

Customs agreement were signed to coordinate and ease trade transport between BRICS countries. It will help in in cross-border trade to help reduce red tape and access advance information about shipments reaching their shores for more effective check on tax evasion.

Remote Sensing Satellite:

A Remote Sensing constellation of satellites has been launched by the BRICS which included six satellites and five ground stations.

China's Gaofen-6, Ziyuan-3 02, the CBERS-4 co-developed by Brazil and China, Russia's Kanopus-V type, and India's Resourcesat-2 and 2A

Ground stations in Sanya of South China's Hainan Province, Cuiabá in southwestern Brazil, Moscow, India's Hyderabad and South Africa's Hartebeesthoek, are also supporting

the program.

- In May, a joint commission on space cooperation of the BRICS countries was established, kicking off a new chapter of joint observation and data sharing of remote sensing satellites among the five member states.

**BRICS Vaccine and R&D Center:**

- Union Minister of Health and Family Welfare of India recently launched the BRICS Vaccine R&D Centre and Workshop on Vaccine Cooperation during a video-conference with other BRICS leaders. The centre will be instrumental in streamlining vaccination resources and facilitate equitable access to safe and efficacious COVID-19 vaccines.

Major outcomes of 14th BRICS Summit:

- BRICS Beijing declaration supported resolution of Russia-Ukraine Conflict through peaceful diplomatic mechanisms.
- BRICS countries showed their concerns about deteriorating situation in the Taliban-led Afghanistan.
- BRICS countries condemned any form of terrorism and reiterated that only UN Security Council has the authority for imposing sanctions on any organization.

Challenges of BRICS:

- The BRICS grouping is often

criticised for being ineffective. Many, especially in the West, predicted that it would not live long. However, disagreements between its members and slow progress shown on the ground when it comes to implementation of initiatives make it quite vulnerable to criticism.

- All the countries in the BRICS group trade with China more than each other, therefore it is blamed as a platform to promote China's interest. Balancing trade deficit with China is a huge challenge for other partner nations.
- It is claimed by critics that heterogeneity (variable/diverse nature of countries) of the BRICS nations with its diverse interests possess a threat to the viability of the grouping.
- Tussle between India and China is a major issues of this group. The two countries are often seen as rival on various global forums which degenerate the confidence between each other.

Conclusion:

BRICS was established with the belief that this group of emerging economies could emerge as engines of global growth. Today, when the world is focusing on post covid recovery, the role of BRICS countries will be very important. BRICS has become a platform for discussing and deliberating on issues of common concern for all developing countries. Even though there are some challenges but the cooperation between the group members and institutional mechanisms of the BRICS are the binding force for the group members.

NOTES



BIMSTEC: Journey and Future

Context:

BIMSTEC's emerging market economies have played their role as an effective forum for regional cooperation between South Asia and South East Asia after the failure of the SAARC organization. The assessment of its relevance becomes necessary on completion of 25 years of its establishment.

Introduction:

BIMSTEC is a federation of seven countries (Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand). BIMSTEC stands for 'Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation'. All these countries belong to the Bay of Bengal region. Initially, this organization included Bangladesh, India, Sri Lanka, and Thailand, then its name was 'BISTEC' meaning 'Bangladesh, India, Sri Lanka, and Thailand Economic Cooperation'. In December 1997, Myanmar also joined this group, then this organization converted from BITSEC to BIMSTEC. After this Bhutan and Nepal also joined the group in February 2004. Since its establishment, this organization has made commendable progress and in the future, this organization has the potential to become a bridge between SAARC and ASEAN. The headquarter of BIMSTEC is at Dhaka, Bangladesh. BIMSTEC Summit is the highest policymaking body in BIMSTEC process and is comprised of heads of state/government of member states. It is home to around 1.5 billion people that constitute around

22% of the global population. It has a combined gross domestic product (GDP) of \$ 2.7 trillion economy. A fourth of the world's traded goods cross the bay every year.

BIMSTEC Progress: The Journey So Far

25 years have been completed since the establishment of BIMSTEC and during this time commendable progress has been made by this organization, the description of which is as follows.

Mutual Cooperation:

One of the principles of BIMSTEC is the concept of peaceful coexistence. And the member countries of BIMSTEC follow the essence of this principle. India is the largest country among all these countries and from time to time India has helped its fellow countries, for example, during the earthquake crisis in Nepal, the economic crisis of Sri Lanka, etc. So these countries walk on peaceful coexistence keeping in mind each other's sovereignty.

Infrastructural Projects:

Many infrastructure projects are going on among BIMSTEC countries. Kaladan Multimodal Project, Ganga-Mekong Project, Asian Trilateral Highway, Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicle Agreement, etc. are several agreements that are moving towards regional development by enhancing infrastructure. The fifth summit held in March 2022 talks about a master plan for transport connectivity, which will provide a framework for

regional and domestic connectivity.

Financial Cooperation:

BIMSTEC countries have a large population of 1.80 billion people and their gross domestic product (GDP) is around \$3.8 trillion. Cooperation is established in these countries in the field of transport and communication, agriculture, trade, and investment. India contributes 32% of the gross expenditure of BIMSTEC and in the fifth summit, it was announced that India will provide 1 million US dollars to the (BIMSTEC) Secretariat to increase its operating budget.

Defense Cooperation :

These countries share water and terrestrial borders with each other. Therefore, protective cooperation between them is necessary. India is the largest power in the Indian Ocean region. All countries see India as a net security provider. However, no specific agreement regarding security has been reached so far. But in the fifth summit, Member countries have also signed a treaty on mutual legal assistance on criminal matters.

Other Cooperation

In addition to the above cooperation, cooperation has been discussed in 14 key areas including BIMSTEC Technology Transfer Facility (TTF), agriculture, and transport in BIMSTEC countries.

Future of BIMSTEC: What could be the way forward?

Although 25 years have passed since the establishment of BIMSTEC, still BIMSTEC has not been as successful as ASEAN. There are many main

reasons for this situation due lack of meetings on time, bilateral disputes, formation of Bangladesh-China-India-Myanmar (BCIM), etc. If BIMSTEC has to overcome these challenges and build itself as a successful organization, then BIMSTEC countries will have to pay attention to the following issues-

- Free Trade Agreement in BIMSTEC was discussed in the year 2004, though it was not implemented. Subsequently, in the year 2018, a study by the Federation of Indian Chambers of Commerce and Industry suggested a BIMSTEC free trade agreement. BIMSTEC countries should heed this suggestion. FTA will make the Bay of Bengal a connectivity route, and a carrier of prosperity, and security.
- Health and economic security is the biggest challenge in the region of BIMSTEC, so BIMSTEC member countries should focus on solidarity and connectivity. India will have to use its capabilities in this regard.
- At present the Indo-Pacific region has become the center of global power. Here, AUKUS, Quad many such military organizations are being created. Many organizations including ASEAN see India as a security provider. Therefore, BIMSTEC countries must focus on security cooperation keeping in mind the military power of India.
- In addition, two essential components for BIMSTEC to be included in the developed category are the coastal shipping ecosystem and power grid inter-connectivity.
- BIMSTEC is the bridge between SAARC and ASEAN. In such a situation, the success of BIMSTEC can pave the way for cooperation between a common South Asia and South-East Asia.

- It is imperative for the BIMSTEC countries to come out of mutual bilateral disputes such as India and Nepal's Kala-Pani dispute, Rohingya dispute, etc. and pave the way for the establishment of a happy and prosperous BIMSTEC.



Importance of BIMSTEC for India:

India is one of the founding members of BIMSTEC. Many elements of India's foreign policy can be seen in its relationship with BIMSTEC.

- **Neighborhood First Policy:** BIMSTEC countries share water or terrestrial border with India. Relations with these countries reflect the India's neighborhood first policy.
- **Policy of Act East:** East and Southeast Asian countries have been an important part of India's foreign policy since the beginning. BIMSTEC countries like Myanmar, and Thailand help take forward this policy of India.
- **Economic Development of North-Eastern States:** The member countries of BIMSTEC like Myanmar, and Bangladesh share borders with the north-eastern states of India. India can use the infrastructure built in these countries for the development of the states of the Northeast. These countries help connect the northeastern states with the countries around the Bay of Bengal.

- **Opposing China's expansionist policies:** India strongly opposes China's expansionist and neo-imperialist policies. Bhutan has shown cooperation towards India by not participating in China's Belt and Road Initiative. Along with this, countries like Nepal, Sri Lanka, Bangladesh, and Myanmar are also suffering from the neo-imperialist policy of China, so BIMSTEC provides an opportunity for India to counter the expansionist influences of China.
- **Policy towards Pakistan:** The relevance of the South Asian Association for Regional Cooperation (SAARC-SAARC) has not worked due to differences between India and Pakistan. In such a situation, BIMSTEC provides a new platform for India to connect with its neighboring countries.

Conclusion:

Most of the BIMSTEC countries have suffered the brunt of colonialism. Apart from India, all other countries are small and afraid of China's encroachment. India also has a border dispute going on with China. Along with this, most of the BIMSTEC countries are facing poverty, unemployment, and economic crisis. Therefore, it is clear that a common solution to their common problem is necessary, which they should try. With better efforts in the coming times, BIMSTEC will surely turn into a successful organization.

NOTES



Protecting Public Property: Everyone's Responsibility

Context

In the present day strikes and protests, there has been heavy damage to public property. We all have to understand that it is everyone's responsibility to protect public property. These incidents of law and order present a gloomy picture of India at the world order.

Introduction :

There were a lot of protests occurring on the issues of controversy regarding the examination method of NTPC and recently the Agneepath scheme and Nupur Sharma's comments on Prophet Mohammad. Government buses, trains, and private vehicles were burnt by the agitated mob. These actions have resulted in extensive damage to public property. According to an estimate, during the protest against the Agneepath scheme, there has been a loss of about 1000 crores of public property. It not only shows direct loss but also factors in many types of indirect losses. In this situation, a conscious citizen must contribute to the protection of public property.

What is Public Property ? :

According to the Prevention of Damage to Public Property Act, 1984, "public property" means any property, whether immovable or movable (including any machinery), which is owned or held or under the control of— i) the Central Government; or (ii) the State Government; or (iii) the local authority; or (iv) a corporation established by or under any Central, Provincial or State Act; or (v) a com-

pany defined in section 617 of the Companies Act, 1956 (1 of 1956); or (vi) such institution, concern or undertaking as the Central Government may, by notification in the Official Gazette, specify in this behalf.

Why there is damage to public property?

It is often seen that during the protests, public property is damaged by some anarchical elements. Many factors work behind this, which are described as follows-

- **More importance to Fundamental Rights in place of Fundamental Duties:** In India, more importance is given to Fundamental Rights in place of Fundamental Duties. Fundamental duties have not been made justifiable in the Constitution of India. The citizen of India also have a sense of their rights, but they do not have that much sense of their duties. Due to this mentality, people give importance to their right to strike and protest in front of the "protection of public property" mentioned in the fundamental duty of India.
- **Colonial mindset:** During the revolutionary activities during the colonial rule, the property of the British government was often damaged by the revolutionaries. Presently the protestors are suffering from this mentality. But it should be kept in mind that at present we are governed by a democratic government, and the public property of this government is our property.

- **Low Conviction Rate:** In the Prevention of Damage to Public Property Act, 1984, there is a provision of 5 years imprisonment for the culprit who is responsible for damage to public property. But the problem is that the damage to public property is not done by any one person but the crowd is involved in it. Since there is no face of a crowd, it is difficult to identify the offenders in it, due to which there is a problem in conviction. Due to the low conviction rate, those who damage public property are not afraid of punishment.
- **Lack of political will:** The protestors and those who caused violence and damage the public property during protest belong to some particular group. In the scenario of vote bank politics, the state governments want to refrain from taking any action against these groups. Due to these conditions, public property gets eroded.

Why is it necessary to protect public property?

Protection of public property is the responsibility of all of us which can be understood from the following points.

- **Part of the Fundamental Duty:** Article 51A (i) of the Constitution of India provides for the fundamental duty to protect public property and to stay away from violence. Although it is not justiciable, citizens have to keep in mind that the rights of others

are protected only by the duties of one. Fundamental duties are the same as the moral principle of the citizen.

- **Indicator of civilized society:** Arson or damage to public property shows anarchy. The citizens of the country who follow the principles of Gandhiji should become a symbol of civilized society by protecting public property.
- **Loss of taxpayer's money:-** Public property is created by the taxpayer's money. Thus the loss of public property is the loss of taxpayer's money. And this taxpayer is none other than us and you. Therefore, the protection of public property also becomes a responsibility of all of us.
- **Need to get rid of colonial mentality:** Burning of public property during the protest is a symbol of colonial mentality. So we should try to get rid of this mentality.
- **Peaceful protest:** Mahatma Gandhi in the past and more recently Anna Hazare and the farmers' movements have demonstrated that protesters can send their demands to the government even through peaceful agitation. Therefore, the protester should follow the principles of these peaceful movements.

Guidelines of the Supreme Court related to the protection of public and private properties:

Taking suo moto cognizance of the large-scale destruction of public and private properties in 2007, the Supreme Court took certain steps. Two committees were constituted under the chairmanship of Thomas and senior advocate Fali Nariman. Based on their recommendations, the Supreme Court gave important guidelines in this regard, which are described as follows-

Guidelines based on the recommendations of KT Thomas Committee:-

- KT Thomas Committee recommended changing the liability for conviction in cases involving damage to public property. In this context, in the normal process, generally, the prosecution has to prove that public property has been damaged in the direct action taken by an organization and that the accused was involved in such a proceeding. But based on the recommendation of the committee, the Supreme Court gave directions in cases related to public property that the accused should try to prove himself innocent.
- It was said by the Supreme Court whether the accused is guilty of the destruction of public property or not? In the context of the fact that the law should be amended to give the court the right to infer.

Guidelines based on the recommendations of the Nariman Committee

- This committee was concerned with compensation for the destruction of public property. Based on this, the Supreme Court gave the following directions-
- Compensation fee will be charged from the protesters for rectifying the deformity in the property while framing the charge of causing damage to public property.
- Guidelines have also been issued to the High Courts to take suo moto cognizance in cases related to damage to public property.
- Instructions were also given to know the reasons for the destruction of public property and to set up a mechanism to examine the compensation.

Conclusion

We often see that such protests are

made in either opposition to the decisions of the government or to get their demands from the government. Therefore, the government should try to reduce such conflicts by increasing transparency and reducing the communication gap between the public and itself. For example, in the case of Agniveer, the government should talk to the candidates. Along with this, the guidelines of the Supreme Court should be followed. But the most important of all these issues is that we have to protect public property by considering it as our property because it is everyone's responsibility to protect public property.

NOTES



Rising Radicalism in India - Threat to Democracy

Context:

The recent Nupur Sharma controversy and the murder of Kanhaiyalal in Udaipur in the same context are showing the growing radicalism in India. This situation is certainly a crisis for democracy.

Introduction:

At present, the ever-increasing radicalism in India is becoming a problem for the democracy of the country. For some days, social animosity was increasing due to problems like the citizenship amendment act, the trust crisis during corona, and mob lynching, but recently the controversy of Nupur Sharma and the murder of Kanhaiyalal in Udaipur in the same context, clearly indicates that the communal harmony of the country has been negatively affected. It should be noted that former BJP spokesperson Nupur Sharma commented on Prophet Mohammad, on which the country's Muslim community showed great anger. Amidst stone-pelting and violent activities, a terrible incident took place in Udaipur, Rajasthan. Kanhaiyalal was killed by two Muslim youths in Udaipur for supporting Nupur Sharma. It is a symbol of growing radicalism in India which is weakening democracy.

Some important events related to communal fanaticism in modern India

- Partition of India in the year 1947 and dispute in Nowakhali
- Anti-Sikh riots in the year 1984

- Expulsion of Kashmiri Pandits from the Valley in 1989
- Babri Masjid controversy in the year 1992
- Riots in Gujarat in the year 2002
- Riots in Muzaffarpur in the year 2013 etc.
- Increasing incidents of mob lynching
- Communal protests in the Citizenship Amendment Act in the year 2019
- Proclamations of the Parliament of Religions in the year 2021
- Nupur Sharma controversy and murder in Udaipur in the year 2022

Key reasons for the rise of radicalism

Religious appeasement:

Religion and caste play a vital role in the politics of India. Through religious appeasement, particular religious sects are used as vote banks. Due to political pressure on the police and administration, they are unable to stop these communal elements. Often, various political parties are accused of providing special administrative facilities to a particular class. As a result of appeasement, the communal elements get political protection, due to which the fear of statehood ends in them, which leads to bigotry in the internalization of these communal elements.

Pluralism:

At present, the notion of pluralism is increasing in India. Culturally, pluralism is a concept that emphasizes the

need for small groups in the larger society to maintain their distinctive cultural identity, values, and traditions and to be accepted by the society/state as long as they are accepted by the majority society.

Misinterpretation of religion:

As a result of increasing inequality, and due to increasing poverty and unemployment, the feeling of dissatisfaction starts increasing among the people. The communal elements take advantage of the increased discontent in this situation. They misinterpret the religion and inspire the common people to establish the path of religious superiority through violent means. For example - issues raised in the recently held Dharm-sansad and fatwas issued from mosques.

Trust Deficit :

In present times, India's concept of "Unity in Diversity" has become endangered. The feeling of suspicion and oppression towards a particular religion encourages communal fanaticism among the people. This Trust Deficit is clearly shown even during the Corona period. In the present day, people not only understand that their interests are different but they also believe that their interests are mutually opposed.

Media influence:

In the present time, due to the increasing transmission of fake news and paid news in the context of communalism through social media

and TV media, the feeling of communalism is also developing rapidly. For fulfilling the purpose of increase in TRP, TV media constantly telecast the debate on communal issues, due to which the trend of the general public remains towards communalism away from issues like unemployment, and poverty. This situation gradually turns into fanaticism.

Radicalism Affecting democracy:

- The problem of radicalism affects democratic values. This secularism, unity in diversity, negatively affect national unity.
- Because of radicalism, the Fundamental Rights of the individuals are violated. For example, in the recent Udaipur violence, the fundamental rights of the deceased Kanhaiyalal (right to life and personal liberty as mentioned in Article 21) were violated. According to an RTI, more than 1,600 people died in communal clashes between 2006 and 2017. Along with this, the freedom of movement and trade of people (rights mentioned in Article 19) is also affected by the communal riots.
- Due to communalism, people of one religion in the society start looking at the people of other religions with suspicion, which reduces brotherhood. It negatively affects the ideals of unity and fraternity as enshrined in the Constitution of India.
- It also affects the election process. People suffering from communal crises tend to vote to keep communal dimensions in mind in elections instead of development and nationalism. It progressively influences the democratic philosophy by promoting religion and communal elements in elections.
- As a result of communalism, mutual harmony declines rapidly,

due to which anarchy spreads in the society. Communal violence mainly affects the general public. They had to bear the brunt of displacement. For example, in 1990 thousands of people were displaced in Kashmir.

- Communalism hinders the process of nation-building and also questions constitutional values. Along with this, it affects democracy by affecting the internal security of the country.

How can radicalism be reduced in society?

Religion is such a subject that not only affects the personal life of a person, but the person is also sentimentally attached to it, so the attack on religion can become a factor of big controversy in time. Therefore, the following steps need to be taken to stop religious fanaticism:

The efforts should be taken by the government:

- Government and political parties have to remove religious appeasement and caste issues from their politics. The government should not work for the growth of any particular religion and should follow the principle of secularism as mentioned in the constitution.
- Communal issues are very sensitive, so the police force needs special training to deal with communal issues.
- There is a need to strengthen the criminal justice system to improve communal matters. So that communal cases can be resolved quickly and the victims can be compensated and the culprits can be punished.
- Simultaneously, there is a need to implement the Communal Violence (Prevention, Control, and Rehabilitation of Victims) Bill 2005 comprehensively.

Efforts should be taken by civil society:

- Civil society should spread awareness for secularism, national integration, and communal harmony.
- Effective people of the society should come forward in this matter and work against bigotry.

Efforts made by religious leaders:

- Religious gurus should give a realistic explanation of the essence of religion. Because the philosophy of any religion does not recognize violence.
- The religious leaders should be taught to be tolerant. And efforts should be made to resolve religious disputes through debate and not inciting people to violence.

Other efforts:

- There is a need to give special importance to values like secularism, unity, communal harmony, and non-violence in education.
- In this context, the family, society, and educational institutions have to understand their role and importance.

Conclusion:

Growing radicalism in India is weakening democracy but India's cultural roots are very strong. To protect the constitutional values (unity, fraternity, rights, equality, liberty, etc.) the spread of radicalism must be stopped in India. In this context, family, society, nation, religious leaders, civil society, etc. have to understand their role and importance. Along with this, everyone must believe that the basis of India's culture is unity in diversity, not pluralism.

STUNTING



WASTING



OVERWEIGHT



Status of Malnutrition in India

Good nutrition has the power to empower the present and future generations. India's greatest national treasure is its people especially women and children but even after 75 years of independence, a majority of them do not get the required diet to meet their nutritional needs.

Malnutrition in all form are rising globally and situation is worst in India. Child malnutrition is one of the most pressing public health issues currently in India. Recently UNICEF alerted that India has 5,772,472 children below five years affected by severe wasting.

What is Malnutrition ? :

Malnutrition refers to deficiencies, excesses, or imbalances in a person's intake of energy and/or nutrients. The term malnutrition addresses 3 broad groups of conditions:

- Undernutrition, which includes wasting (low weight-for-height), stunting (low height-for-age) and underweight (low weight-for-age);
- Micronutrient-related malnutrition, which includes micronutrient deficiencies (a lack of important vitamins and minerals) or micronutrient excess; and
- Overweight, obesity and diet-related noncommunicable diseases (such as heart disease, stroke, diabetes and some cancers).

Status of Malnutrition in India:

- Despite India's 50% increase in GDP since 2013, more than one

third of the world's malnourished children live in India.

- However the National Family Health Survey (NFHS-5) has shown marginal improvement in different nutrition indicators, indicating that the pace of progress is slow. Children in several States are more undernourished now than they were five years ago.
- Malnutrition trends across NFHS surveys show that wasting, the most visible and life-threatening form of malnutrition, has either risen or has remained stagnant over the years (Wasting is defined as low weight-for-height).
- As per latest release of Women and Child development ministry over 33 lakh children in India are malnourished and more than half of them fall in the severely malnourished category with Maharashtra, Bihar and Gujarat topping the list.
- According to the Global Hunger Index (GHI) report 2021, India recorded the highest child wasting rate of any country at 17.3 per cent in 2020. Moreover, recent data from National Family Health Survey-5 (2019-21) shows that roughly 35 per cent of children under the age of five are affected by stunting in India.
- The UN Policy 2018 reports that nearly four out of 10 children in India do not meet their full human potential owing to chronic malnutrition.
- India also has the highest prevalence

of anaemia in the world. The NFHS-5 survey indicates that more than 57% of women (15-49 years) and over 67% children (6-59 months) suffer from anaemia.

- NFHS-5, gave figures for 22 states and UTs also presented a grim scenario and showed that malnutrition increased among children in 2019-20 from 2015-16 in 22 states and UTs.
- UNICEF also alerted that India has 5,772,472 children (Highest in the world) below five years affected by severe wasting .
- However as per the recent report of NFHS-5 (2019-21), the nutrition indicators for children under 5 years have improved as compared with NFHS-4 (2015-16). Stunting has reduced from 38.4% to 35.5%, Wasting has reduced from 21.0% to 19.3% and Underweight prevalence has reduced from 35.8% to 32.1% but situation is still alarming.

Causes of Malnutrition in India:

Food Insecurity- Research carried out in various countries in which the prevalence of child malnutrition is high, shows that an important cause of this problem is household food insecurity. State of Food Security and Nutrition in the World (SOFI) report 2020 shows that while 27.8 per cent of India's population suffered from moderate or severe food insecurity in 2014-16, the proportion rose to 31.6 per cent in 2017-19. India accounted for 22 per cent of the global

burden of food insecurity, the highest for any country, in 2017-19. Currently India ranks 101st among 135 countries according to the GHI 2021.

Poverty: Because of low purchasing power, poor cannot afford to buy desired amount and desired quality of food for the family. This adversely affects their capacity for physical work and they earn less. Thus starts a vicious cycle of poverty, under nutrition, diminished work capacity, low earning and poverty.

Social strains on Women: Early marriages of girls leads to teenage pregnancies resulting in low birth weight of the newborns, poor breastfeeding practices and poor complementary feeding practices and causing malnutrition for women and child.

Rising Food inflation: Currently, inflation is running at 7.8 per cent and food inflation, at 8.4 per cent. If food prices rise by 20 per cent, families may be able to afford 20 per cent less food if there is no scope for dipping into savings or to increase income. The burden of such a reduction in food purchases is more likely to fall on women and children.

Impact of Covid-19 pandemic:

- The outbreak of the Covid-19 pandemic and the restrictions that followed has resulted in half of India's poor people being deprived of nutritious food. In its 2021 Global Food Policy Report, the International Food Policy Research Institute has warned of severe and long lasting consequences due to the contraction in diet quality.
- A paper published in July 2021 in British journal Nature stated that based on predicted declines in gross national income

(GNI) in 118 countries included in the study, the number of children under five years with wasting could increase by an additional 9.3 million; an estimated 2.6 million additional children were likely to be stunted in 2022 compared to 2019; and there would be roughly 1,68,000 additional deaths of children under five years.

Government Initiatives:

- Government has accorded high priority to the issue of malnutrition and is implementing several schemes like Anganwadi Services, Scheme for Adolescent Girls and Pradhan Mantri Matru Vandana Yojana (PMMVY) under the Umbrella Integrated Child Development Services (ICDS) Scheme (1975) as direct targeted interventions to address the problem of malnutrition in the country. Children with Severe Acute Malnutrition are treated at the Nutrition Rehabilitation Centres established by the Ministry of Health and Family Welfare.
- National Food Security Act, 2013 legally entitled up to 75% of the rural population and 50% of the urban population to receive subsidized food grains under the Targeted Public Distribution System to provide food security.
- Further, POSHAN Abhiyaan launched on 8th March 2018, aims to reduce malnutrition in the country by adopting a synergised and result oriented approach.
- Mission Poshan 2.0, an integrated nutrition support programme has been announced in budget 2021-2022 for all States/UTs. It seeks to strengthen nu-

tritional content, delivery, outreach and outcomes with focus on developing practices that nurture health, wellness and immunity to disease and malnutrition.

Conclusion:

The developmental, economic, social, and medical impacts of the burden of malnutrition are serious and lasting, for individuals and their families, for communities and for countries. Hence it is necessary to control the malnutrition in the country. However NFHS 5 indicates that there is improvement in child nutrition but the pace is slow. There is a greater need now to increase investment in women and children's health and nutrition to ensure their sustainable development and improved quality of life.

NOTES



Rural Transformation through Farm ponds

Context:

A bank-supported NGO initiative has transformed agriculture in the Hubli-Dharwad area by constructing farm ponds.

Agriculture and water use in India:

- Agricultural sector employs nearly half of the workforce in India.
- Contribution to the GDP has been rising in recent years from 18.2 percent in 2014-15 to 18.8 percent in 2021-22 according to the Economic Survey 2021-22.
- 61 percent of the farmers practice rainfed farming with 55 percent of the crop area in India being rain dependent, while the rest is irrigated using tubewells, canals, wells, tanks, and other sources.
- Fifty percent of agriculture depends on groundwater in India with 39 million hectares of land irrigated by groundwater, 22 million by canals with about 100 million hectares being rainfed.
- Agriculture consumes around 80 percent of India's available water and 90 percent of the total production includes water-guzzling varieties like sugarcane, wheat, and rice.

Benefits of farm ponds:

• Cost-effective structures:

- cost-effective structures that transform rural livelihoods.
- aid in superior water control through the harvesting not just of rainfall but also of surface run-off and subsurface flows.

• Recharge points:

- Some of farm ponds functioned

exclusively as recharge points, contributing to groundwater replenishment.

• Food security:

- They also helped in providing supplemental irrigation in the kharif season and an enhanced irrigation coverage in rabi.

→ The yield of paddy, the most important crop in kharif, stabilised, thus contributing to greater food security.

- Farm ponds retain water for 8-10 months of the year; thus farmers could enhance cropping intensity and crop diversification within and across seasons. The area used to cultivate vegetables and other commercial crops also increased.

• Financially viable:

- Some study indicated that the ponds were also a financially viable proposition, with a fairly high Internal Rate of Return, of about 19%, over 15 years

- They also support cultivation of water-intensive and more profitable commercial crops like papaya, beyond the traditional cotton, onion, etc.

• Minor investments:

- With zero maintenance cost and no requirement of intensive technology, farm ponds can provide extra income to farmers not only through better crops but also through other methods like aquaculture and fishery in farm ponds.

Issues with Farm Ponds:

- In some areas the idea of a farm pond as an in-situ rainwater harvesting structure has taken a complete U-turn. Here, some of them are benefiting farmers at an individual level, but not contributing to water conservation and recharge.

- They are being used as intermediate storage points, accelerating groundwater depletion and increasing evaporation losses as the groundwater is brought to the surface and stored in relatively shallow structures.

- Some of farm ponds are being constructed without inlet and outlet provisions and their walls are raised above the ground level by only a few feet. They cannot arrest the excess run-off as there is no inlet, and therefore they cannot be used effectively for rainwater harvesting.

- Further, farmers line them at the bottom with plastic, restricting seepage and converting the ponds into intermediate storage points.

- Such farm ponds have an adverse impact on the water tables and accelerate water loss.

- The usual practice here is to lift water from a dug well and/or a borewell, store it in the pond and then draw it once again to irrigate the fields, often using micro-irrigation. While offering secure irrigation facility, this intensifies competition for extraction of groundwater from the aquifer, which is a common pool resource.

Making farm ponds sustainable:

These steps need to be undertaken to make farm ponds ecologically sustainable:

- Regulating borewells and the use of groundwater for farm ponds.
- Limiting the number of farm ponds and size in each village depending on hydrology, topography, climate patterns, population, etc. These provisions must be included in the scheme itself.
- Finding substitutes for plastic linings, like WOTR (Watershed Organisation Trust), Pune that experimented with 80 percent soil and 20 percent cement for coating, which reduced 50 percent cost and was found to be ecologically effective and sustainable.
- Using farm ponds for domestic use. This experiment was carried out in the Marathwada region successfully by WOTR.
- Community farm ponds were built with participation from the locals right from planning, implementation to maintenance thus, creating ownership amongst the beneficiaries. It also helped in reducing the number of ponds in the village.
- Covering pond surfaces to reduce evaporation. Aquaponics can be practised for reducing evaporation and providing supplementary income. And if possible pisciculture too.
- Farm ponds constructed with minimum surface area and greater depth can also reduce evaporation when temperature rises above 40 degrees.
- Provision of subsidy to small and marginalised farmers to avoid loss for diverting available land for farm ponds, hence reducing area under cultivation.

- Focus on micro-irrigation projects like drip and sprinkler irrigation which provide a higher rate of interest than large irrigation projects like the dams, canal irrigation, etc.
- Promotion of cottage industries like food processing, thus motivating farmers to cultivate different crops than water guzzlers. Cottage industries can be built with the help of SHGs and cooperatives thus further providing employment and income opportunities to the locals.

Case study:

Evidence from the ground in North Karnataka and Telangana under the initiative of an NGO, the Deshpande Foundation, indicates that with awareness creation among farmers, CSR spends by corporates, focused lending by banks like SBI and support of institutions like NABARD, big changes at the grassroots level are possible.

In districts like Dharwad, Bellary, Kalaburagi and Karim Nagar, farm ponds of the size of 100 feet by 100 feet with a depth of 12 feet, constructed under the aegis of the Foundation are now helping farmers draw water for their crops without even the availability of large irrigation systems. Instead of single cropping, the beneficiaries now do multiple cropping and naturally, output has increased.

Way forward:

- Overall, farm ponds can act as effective harvesting structures and also yield healthy financial returns. But if they are promoted merely for on-farm storage of groundwater and canal water, they could accelerate, rather than reduce, the water crisis in the countryside.
- Assured irrigation created through farm ponds has led to

some farmers in Bundelkhand even planning rearing of fish or taking a crop of singhaada (water chestnut) in their fields. There could also be scope to earn extra income from planting of fruit-bearing trees on the bunds. By enabling harvesting and conservation of rainwater, creating irrigation potential and providing a means of drought proofing, farm ponds have shown they can be a potential game-changer for even parched regions like Bundelkhand.

NOTES



SHORT ISSUES

1

India's Largest Floating Solar Power Project Commissioned

Why in News?

India's largest floating Solar Power Project is now fully operational. NTPC declared Commercial Operation of the final part capacity of 20 MW out of 100 MW Ramagundam Floating Solar PV Project at Ramagundam, Telangana with effect from July 01, 2022.

About Ramagundam Floating Solar Power project:

The 100-MW Floating Solar Power-project at Ramagundam is endowed with advanced technology and environment friendly features. The overall construction cost was Rs. 423 crores through EPC (Engineering, Procurement and Construction) with BHEL.

The project spreads over 500 acres of its reservoir, divided into 40 blocks, each having 2.5MW. capacity Each block consists of one floating platform and an array of 11,200 solar modules.

This project is unique in the sense that all the electrical equipment including inverter, transformer, HT panel and supervisory control and data acquisition etc. are also on floating cement platforms.

Other floating solar power plant in News:

Recently Tata Power Solar Systems has partly commissioned India's largest floating solar power project of 101.6 Megawatt Peak in Kerala back-

waters.

- Rihand Dam (50MW) State – Uttar Pradesh
- Kayamkulam Project (92 MW) State – Kerala
- Getalsud dam project (100MW) State – Jharkhand
- Ramagundam Reservoir (100 MW) State – Telangana
- Omkareshwar Reservoir (600MW) State – Madhya Pradesh

Bhadla Solar Park is the world's largest solar park in India. It is spread over a total area of 14,000 acres in Bhadla, Phalodi tehsil, Jodhpur district, Rajasthan, India.

Initiative related to Solar Power:

National Solar Mission: It is the part of India's National Action Plan on Climate Change-2008 with the National Solar Mission as one of the key Missions.

INDCs target: It targets installing 100 GW grid-connected solar power plants by the 2022.

India's Intended Nationally Determined Contributions (INDCs) target is to achieve about 40% cumulative electric power installed capacity from non-fossil fuel, to reduce the emission intensity of its GDP by 33 to 35% from 2005 level by 2030.

ISA: The International Solar Alliance (ISA) was announced by the Prime Minister of India and the President of France in 2015, at the 21st ses-

sion of the United Nations Climate Change Conference of the Parties in Paris, France.

One Sun One World One Grid: India has an ambitious cross-border power grid plan 'One Sun One World One Grid' that seeks to transfer solar power generated in one region to others with need and demands.

Advantages:

Address Land Acquisition Issues: The key challenge to renewable energy plant owners is land acquisition, grid connectivity, regulations etc. Floating solar Power Plant save the land for other uses such as farming or construction.

Cooling Effect: The bodies of water have better cooling effect, which improves the performance of solar photovoltaic panels by 5-10%.

Other Advantages: Reduced grid interconnection costs, algal blooming, water evaporation and improved water quality.

Challenges:

Increased Cost: Engineering and construction costs are usually higher than ground-mounted solar farm.

Safety Issues: More consideration must be given to cable management and insulation testing than on land, especially when cables are in contact with water.

Degradation and Corrosion: A floating solar plant has moving parts that are subject to constant friction and

2

Performance Grading Index for Districts (PGI-D)

Why in News?

The Department of School Education and Literacy (DoSE&L), Ministry of

Education released the Performance Grading Index for Districts (PGI-D) for 2018-19 and 2019-20. That assesses

the performance of school education system at the District level by the report comprehensive analysis.

About:

The PGI-D assessed district-level performance in school education system by creating an index for comprehensive analysis. It is based on the data collected from various sources, including Unified District Information System for Education Plus (UDISE +), National Achievement Survey (NAS)-2017 and data provided by respective districts.

Methodology:

The PGI-D structure comprises of total weightage of 600 points across 83 indicators, which are grouped under 6 categories. These categories are further divided into 12 domains.

Assessment Grades: The PGI -D Assess the districts into 10 grades. The highest achievable grade is 'Daksh', for districts scoring more than 90% of the total points in that category or overall, then 'Utkarsh' (81% to 90%), 'Ati Uttam' (71% to 80%), 'Uttam' (61% to 70%), 'Prachesta-1' (51% to 60%) and 'Prachesta-2' (41% to 50%) etc.

The lowest grade in PGI-D is 'Akanshi-3' which is for scores upto 10% of the total points.

Key Highlights of the Report:

Three districts of the Rajasthan performed the best in the report; these are Sikar, Jhunjhunu, and Jaipur.

Rajasthan has the highest 24 districts in Utkarsh' grade, followed by Gujarat and Kerala with each having 13.

12 States/UT don't have even a single district in the Ati-uttam and Uttam category. These states are Bihar, Goa, Jammu and Kashmir, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and Uttarakhand.

Eight districts improved their PGI score by more than 20% and 14 districts improved more than 10%. Another 423 districts made less than 10% improvement.

In the Digital Learning (DL) category 20 districts have shown over 20% improvement in score and 43 districts have shown improvement of over 10%.

The report also underlines the clear rural-urban divide in the area of digital learning. The districts like Chandigarh and Delhi scored between 25 and 35 out of 50, places like Bihar's Araria and Kishanganj scored as low as 2.

In the Infrastructure, Facilities, Student Entitlements (IF & SE) category, overall 478 districts made improvement in score. Out of 478 districts, 37 districts improve over 20% and 115 districts over 10%.

Under the Effective Classroom Transactions, overall 510 districts made

improvement in scores. There are 18 districts which improved more than 20% and 29 districts which improved their score by over 10%.

Way Forward:

It's absolutely true that the future and overall development of any country depends upon the fact that how educated its citizens are.

India has shown significant improvement in education since 1947 until today. Even then some necessary improvements are required in every field.

Better implement of the New Education Policy with aims to facilitate an inclusive, participatory and holistic approach.

Promote parents to send their kids to schools.

Improve proper infrastructures, and appoint adequate number of well-trained teachers.

The schools (especially in rural area) are required to equip with computer and technical education.

Promote the innovative teaching methods in schools and college.

Improve coordination with field experiences, empirical research, stakeholder feedback, as well as lessons learned from best practices.

3 Start Up Ranking Of States Of 2021

Why in news ?:

Recently, ministry of commerce and industry has released result of Start Up ranking of States 2021.

The ranking recognise the effort of the states and union territories from October 2019 to July 2021, aiming fostering competition among them.

The ranking has classified the states under two category, category A and category B states.

Ranking of the states

For the purpose of the ranking, states and union territories has been classified under five categories like as Best Performer, Top Performer, Leader, Aspiring Leader and Emerging start up ecosystem.

States are evaluated across 7 broad reform areas consisting of 26 points.

The exercise plays a crucial role in easing the business environment for Start Up in the country.

Gujarat and Karnataka have emerged

as the Best Performer category of states which include NCT Delhi. Meghalaya has won the top honour among UT and North Eastern states Maharashtra, which was classified in the leader category in 2020 ranking, has improved its position and felicitated as a Top Performer state along with Telangana, Kerala and Odisha. Assam, Punjab and Tamil Nadu have emerged as a leader of the ranking in category A states.

Chhattisgarh along with Delhi have cemented their position as an Aspiring leader.

Andhra Pradesh and Bihar have been recognised as emerging start up ecosystem states in the ranking.

In category B states Meghalaya is best performer state and Jammu and Kashmir has emerged as top performer.

Chandigarh ranked as aspiring leader in category B states in ranking.

Andaman and Nicobar has gained position as leader in category B States.

Mizoram and Ladakh are categorised as emerging start up ecosystem states in category B states.

Leader across 7 reform area:

The top performer states and Union territories across each reform area have been recognised as a leader.

Gujarat, Karnataka and Kerala have been placed in institutional champion.

on.

Karnataka, Maharashtra and Telangana has emerged as innovative leader.

Gujarat, Telangana and Jammu Kashmir top in incubation hub category.

Gujarat and Karnataka have also topped the mentorship category.

Gujarat, Karnataka and Kerala have been recognised as capacity building pioneer states.

About the State Start up ranking exercise

The Department for Promotion of Industry and Internal Trade (DPIIT) has been conducting the states start up ranking exercise since 2018 to facilitate the ease of building a start-up and doing business across the country. The exercise has grown in its impact over the last three editions, with 31 participating states and union territories this edition, the highest till date. The State Start-up Ranking Exercise aims to support states and

union territories in developing their start-up ecosystem and learn from the best practices in each state and union territory.

A State Specific Report for each of the 31 participating States and Union Territories has also been released, containing an extensive analysis of respective ecosystem, which highlights strengths and priority areas for future.

Conclusion:

India has emerged as a leader in the world in Start Up sector. India has established itself in top three position in the Start Up ecosystem. 100 plus Start Up has been recognised as unicorn start up. Unicorn is a Start Up which total market value amount about 1 billion dollar. Indian government had launch many schemes to facilitate start up ecosystem like Start Up India scheme, Stand up India scheme and mudra yojana etc.

4

Digital India week 2022

The Digital India week 2022 with the theme Catalyzing New India's Techade kicked off on 4 July in Gandhinagar Gujarat. The July 4th to 9th weeklong event commemorated the path breaking journey of the flagship initiative of the Digital India Programme that was launched in year 2015 by P.M.Modi.

Programme launched at week long event:-

Digital India Bhashini: This will enable Indians an easy access to the internet and digital services in vernacular language.

Digital India GENESIS: Gen next Support for innovative Startup –a national deep tech startup platform.

MyScheme: It will provide access to government scheme at a single place

About Digital india Programme :

Digital India Programme was

launched by Prime minister Narendra Modi on 1 July 2015. Programme has three main vision area.

- Digital infrastructure is core utility of every citizen
- Government and service on demand
- Digital empowerment of citizen.

Digital India: key initiative and progress

Aadhaar: It was launched in 2009 to provide every Indian resident with a unique identity or Aadhar number. According to UIDAI total 129 crore Indian possess Aadhar as of April 2021.

Digilocker: It was launched in 2015 to create a cloud based platform to issue, exchange and verify essential documents or certificates. There are 3.3 crore registered users in India.

Smart city programme: It was initiated

in 2015 to transform all Indian cities into smart cities by leveraging various technologies. 100 cities have been selected for area-based and pan-city development between 2019 and 2023.

Common service centre: Under the Digital India programme, CSC 2.0 aims to establish a self-sustaining network of 2.5 lakh CSC centres in Gram Panchayats. It is implemented by Department of Electronics and Information Technology. As of now about 3.74 lakh CSC are working in India.

Digitisation of post office: Under the digital india programme, the government aim to convert 1.5 lakh post office into multiple service centre. About 1.55 lakh post payment banks are working in India.

Pradhan Mantri Gramin Digital

Saksharta Abhiyaan (PMGDISHA):

It was launched in 2017 to help people in rural areas become digitally literate. The scheme aimed to cover 6 crore rural citizen by march 2020, targeting one member from every eligible household.

e-health: it was introduced to provide timely and effective health care service such as online booking, payment and consultation.

My Gov: It was launched in 2014 to bring the government closer to the people by providing an online platform to exchange the ideas.

Bharat net: It was introduced in 2012 to connect all 250,000 Gram Panchayat through internet services.

Why digital India is need of the

hour?

For uprooting the corruption and making the life easier, it can be done only by digital India and new technology.

Through digital India programme, many new possibilities have come up and people do not face much hurdle in availing service like banking, ration shop and gas shop etc.

Digital payment has become so easier that people can now pay even one rupee to any one through digital means and it also help to weed out black money and corruption from system, and help government to boost their revenue.

Conclusion:

The rising use of UPI has indicates that more people in India are adopting digital lifestyle. With emergence of technology such as artificial intelligence, internet of things, robotics, block chain, the government can use these new avenue to further enable digital and technological growth in India.

5 MP/MLA Court

Why in news?

Raj Babbar, has been sentenced to two-year imprisonment by an MP-MLA court for assaulting a polling officer and others during the 1996 Uttar Pradesh Assembly elections.

About MP/MLA Court-

- In 2017, the Supreme Court in one of its judgments ordered that special courts be set up across the country for speedy disposal of pending cases of MPs and MLAs.
- Subsequently, 12 special courts were set up in 11 states exclusively to hear the cases of sitting MPs and MLAs.
- 12 Special Courts (02 in the National Capital Territory of Delhi and 01 each in the states of Uttar Pradesh, Bihar, West Bengal, Madhya Pradesh, Maharashtra, Karnataka, Andhra Pradesh, Telangana, Tamil Nadu and Kerala) were constituted. Presently 10 Special Courts are functioning in 9 States (Special Courts of Bihar and Kerala were closed as per the direction of Apex Court dated 04.12.2018).

ed 04.12.2018).

- Recently on the direction of the Supreme Court, the crime has been divided into two categories. First the case which is under trial by the Sessions Court and the hearing is to be held in Sessions Court. Second, matters relating to petty offenses are to be heard in Magistrate Court.
- In September 2020, the SC-appointed amicus curiae (friend of the court) highlighted in its reports that despite the constitution of special courts to hear cases against MPs/MLAs, there are 2,556 sitting MPs and MLAs accused in 4,442 criminal cases.

Increasing criminalization in politics:

According to the Association of Democratic Reforms (ADR), almost half of the current Lok Sabha members (2019) have criminal cases against them, which is 26% more than in 2014 (16th Lok Sabha).

Cause-

1. Increasing use of money power and muscle power in elections.

2. Lack of enforcement of laws and judgments of SC.
3. Lack of awareness among the public.
4. Lack of internal democracy within political parties, etc.

Initiatives in this regard-

1. Section 8 of the Representation of the People Act, 1951, prescribes disqualification on conviction for certain offences. According to this, a person sentenced to imprisonment for more than two years cannot fight in election for next six years after the expiry of the jail term.
 - However, this law does not prevent such persons from contesting elections against which criminal cases are pending.
2. By a Supreme Court decision in the Association of Democratic Reforms (ADR) case, the Representation of the People Act 1951 was amended by inserting Section 33-A, which requires a candidate to furnish information whether he is charged with imprisonment for a term which

may extend to two years or of any other offence. Pending cases in which charges have been framed and whether he has been convicted for one year or more.

- The increasing criminalization and corruption of politics strike at the root of democracy. In order to regulate the affairs of a

political party, it is necessary to have a clean electoral process.

Way forward:

- Various Committees on Electoral Reforms (Dinesh Goswami, Indrajit Committee) have recommended state funding for elections which will substantially curb the use of black money in elections and thus will help in to

prevent criminalization of politics.

- It is imperative to strengthen the Election Commission of India.
- Voters also need to be vigilant about misuse of money, gifts and other inducements during elections.
- Promote the intra-party democracy.

INTER-NATIONAL

1

International Day Against Drug Abuse and Illicit Trafficking 2022

Why in News?

- Every Year the International Day against Drug Abuse and Illicit Trafficking or World Drug Day, is celebrated on 26 June. The focus is on creating awareness about the hazardous impacts of drug abuse on the society and to create a world without it.
- UNODC World Drug Report 2022 was also released on the occasion of the world Drug Day.

About World Drug Day**History:**

7 December 1987, the General Assembly decided to observe 26 June as the International Day against Drug Abuse and Illicit Trafficking as an expression of its determination to strengthen action and cooperation to achieve the goal of an international society free of drug abuse.

Theme:

- This year the theme is "Addressing drug challenges in health and humanitarian crises". The motive is to fight off misinformation by sharing facts and by providing methods of treatment, prevention and care.
- This year, United Nations Office on Drugs and Crimes (UNODC)

started the campaign- "#CareInCrises"- for World Drug Day.

Significance:

- Each year supported by individuals, communities, and various organizations all over the world, this global observance aims to raise awareness of the major problem that illicit drugs represent to society.
- In 2022, the world continues to witness widespread humanitarian crises in Afghanistan, Ukraine and elsewhere, while the Covid-19 pandemic is still a major global health crisis.

Key Highlights of the World Drug Report 2022:**Global:**

- The World Drug Report 2022 is released by the UN Office on Drugs and Crime (UNODC).
- According to the report, around 284 million people aged 15-64 used drugs worldwide in 2020, a 26 per cent increase over the previous decade.
- In Africa and Latin America, people under 35 represent the majority of people being treated for drug use disorders.
- Globally, the report estimates

that 11.2 million people worldwide are injecting drugs. Around half of these numbers are living with hepatitis C, 1.4 million are living with HIV, and 1.2 million are living with both. Cocaine manufacture was at a record high in 2020, growing 11 per cent from 2019.

- Nearly 90% of cocaine seized globally in 2021 was trafficked in containers and or by sea.
- Women represent are estimated 45-49 % users of amphetamines and non-medical users of pharmaceutical stimulants, pharmaceutical opioids, sedatives, and tranquilizers.

India:

- India is one of the world's single largest opiate markets in terms of users and likely be vulnerable to increased supply.
- India is vulnerable to the trafficking of narcotics as it is sandwiched between the 'Golden Crescent (Pakistan, Afghanistan, and Iran)' and the 'Golden Triangle (Myanmar, Thailand and Laos)', the major opium production regions in the world,
- India has the fourth largest

quantities of opium seized in 2020 at 5.2 tons, and third-highest amount of morphine was also seized in the same year at 0.7 tons.

- About 3.8 tons of heroines were seized in 2020 in India, the fifth-highest in the world.

Way Forward:

- There is need to devote the necessary resources and attention
- It is needed that the policy makers across the world tailor holistic drug-supply reduction strategies encompassing economic development and alternative livelihoods in countries where coca bush are illicitly cultivated.
- Drug policy approaches should be integrated into conflict and

peace building response in conflict areas.

- Governments should encourage more complex and deep investigation of transnational crimes, aimed at revealing and dismantling related financial flows.

2**Contribution of Shinzo Abe toward India Japan Relations****Why in news ? :**

Former prime minister of Japan Mr Shinzo Abe had been shot dead at an election campaign in Nara by a 41 year old man. Government of India had decided to observe state mourning on 9 July 2022.

About Shinzo Abe:

Shinzo Abe (21 September 1954 – 8 July 2022) was a Japanese politician who served as P.M of Japan and President of the Liberal Democratic Party (LDP) from 2006 to 2007 and again from 2012 to 2020. He was the longest-serving prime minister in Japanese history. Abe also served as Chief Cabinet Secretary from 2005 to 2006 under Junichiro Koizumi and was briefly leader of the opposition in 2012. He was staunch supporter of globalisation and free Indo-Pacific concept. Relationship with China was not in good shape during his tenure due to expansionary policy of China.

Contribution towards India Japan relation :

Abe sought to upgrade the strategic Japan India relationship. Abe initiated quadrilateral security dialogue between Japan, USA, India and Australia in 2007. In January 2014 he became the first Japanese leader to attend India's republic day parade in Delhi as chief guest. During this visit he had met with prime minister of

India Manmohan Singh and agreed to increase cooperation over economic, defence and security issue and signed trade agreements related to tourism, energy and telecom. Modi's first visit to Japan as prime minister of India in 2014 was marked by signing of many new agreement including rare earth elements, joint maritime exercise and nuclear cooperation.

Major projects:**Mumbai-Ahmedabad High Speed Rail Corridor:**

It involves expenditure of about 1 lakh crore rupee for construction of Mumbai-Ahmedabad High Speed Rail Corridor. It involved 505 km construction of track using Japan Shinkansen technology. This project was started during his official visit in India in 2017.

Indo pacific:

In August 2007, when Shinzo Abe visited India as prime minister of Japan, he delivered famous "confluence of two seas" speech, laying the foundation for his concept of Indo-Pacific. His historic speech became the benchmark and foundation for Indo-Pacific ties.

Nuclear deal:

When Prime Minister Modi went to Japan in 2014, Indo-Japan deal was

still uncertain as Tokyo was sensitive about a pact with NPT member country. However Shinzo Abe government convinced the antinuclear hawks in Japan to signed the agreement in 2016.

Joint effort to counter China:

Growing concerns about Chinese aggression have resulted in Tokyo and Delhi reconfiguring bilateral ties to make them more ambitious in undertaking joint projects in India northeast and revival of quad in 2017. Asia Africa growth corridor to counter the China's BRI project in Africa was the joint effort of Japan and India.

Conclusion:

Shinzo Abe was one of the most trusted partner of India. He agreed to upgrade bilateral relation to a "special strategic global partnership", a relationship which encompassed issues from civil nuclear energy to maritime security, bullet train to quality infrastructure, act east policy to Indo-Pacific strategy.

ENVIRONMENT

1

Assam: Floods & Landslides

- India is the second most flood affected country in the world. A flood is a situation in which a certain area of land is temporarily submerged and the general public is affected.
- Recently, in fact the flood situation has become critical due to heavy rains in Assam.
- About 7 lakh people of 29 districts of Assam are troubled by the devastation of the floods. Assam got submerged in flood waters. Due to this, normal life has been completely disturbed. Farmers have suffered from huge losses due to floods in Assam. Thousands of hectares of agricultural land has been submerged in water.
- Indian Air Force has deployed 20 N.D.R.F. personnel for relief work the flood affected areas.

Reason for floods in Assam:

- Strong flow of water from Brahmaputra river in Assam Valley.
- Due to the U-shape of the Assam Valley, the flow of water is towards Assam.
- Due to the high earthquake zone of the state of Assam, there is high possibility of both floods and landslides.

What is flood?

- Flood is a natural calamity caused by excessive rainfall on the earth's surface. Due to the effect of flood, a wide area is submerged and it causes loss of life and property on large scale. Usually floods come due to the rapid flow in rivers in which the biggest contributor is torrential rains. Not only the agricultural fields are destroyed by the flood's menace, but the buildings, telecommunications and transport services also come to a complete halt.
- Most of the flood prone areas in the world are found in the alluvial plains, in which large rivers flow with their tributaries.

Floods in the 21st century:

- Mumbai Floods in July, 2005.
- Flood outbreak in Uttarakhand in June, 2013.
- The scene of the floods in Gujarat in June, 2015.
- August, 2018 Kerala floods.
- 2020 Hyderabad floods.
- 2021 Maharashtra floods.

Reason for flood:

- Heavy rains – there are two causes of excessive rainfall (a) By cloudburst, (b) Due to cyclones

- Excessive deforestation.
- By deposition of sediments at the bottom of rivers.
- Due to expansion in catchment areas.
- Due to lack of drainage.

Flood Affected States in India:

Bihar, Uttar Pradesh in the eastern region, Assam and Meghalaya in the north eastern states, Tamilnadu, Kerala and Andhra Pradesh in the southern regions while Gujarat and Maharashtra in the western regions.

Flood Damage:

- Loss of crops,
- Loss of life and property,
- Disruption of traffic and communication services,
- Increase in diseases,
- Destruction of biodiversity,
- Huge increase in the expenditure of the central and state governments.

Measures to Prevent Floods:

- Planting more forests in the catchment areas.
- Construction of small water storage dams.
- Removal of deposited sediments in rivers.
- Interlinking rivers.
- Reducing the emission of greenhouse gases.

1

Renewable Energy Revolution

Context:

Recently secretary general of United Nations Antonio Guterres highlighted the dire crises for earth in near fu-

ture and show the path for solving the problem. He highlighted that the only true path to energy security, stable power prices, prosperity and

liveable planet lies in abandoning polluting fossil fuel and accelerating the renewable based energy transition.

Main Point :

Russia Ukraine crises had grown the energy crises.

All climate indicators continue to break the record, forecasting ferocious storms, flood, drought, wildlife, and unliveable temperature in the vast swathes of planet.

- Fossil fuel are the cause of the climate crises. Renewable energy is the answer to limit climate disruption and boost energy security.
- He urged G20 government to dismantle coal infrastructure with a fuel to phase out by 2030 by OECD and 2040 for all other countries.

Five point plan of Guterres:

- Make renewable energy technology a global public good
- Improve global access to supply chain for renewable energy technologies component and raw material
- We must cut the red tape that holdup solar and wind projects.
- Protect vulnerable people from energy shock and invest in a just transition to sustainable future
- We need to triple investment in renewable sector

About Renewable Energy:

Renewable energy is energy that derived from renewable sources and naturally replenished on time to time. It includes sources such as sun light, wind, rain, tides, wave, and geothermal heat. Most of the renewable sources are sustainable except a few.

India and renewable energy:

- The indian renewable energy sector is the fourth most attractive renewable energy market in the world. As india looks to meet its energy demand on its own, which is expected to reach 15,820 Twh by 2040, renewable

energy set to play an important role.

- As of January 2022, India's installed renewable energy capacity stood at 152 GW representing 39 % of overall installed capacity.

India's rank:

India was ranked fourth in wind power, fifth in solar power and fourth in renewable power installed capacity.

Government initiative:

- In union budget 2022-23, the allocation for the Solar Energy Corporation Of India (SECI) which is currently responsible for the development of entire renewable energy sector, stood at Rs 1000 crore
- PLI scheme to boost manufacturing of high efficiency Solar module
- At cop 26, PM made a promise to increase India's renewable generation capacity to 500 GW and meet 50% of India energy need through renewable mean by the year 2030
- Government undertake rooftop solar program, which aim to installed capacity of 4000 mw in residential sector by 2022
- In June 2021, India launched mission innovation clean tech exchange, that will create a whole network of incubators across members countries to accelerate clean energy innovation

SECI(solar energy corporation of india ltd):

It is public sector company come under ministry of new and renewable energy, Government of India to facilitate the implementation of national solar mission. SECI was founded on September 2011, headquarter in New Delhi.

India's Effort for World:

- We have already knew that India is committed toward renewable

energy sector, like establishment of International Solar Alliance, declaration of Panchamrit at glosgow and net carbon neutrality by year 2070

- At the same time india has fully geared up to meet the target if INDC which was pledged in Paris climate agreement.
- India run scheme like Jal Jeewan Mission, Swachh Bharat Abhiyaan, Ujjwala scheme and saubhagya scheme that will inspire the whole world.

Conclusion:

Renewable energy revolution highlight the effort of cooperation for well being of whole world. Renewable energy is the only solution to mitigate the is effects of global warming.

NOTES

SCIENCE-TECH

1

ABHYAS: High Speed Expandable Aerial Target

Why in discussion?:

DRDO has recently successfully test-fired the indigenous combat drone 'ABHYAS' from the Integrated Test Range (ITR) at Chandipur off the coast of Odisha.

About 'ABHYAS':

- It is an indigenous combat drone manufactured by DRDO named 'ABHYAS'. It is powered by a small gas turbine engine. Not only can it take off automatically, but it can also easily hit its target.
- The Defence Research and Development Organization successfully test-fired the 'ABHYAS' High Speed Expandable Aerial Target (HEAT) from the Integrated Test Range at Chandipur on the Bay of Bengal coast in Odisha.
- 'ABHYAS' was being constructed by DRDO from the year 2012. Earlier, the successful test of 'ABHYAS' has been done in the year 2019, 2020 and 2021 as well. ABHYAS has all the three systems 'RCS', 'Visual' and 'IR' required to operate the weapon.

Importance of 'ABHYAS':

- Its use will further strengthen the Indian Defence system. It can be used to monitor various missile systems. This will make it

easier to hit the air target.

- It flies under the control of a fully automatic system and does not require the intervention of a human pilot. This drone is capable of hitting two modes, surface-to-air and air-to-air. The BRAHMOS missile can also be tested at a lower altitude than this.

About DRDO:

- It was established in the year 1958. Its motto is "BALASY MOOLAM VIGYANAM" which means science is the source of power. DRDO is an R&D wing under the Ministry of Defence, Government of India. DRDO has strengthened India's Defence technology and systems.

DRDO Products:

- It has developed Light Combat Aircraft-TEJAS, Multi Barrel Rocket Launcher-PINAKA, Air Defence System-AKASH, Radar and Electronic Warfare System,. In addition it has developed a complete range of AGNI and PRITHVI missiles.
- Today, DRDO through a network of over 50 Laboratories has not only covered Aeronautics, Armaments, Electronics, Combat Vehicles, Engineering Systems,

Instrumentation, Missiles, Advanced Computing and Simulation, Special materials, Naval Systems, Life Sciences, Training, Information Systems. It has developed missiles, Armaments, Light Combat Aircraft, Radars, Electronic Warfare Systems, etc., but it has also exported many important technologies to other countries. In exports, there are P-7 Heavy Drop System, NISHANT HPO Chamber, On Board Oxygen Generating System, Pilotless Target Aircraft, Torpedo.

Way Ahead:

India's DRDO has achieved many important achievements in the field of Defence, but compared to developed countries, there are still many challenges before India, such as Defence related structural, Policy, COVID Pandemic, Helicopter Accidents, War related Military Supplies, Shortfall in Defence Budget, Bureaucratic Interference, Shortage of Defence Experts, Red tapism, Excessive complexity of Organization etc.

2

Capstone Mission

Why in discussion?

On June 29, 2022, NASA has launched CAPSTONE, a microwave oven-sized cube satellite orbiting the Moon.

ABOUT CAPSTONE-

- CAPSTONE > Cislunar Autonomous Positioning System Technology

- Its weight is 55 pounds i.e. 25 kilograms.
- The orbit in which this satellite has been sent is called near-rec-

tilinear halo orbit. This orbit is completely different from other orbits.

- This near-rectilinear halo orbit will operate at an equilibrium point where the gravity between the Earth and the Moon is almost equal.
- This satellite will test the moon with a unique, elliptical orbit.
- This satellite is part of NASA's Artemis program.
- This satellite will act as a guide for the gateway.
- This satellite will help in reducing the risk of future spacecraft.
- The satellite will fly near the Moon's near 1,600 km north pole and within 70,000 km at its farthest from the south pole.

What is NASA's Artemis mission?

It is also known as the Space Launch System, which will work to take humans to the moon in the future. NASA started the Artemis mission in the year 2011.

About NASA:

- US Space Agency.
- Headquarters: Washington DC (United States of America).
- Established: October 1, 1958.
- NASA Administrator: Bill Nelson.

History related to the exploration of the moon:

In 1959, the Soviet Union sent unmanned Luna 1 and 2 to the Moon. America started sending people into space from the year 1961.

On July 20, 1969, Neil Armstrong and Edwin were the first humans to step on the Moon through the Apollo 11 mission.

From July 1969 until 1972, 12 American astronauts walked on the surface of the Moon.

The US started exploration work on the Moon in the 1990s with the robotic missions 'Clementine' and 'Lunar Prospector'.

The Moon's gravity was studied by the Gravity Recovery and Interior Laboratory (GRAIL) spacecraft in 2012.

The United States, European Space Agency, Japan, China and India have sent their missions to explore the Moon.

China has landed two rovers on the lunar surface, with the first landing on the lunar surface in the year 2019.

ISRO's efforts related to the exploration of the moon:

- India launched its first satellite with the help of Soviet Union on 19 April 1975 by Kosmos-3 mission.
- India started the Chandrayaan project in 2007 with the help of Russia, through which the presence of water on the Moon was detected.
- Chandrayaan-2 is India's second mission to the Moon which is completely indigenous. This included Orbiter, Lander (Vikram) and Rover (Pragyan).
- Recently, India's ISRO has announced the third moon mission, in which there will be only one lander and one rover.

3

Thiomargarita Magnifica Bacteria

About the Thiomargarita Magnifica Bacteria:

Thiomargarita magnifica bacteria is a species of sulphur oxidising gammaproteobacteria, found growing underwater on the detached leaves of red mangrove from Guadeloupe archipelago in lesser Antilles.

Why in News ?:

T.magnifica is the world's largest known bacteria found in tropical mangroves of Guadeloupe archipelago in the Caribbean. Each bacterium is 1cm long and has a structural complexity not seen before in any bacteria.

About the Bacteria::

Bacteria are small single celled organism. They may be shaped like spheres, rod or spiral. They inhabit virtually all

environment, including soil, water, organic matter and bodies of animal.

Characteristic:

- Lack of membrane bound organelles
- Unicellular
- Small microscopic size

Some Facts :

The most bacteria are around 2 mm or 0.0002 cm in length. Their size is limited by the fact that the energy carrying molecules they use to power themselves, known as ATP, are produced using enzymes embedded in the cell membrane. This means bacteria need to have a suitable surface area to volume ratio to function. Already known bacteria could grow

larger, with one species Thiomargarita nelsonii growing up to 750 micrometre long. This is however, still within expected theoretical size limit imposed on bacteria.

The new bacteria name T.magnifica has a volume about 50 times that of T.nelsonii, breaking those expected size limit.

What can Bacteria Do?

Some of them help to digest food, destroy disease causing cell, and give body needed vitamin. Bacteria are also used in making healthy food like yogurt and cheese. But some bacteria can also cause ill health.

Bacterial Disease:

Disease	Causative agent
Tuberculosis	- Mycobacterium

	tuberculosis
Diphtheria	- Corynebacterium diphtheria
Cholera	- vibrio cholera
Tetanus	- clostridium tetani
Plague	- Yersinia pestis
Gonorrhoea	- Neisseria gonorrhoeae
Salmonellosis	- salmonella enteriti
Syphilis	- Treponema pallidum
Leprosy	- Mycobacterium leprae
Pertussis	- Pertussis

How to Protect From Bacterial Disease ?

Improve sanitary condition and antibiotics have helped to decrease the bacterial disease. The immune system typically fight off harmful bacteria, but in the some cases antibiotics are needed to treat bacterial infection. Antibiotics are two type :broad spec-

trum antibiotics, which generally applied wide range of bacteria. And narrow range of spectrum, which generally applied targeting specific bacteria.

How Antibiotic Work?

Antibiotic work by destroying the bacteria cell wall, DNA, and ribosome (the organelles that make protein)

What Is Antibiotic Resistance?

Overuse of antibiotic can cause problem. Overtime bacteria can become resistance to antibiotic, making it difficult to treat infection caused by new resistance strain.

Why Antibiotic Should Be Limited Use?

Although, bacteria can invade human bodies and cause disease, but most bacteria are not harmful for human bodies. Many bacteria live in our skin

and in our digestive tract and make up our micro biome or population of microbes coexisting in our body. The collection of bacteria keep us healthy by synthesising vitamin, helping us breakdown food, and preventing the growth of harmful bacteria.

Conclusion:

The discovery of t.magnifica is important, inasmuch as it blurs the boundary between prokaryotic (primitive single cell organism do not have cell nucleus) and eukaryotic, where the DNA is surrounded by the nuclear envelope. With the t.magnifica being a bacterium, it belong to prokaryotic, but its cell includes membrane sack that encapsulate the cell DNA.

4

Aditya L1 Mission

Why in news ?:

AdityaL1 science support cell had organize a workshop in which student from institutions and universities from across India had participated and they were exposed to basic process happening on the sun, AdityaL1 mission, observational data analysis and other current open problem that young researcher on the subject can address. This workshop will help in developing next generation of solar physicists spread across various institutions and universities in India.

The workshop was organized from 27 June to 5 July as a joint effort of ISRO and ARIES (an autonomous institution of DST- government of India) to commemorate 75 year of Indian independence.

About AdityaL1 mission:

The AdityaL1 mission is India's first dedicated spacecraft mission to study the sun. It will enable a comprehensive understanding of the dynamical process of the sun and address some of the outstanding problem in solar physics and heliophysics.

AdityaL1 mission will launch in halo orbit at Lagrangian point 1 (L1) of the sun earth system. It will have major advantage of continuous viewing the sun without any eclipses. Halo orbit L1 is 1.5 million km from the earth.

About Lagrange point:

Lagrange points are positions in space where object sent there tend to stay put. At Lagrange point, the gravitational pull of two large masses precisely equal the centripetal force required f

for a small object to move with them. These points in space can be used by spacecraft to reduce fuel consumption needed to remain in position. Lagrange points are named in honour of Italian French mathematics joseph Louis Lagrange. There are five Lagrange point in space in which three are unstable and two are stable. L1,L2,L3 labelled as unstable and L4 and L5 labelled as stable Lagrange point.

L1 point of the earth system affords an uninterrupted view of sun and is currently solar and Heliosphere observatory satellite. L2 point of earth system is homes to James Webb telescope. India AdityaL1 mission will also launch at L1 point.

What mission will do?

AdityaL1 mission will provide observation of sun corona (soft and hard X ray, emission line in visible spectrum) and chromosphere and photosphere. Mission been also study the particle flux emanating from sun, reaching the L1 orbit and also magnetometer payload will measure magnetic field strength.

List of payload:

- Visible Emission Line Corona-graph
- Solar ultraviolet imaging telescope

- Aditya solar wind particle experiment
- Plasma analyser package for Aditya
- Solar low energy X ray spectrometer
- High energy L1 orbiting X ray spectrometer
- Magnetometer

When mission will be launched?

It is expected that mission will be launched by PSLV-XL from Sriharikota on September to October 2022. PSLV-XL is the upgraded version of polar satellite launch vehicle in its standard

configuration boosted by more powerful, stretched strap on booster with 12 tonne propellant load. The first use of PSLV-XL was to launch the Chandrayaan 1 mission.

Conclusion:

AdityaL1 mission will showcase India's growing strength in space sector. Although ISRO itself has established in commanding position in space sector, this mission will help India to further capitalise new opportunity in space sector, and compete with USA and China etc.

ECONOMY

1

Digital Yuan

Context:

Central banks worldwide are implementing digital solutions to improve the efficiency of the financial system. Amongst the G20 countries, 19 out of 20 are exploring the idea of a Central Bank Digital Currency (CBDC). China is closely following all these developments and it appears that China is at the forefront of the development of CBDCs with great ambitions to transform the global financial system.

What is a CBDC?

A Central Bank Digital Currency (CBDC) is a digital token which acts as a completely digital version of cash issued and guaranteed by a central bank. CBDCs are unlike crypto currencies, which are decentralised and, in the case of stable coins, have values pegged to a stable currency like the dollar or euro. The People's

Bank of China (PBOC) has been a forerunner in the CBDC space since 2014, with the development of the digital Yuan which places them ahead of several other countries, is still in the research and planning phase. This early development allows China to internationalise the Renminbi (RMB) and disrupt the dollar's hegemony.

Dollar supremacy:

The Bretton Woods system which was set up in 1944, paved the way for the US dollar's emergence as the world's international reserve currency. Consequently, global economies and financial markets became interwoven with the dollar and the American economy. Today, though China is the world's largest trading partner, the RMB still makes up less than 2% of the world's reserve currency. That is structurally indebted

to a dollar-dominated financial system.

Development of the digital Yuan:

PBOC created the Cross-Border Inter-Bank Payment service (CIPS) in 2015 to challenge the dollar-dominated global payments system. Accepted by large banks and financial institutions, including Citibank, HSBC, and JPMorgan Chase, the CIPS facilitates RMB transactions globally. This attempt to internationalise the RMB has limitations, as the CIPS has only 1,300 participants compared to The Society for Worldwide Interbank Financial Telecommunication's (SWIFT) which has 10,000 participants.

However, it must be noted that CIPS and SWIFT have different functions. SWIFT does not move any funds. It is simply a secured messaging system that provides a platform to the par-

anticipating banks to communicate with each other. On the other hand, CIPS is an RMB clearing mechanism, which makes it similar to the US' Clearing House Interbank Payments System (CHIPS). In 2016, the IMF added RMB to the Special Drawing Rights Basket. However, since the inception of the BRI, the US dollar has remained the

main currency for investment—only 14% of all loans being RMB denominated. Such imbalance is in stark contrast with the rise in BRI investments and China's global economic status, which is similar to the current situation of China's global trading position and RMB utilisation. According to the Asian Development

Bank, Asia requires US\$26 trillion in infrastructure investment over the next decade, and China is uniquely positioned to make these investments. The digital Yuan allows China to issue more debt in RMB and strengthen networks and mechanisms for debt repayment.

2

RBI liberalises norms to boost forex inflows

Reserve Bank of India (RBI) on has further liberalised norms to boost inflows of foreign exchange, including doubling the borrowing limit under the ECB route, amid the rupee falling against the US dollar.

In a statement, the central bank said it has been closely and continuously monitoring the liquidity conditions in the forex market and has stepped in as needed in all its segments to alleviate dollar tightness with the objective of ensuring orderly market functioning.

1. Exemption from Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) on Incremental FCNR(B) and NRE Term Deposits:

It has been decided that with effect from the reporting fortnight beginning July 30, 2022 incremental FCNR(B) and NRE deposits with reference base date of July 1, 2022 will be exempt from the maintenance of CRR and SLR. This relaxation will be available for deposits mobilised up to November 4, 2022. Transfers from Non-Resident (Ordinary) (NRO) accounts to NRE accounts shall not qualify for the relaxation.

2. Interest Rates on FCNR(B) and NRE Deposits:

It has been decided to temporarily permit banks to raise fresh FCNR(B) and NRE deposits without reference to the extant

regulations on interest rates, with effect from July 7, 2022. This relaxation will be available for the period up to October 31, 2022.

3. FPI Investment in Debt: It has been decided that investments by FPIs in government securities and corporate debt made till October 31, 2022 will be exempted from this short term limit. These investments will not be reckoned for the short term limit till maturity or sale of such investments.

4. Foreign Currency Lending by Authorised Dealer Category I (AD Cat-I) Banks:

It has now been decided that AD Cat-I banks can utilise OFCBs for lending in foreign currency to entities for a wider set of end-use purposes, subject to the negative list set out for external commercial borrowings (ECBs). The measure is expected to facilitate foreign currency borrowing by a larger set of borrowers who may find it difficult to directly access overseas markets. This dispensation for raising such borrowings is available till October 31, 2022.

5. External Commercial Borrowings (ECBs): It has now been

decided to increase the limit under the automatic route from \$750 million or its equivalent per financial year to \$1.5 billion. The all-in cost ceiling under the ECB framework is also being raised by 100 basis points, subject to the borrower being of investment grade rating.

NOTES

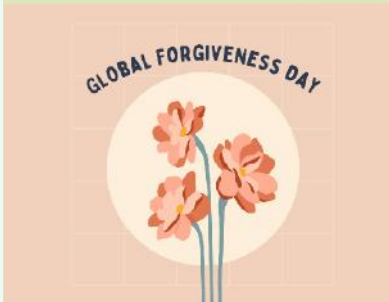
1. World Population Day



The day is observed on the 11th of July every year. The objective of the day is to increase the awareness of the people towards the worldwide population issues. The United Nations Development Programme's Governing Council had established the 'World Population Day' in 1989 after the global population crossed five billion in 1987. In 1990, the day was recognised by the United Nations General Assembly.

The theme for the World Population Day 2022 is "A world of 8 billion: Towards a resilient future for all – Harnessing opportunities and ensuring rights and choices for all." As per the UNPF, the world population will hit the eight billion mark in 2022. In 2011, it had hit the seven billion mark.

2. Global Forgiveness Day



The day is observed on 7th of July every year to celebrate goodwill among people and it gives us a chance to set things right and make our relationships stronger. The art of practicing forgiveness after an offense, and let go of your negative emotions, is a key principle taught by all religions across the globe. In 1994, The Christian Embassy of Christ's Ambassadors founded National Forgiveness Day in British Columbia. The day started gaining momentum and was later renamed 'Global Forgiveness Day'.

3. Income Inequality declined in India



Inequality of Income in India has declined significantly since Financial Year 2017, says a latest SBI Ecowrap research report. It also says that the income inequality in the country has also declined during the Covid-19. According to the report authored by Soumya Kanti Ghosh, group chief economic adviser, SBI, India has done quite well during pandemic in terms of navigating income shocks across deciles of population. India's poverty ratio has also declined to 17.9 per cent in 2020-21 from 21.9 per cent in 2011-12, the report said.

4. India gets elected to UNESCO panel on Intangible Cultural Heritage for 2022-2026 cycle.



India has been elected a member of the Intergovernmental Committee of UNESCO's 2003 Convention for the Safeguarding of the Intangible Cultural Heritage for the 2022-2026 cycle. In a series of tweets, Culture Minister GK Reddy said this is yet another opportunity for India to reinstate the values of 'Vasudhaiva Kutumbakam'. The elections for the Intergovernmental Committee took place during the two-day General Assembly of the 2003 Convention held at UNESCO headquarters in Paris which began on the 5th of July.

5. 6th Deputy National Security Adviser level meeting of members of Colombo Security Conclave held in Kochi.



The 6th Deputy National Security Adviser level meeting of the members of Colombo Security Conclave was held in Kochi. The member states are India, Maldives, Mauritius and Sri Lanka. Delegations from Bangladesh and Seychelles participated as Observers.

The participants discussed the implementation of the Roadmap for Cooperation for 2022-23 and the decisions taken at the 5th NSA level meeting of the Conclave held in March this year in Maldives. Maritime safety and security, countering terrorism and radicalisation, combating trafficking and transnational organised crime, cyber security, protection of critical infrastructure and technology and humanitarian assistance and disaster

relief were discussed at the meeting.

6. WCD Ministry issues guidelines for Mission Vatsalya Scheme



Women and Child Development Ministry has issued guidelines for Mission Vatsalya Scheme. Earlier, it was known as Child Protection Services (CPS) Scheme, since 2009-10 for the welfare and rehabilitation of children. The objective of Mission Vatsalya is to secure a healthy and happy childhood for each and every child in the country.

Mission Vatsalya promotes family-based non-institutional care of children in difficult circumstances based on the principle of institutionalization of children as a measure of last resort. Components under Mission Vatsalya include, improve functioning of statutory bodies; strengthen service delivery structures; Upscale institutional care and services; encourage non-institutional community-based care; emergency outreach services; training and capacity building.

All the States and UTs have signed the Memorandum of Undertaking (MoU) with the Ministry for implementation of the Scheme. Mission Vatsalya will be implemented as a centrally sponsored scheme as per prescribed cost sharing ratio between the Centre and States.



7. Coalition for Disaster Resilient Infrastructure (CDRI)

The Union Cabinet approved the classification of Coalition for Disaster Resilient Infrastructure (CDRI) as an 'International Organization'. The cabinet also approved the signing of the Headquarters Agreement with CDRI for grant of exemptions and privileges under Section-3 of the United Nations (Privileges and Immunities) Act, 1947.

CDRI was launched by the Prime Minister of India during his speech at the United Nations Climate Action Summit on September 23, 2019. It was established with the aim of promoting the resilience of new and existing infrastructure systems to climate and disaster risks to support sustainable development. So far 31 countries, 6 international organizations and 2 private sector organizations have joined CDRI as members.



8. Discovery of Uranium in Rajasthan

Recently huge deposits of uranium have been found in Sikar district of Rajasthan. It is about 120 km from the state capital Jaipur. Rajasthan has become the third state after Andhra Pradesh and Jharkhand where uranium has been found. Uranium is considered one of the rarest minerals in the world. Presently uranium excavation is going on in Jadugoda in Jharkhand State and in Andhra Pradesh State. The world's largest producers of uranium include Kazakhstan, Namibia, Canada and Australia. Uranium is a chemical element with the symbol U and atomic number 92. Uranium is weakly radioactive because all its isotopes are unstable.

Uranium is also commonly used to generate electricity, nuclear power, defense equipment, medicines and photography. Uranium is found in nature as uranium-238 and uranium-235.

9. UNESCO's King Hamad bin Isa Al-Khalifa Award



The Central Institute of Educational Technology (CIET), a unit of NCERT, has been awarded UNESCO's King Hamad bin Isa Al-Khalifa Award for the use of ICT (Information and Communication Technology) in education for the year 2021 has gone. This organization used ICT under the 'PM eVidya Yojana' during the Covid epidemic.

Central Institute of Educational Technology (CIET) is an autonomous organization, as a nodal agency under the National Council of Educational Research and Training (NCERT), to promote the use of mass media technology for expanding and improving the quality of education. is constituted. Central Institute of Educational Technology (CIET) was established

in 1984 by the Ministry of Human Resource Development, Government of India under the umbrella of National Council of Educational Research and Training (NCERT). This institute is located at NIE Campus, NCERT in the capital of India, New Delhi.

10. RIMPAC 2022



Indian Navy's indigenous warship INS Satpura and P8I aircraft have participated in one of the largest multilateral naval exercises- Rim of the Pacific exercise at Pearl Harbor in Hawaii, US. It is also known as RIMPAC, 27 countries are participating in the current version of RIMPAC. The theme of RIMPAC 2022 is 'capable, adaptive, partners'.

RIMPAC is the largest maritime military exercise in the world. It is held every two years in US. For the first time RIMPAC was organized in 1971.

For the first time, military forces from Australia, Canada, New Zealand, the United Kingdom (U.K.) and the United States (U.S.) were involved in the RIMPAC. India first participated in RIMPAC in 2014 when indigenously built Shivalik class stealth frigate INS Sahyadri participated in the exercise.

11. New Chairman of Financial Action Task Force (FATF)



Recently T. Raja Kumar of Singapore has been appointed as the Chairman of Financial Action Task Force (FATF). He has replaced Marcus Pleier.

The Financial Action Task Force (FATF) is an intergovernmental organization established in 1989 at the initiative of the G7 to combat money laundering. In 2001, its mandate was expanded to include the financing of terrorism. Its secretariat is located at the headquarters of the Organization for Economic Co-operation and Development (OECD) in Paris. The FATF currently consists of 39 member states and 2 regional organizations (the European Commission and the Gulf Cooperation Council).

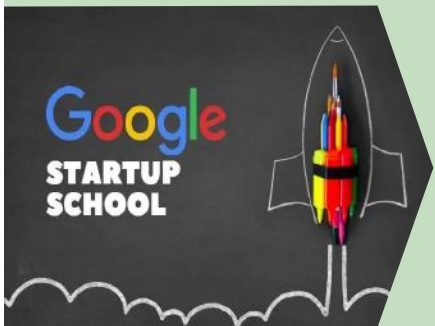
India is a member of FATF since 2010.

FATF Lists

Grey List: Countries that are considered safe havens to support terror funding and money laundering have been put on the grey list of FATF. The inclusion in this list serves as a warning to the country concerned that it may be included in the black list. Countries included in this list- Pakistan, UAE etc.

Blacklist: Countries that support terrorist funding and money laundering activities are put on the blacklist. The FATF regularly revises this list to include or remove countries. Currently, Iran and South Korea are included in the Black List.

12. Startup School India Initiative

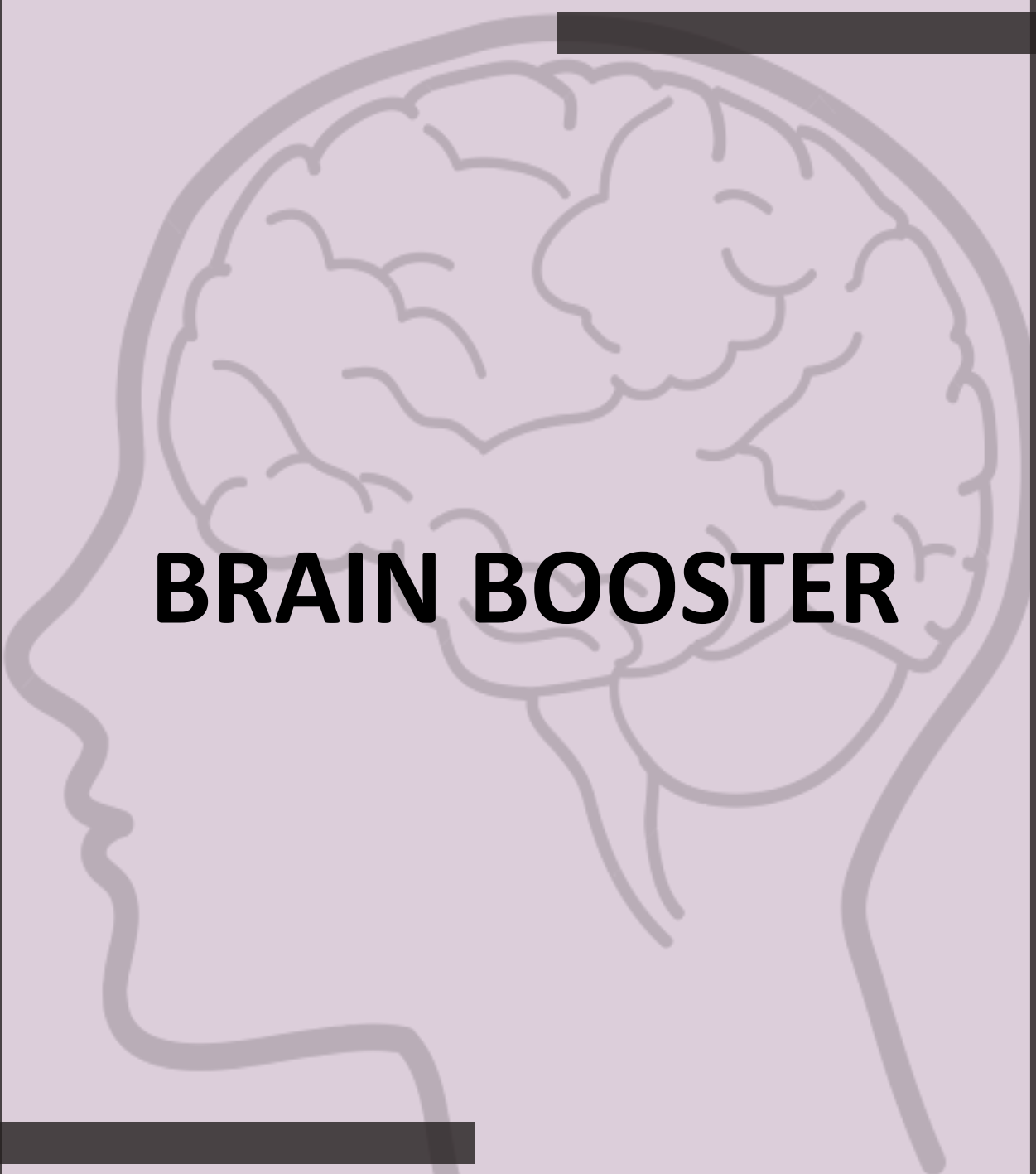


The 'Startup School India' initiative has been launched by Google. The Startup School India initiative has been set up with the objective of collecting relevant information on startups and tailoring it into a systematic curriculum. The move will help 10,000 startups in Tier 2 and Tier 3 cities. The event will be conducted in virtual mode for 9 weeks. The Google Startup School India initiative will cover a range of topics including fintech, languages, job search, social media and networking, business-to-consumer e-commerce and business-to-business e-commerce. It aims to provide flexibility to the virtual curriculum. This initiative provides the pick and choice module to the people. It will provide entrepreneurs with an opportunity to learn from what makes them a successful founder.

India is the third largest startup ecosystem in the world. Even though the number of startups is huge, 90% of startups fail in the first 5 years of operation. Startups are failing due to financial crunch, inefficient feedback loop, absence of leadership and no control over unreasonable demand projections.

Current Affairs at a Glance

1. The Union Cabinet approved the listing of the 'Coalition for Disaster Resilient Infrastructure (CDRI)' as an "International Level Organization".
2. The 'Business Reforms Action Plan (BRAP) Report' was released by the 'Ministry of Commerce and Industry', Government of India.
3. Ease of Doing Business Ranking: The top achievers in the BRAP 2020 report are seven states – Andhra Pradesh, Gujarat, Haryana, Karnataka, Punjab, Telangana and Tamil Nadu while Himachal Pradesh, Uttar Pradesh, Odisha and Madhya Pradesh are in the achiever category.
4. International Day of Parliamentarism is celebrated every year on 30th June all over the world.
5. Bedati-Varda River Link Project is located in the state of Karnataka.
6. The state of Odisha has received the first Prize of National MSME Award 2022.
7. Nari Ko Naman Yojana was launched by the Himachal Pradesh government.
8. International Plastic Bag Free Day was observed on 3rd July.
9. Yair Lapid became the new Prime Minister of Israel.
10. NASA launched the Capstone satellite for the Moon.
11. The 100th International Day of Cooperatives was celebrated on 2nd July.
12. Odisha, Uttar Pradesh, Andhra Pradesh top the general category states in the 'State Ranking Index' for the Indian Food Security Act (NFSA); Whereas Tripura, Himachal Pradesh and Sikkim have topped in the special category states/UTs.
13. French Company Safran Partners With HAL To Develop Helicopter Engines
14. Elon Musk abandoned his \$44 billion offer to buy Twitter after the company failed to provide enough information about the number of fake accounts.
15. The First Deputy Managing Director of the International Monetary Fund (IMF) Gita Gopinath has the first woman to be featured on the 'wall of former chief economists' of the IMF.
16. GMR Group has announced that the Kualanamu International Airport in Medan, Indonesia has begun to be run by its joint venture, Angkasa Pura Aviassi.
17. Ex-NITI Aayog CEO Amitabh Kant is new G-20 Sherpa
18. India has been elected to the Inter-Governmental Committee of UNESCO's 2003 Convention for the Protection of Intangible Cultural Heritage (ICH) for the period 2022-2026.
19. India will surpass China as the most populous country on earth in 2023: UN
20. Boris Johnson resigns as PM of Britain; New Delhi says change in leadership will not impact India-UK ties
21. India's merchandise exports rise by 16.8 per cent to USD 37.9 billion in June.
22. Core Industries Output posts a robust growth of 18.1 per cent in May 2022 against 16.4 last year
23. National Monuments Authority recommends two sites associated with Babasaheb Ambedkar to be declared as Monuments of National importance.
24. The World Bank released 'The Global Findex Report 2021'.
25. Kerala has been ranked first in Asia in the Affordable Talent in the Global Startup Ecosystem Report (GSER) 2022.



BRAIN BOOSTER

1. Why in news?

- Election Commission of India has recently announced the process for election of 16th vice president of India.
- As per Article 68 of the Constitution of India, an election to fill the vacancy caused by the expiration of the term of office of the outgoing Vice-President is required to be completed before the expiration of the term.
- The term of office of current vice president, M. Venkaiah Naidu is end-

2. About Vice President of India

- Article 63 of the constitution says that there shall be a Vice President of India.
- Article 64 of the constitution says that The Vice President shall be ex-officio Chairman of the Council of States and shall not hold any other office of profit.
- The Vice President holds the second highest Constitutional office in India. It is same like in the United States of America.
- The Vice President holds office for a term of 5 years from the date on which he enters upon his office.

3. Election of Vice President

- Article 324 of the Constitution read with the Presidential and Vice-Presidential Elections Act, 1952 vests the superintendence, direction and control of the conduct of election to the office of the Vice-President of India in the Election Commission of India and that must free and fair.
- Article 66 of the Constitution says the Vice-President is elected by the members of the Electoral College consisting of the members of both Houses of Parliament in accordance with the system of proportional representation

4. Qualifications

- He must be citizen of India.
- He must have 35 years of age.
- He should be eligible for the election to upper house of the Parliament also known as Rajya Sabha.
- Before entering his office, the Vice-President has to take an oath or affirmation.
- The President or any person appointed on behalf of him administer the oath of office to the Vice-President (Art.69).

5. Powers and Functions of Vice President

- Being an ex-officio chairman of Rajya Sabha, He has same power like speaker of Lok Sabha in functioning of the upper house.
- The vice president can work as the president only for the time period of 6 months.
 - When he acts like the President, the vice president does not perform the duties the office of chairman of Rajya Sabha. In this period of time those duties shall be performed by deputy chairman of Rajya Sabha.
 - As he is not member of the house therefore he has no right to vote but can exercise in case of deciding vote.

Vice President of India

by means of the single transferable vote and voting done by secret ballot.

Electoral College consists of:

- 245 members of Rajya Sabha
- 543 members of Lok Sabha.
- Any disputes regarding the election of vice president are inquired into and decided by the Supreme Court whose decision is final.

6. Removal of Vice President

- In case of removal of Vice President, a formal impeachment is not required like President.
- Vice President can be removed from his office by a resolution passed only in Rajya Sabha and agreed upon by Lok Sabha.
- A 14 days' notice should be served to Vice President of India, prior to passing the resolution in Rajya Sabha.

1. Why in News?

- Recently Prime Minister Narendra Modi visited Germany to attend 48th Group – 7 summits at Schloss Elmau, Bavarian Alps.
- Germany held this year's presidency of G-7.
- Besides India, Germany presidency also invited Argentina, Indonesia, Senegal and South Africa.
- Prime Minister spoke in two sessions that included topics related to Environment, Energy, Climate, Food Security, Health, Gender Equality and Democracy.
- He also held bilateral meetings with several leaders of the participating

2. About G – 7

- It is an intergovernmental organization that was formed in 1975 with six member countries like the USA, France, Germany, Italy, the UK and Japan.
- In 1976, Canada also joined this group and it became G-7.
- Later in 1998, after the disintegration of USSR, Russia became part of G-7 and officially it became G-8.
- Due to violation of Ukraine's sovereignty, group countries have decided to expel Russia.
- The group meets annually to discuss issues of common interests like economic governance, global security and energy policy.
- Japan will have the presidency of next year's meeting.

3. Group – 7 in numbers

- According to summit website, group – 7 countries comprise 10% of world's population, approximately 31% of world's GDP and 21% of global carbon emissions.
- China and India the emerging economy as well as the two most populous nations of the world are not part of group-7.
- The group does not have any official secretariat. The presidency of this

4. Highlights of the meeting

- Group-7 countries have launched a 600 billion \$ collective initiative called it Partnership for Global Infrastructure and Investment (PGII) to deliver game changing and transparent infrastructure projects for developing and middle income countries.
- PM Modi highlighted global efforts for LiFE (Lifestyle for Environment) campaign to encourage eco-friendly lifestyle for the citizens.
- Group countries also advocated max-

imizing efforts towards renewable energy for getting target of Paris climate agreement.

- Member countries also discussed about on-going war between Ukraine and Russia and reached at the consensus to sort out oil dependency of European countries on Russia.

5. India's Initiative

- India is also signatory of Paris climate agreement that is why India has taken so many steps towards achieving the target such as renewable energy (solar power, wind power, hydro-power, biomass, biofuels etc.), green transportation, electric motors etc.
- India has set the target of producing 175 GW by 2022 and 500 GW by 2030 from renewable sources. As of march 2022, India produced approximately 110 GW.
- Today India is one of the most attractive destinations in the world for environment-friendly investments.
- India is doing excellent efforts to become global leader in renewable batteries as well as green hydrogen.
- India has the world's first fully solar power operated airport.
- India is also using 10% ethanol with petrol and has set the target of 20% in next 3 years.
- It will help to minimize dependency on imported crude oil which increases environmental pollution.



Group - 7

group rotates among member countries each year.

- It is the group of developed countries which play greater role in global trade.
- The US and Germany are in particular major exporting countries. Both have exported goods in 2021 over 1 trillion US dollar.
- In all group -7 countries, annual public sector expenditure exceeded revenue. The most group-7 countries have high level of gross debt, especially Japan (263% of GDP), Italy (151% of GDP) and the US (133% of GDP).

1. Why in news?

Recently a powerful earthquake of magnitude 5.9 on the Richter scale struck a remote town in Afghanistan.

2. How do earthquakes happen?

- According to the theory of plate tectonics, the Earth's crust and upper mantle are made of large rigid plates that can move relative to one another.
- Slip on faults near the plate boundaries can result in earthquakes.
- The point inside the Earth where the earthquake rupture starts is called the focus or hypocentre.
- The point directly above it on the surface of the Earth is the epicentre.

3. Seismic waves:

- Earth has an elastic limit and when the stress is higher than this limit, it breaks.
- Then there is a generation of heat, and energy is released.
- Since the material is elastic, the energy is released in the form of elastic waves.
- These propagate to a distance determined by the extent of the impact & are known as seismic waves.
- An earthquake generates seismic waves that penetrate the Earth as body waves (P & S) or travel as surface waves (Love and Rayleigh).

4. Measurement of Earthquakes:

- Earthquakes are measured by seismographic networks, which are made of seismic stations, each of which measures the shaking of the ground beneath it.
- In India, the National Seismological Network measures the earthquakes.
- The wave parameters are measured & not the total energy released.

5. Scales used to measure earthquake :

1. Richter scale:

- The magnitude of an earthquake is the logarithm of the amplitude of the waves measured by the seismographs.
- Richter scale magnitudes are expressed as a whole number and a decimal part, for example 4.6 or 8.2.
- The magnitude is expressed in absolute numbers, 0-10.
- An increase of the whole number by one unit signifies a 10x increase in the amplitude of the wave and a 31x increase of the energy released.

1. Mercalli scale:

- It takes into account the visible damage caused by the event.
- The range of intensity scale is from 1-12.

6. Designating the zones :

- India has four seismic zones (II, III, IV, and V) based on scientific inputs relating to seismicity.
- Previously India was divided into five zones with respect to the severity of the earthquakes.
- Zone-V is the most hazardous and Zone- I is the least hazardous.
- BIS is the official agency for publishing the seismic hazard maps and codes.

7. Earthquake map of the world :

- Principally three large areas of the earth are:
 - The world's greatest earthquake belt, the circum-Pacific seismic belt ("Ring of Fire"), is found along the rim of the Pacific Ocean, where about 81% of our planet's largest earthquakes occur.
 - Alpidic Belt, passes through the Mediterranean region eastward through Asia and joins the Circum-Pacific Belt in the East Indies. About 17% of the world's largest earthquakes occur here.
 - The third prominent belt is the submerged mid-Atlantic Ridge.



- There is a relationship between the quantum of energy released and the wave amplitude.
- The amplitude of the wave is a function of the time period of the wave.
- It is possible to convert the measured wave amplitude into the energy released for that earthquake which is defined as the magnitude of the earthquake.

1. Why in news?

- The Indian rupee hit an all-time low against the U.S. dollar in the last week of June, 79 Rupees to a dollar mark and selling as low as 79.05 against the dollar.

2. Rupees downfall

- The Indian rupee has been witnessing a steady decline this year, losing more than 6% against the U.S. dollar since the beginning of 2022.
- India's forex reserves have also dropped below \$600 billion, plunging by more than \$50 billion since September 3, 2021.

3. Determining the currency value:

- The value of any currency is determined by demand for the currency as well as its supply.
- When the supply of a currency increases, its value drops.
- On the other hand, when the demand for a currency increases, its value rises.
- In the wider economy, central banks determine the supply of currencies, while the demand for currencies depends on the amount of goods and services produced in the economy.
- In the forex market, the supply of rupee is determined by the demand for imports, export and various foreign assets.

4. Exchange rate determination:

- A floating exchange rate is set by the forex market based on supply and demand relative to other currencies.
- A fixed or pegged exchange rate, is a rate that the government (central bank) sets and maintains as the official exchange rate.
- The price will be pegged with a major world currency like dollar, Euro etc.

5. Currency Value Fluctuations:

- Revaluation of a currency occurs when the value of a currency is increased relative to another currency in a fixed exchange rate regime, while its vice-versa is devaluation.
- Appreciation of a currency is an increase in the value of country's currency with respect to one or more foreign reference currencies, in a floating exchange rate system, while its vice-versa is depreciation.

6. Reasons behind rupee fall:

- The U.S. Federal Reserve has been raising its benchmark interest rate causing investors to pull capital away from emerging markets such as India and increase the dollar demand.
- India's current account deficit is expected to hit a 10-year high of 3.3% of GDP in the current financial year. It is negatively affecting the rupee.
- Consistently higher domestic price inflation in India.

The free fall of the rupee

8. Way forward :

- RBI can start supplying dollars in the open market to cool down the exchange rate.
- The government should focus on exports and rearrange the imports also.
- RBI would have to monitor the other components of demand for dollars.
- Channels for external commercial borrowing should be looked at judiciously.
- Considering a sovereign bond or any such scheme, for getting expatriates to invest in such bonds should be planned.

7. Impact:

a) Positive:

- Weaker rupee should theoretically give a boost to India's exports, but in an environment of uncertainty may not translate into higher exports.

b) Negative:

- It poses risk of imported inflation, and may make difficult for RBI to maintain reasonable interest rates.
- India's imports value and current account deficit (CAD) will increase.
- Widening of CAD impacts the health of the economy leading to investors pulling out their investment from India. That's another reason for falling currency and forex reserve.

1. Why in News?

- Recently Sweden and Finland have applied for integration into NATO.
- Initially Turkey was against this proposal but has now backed the proposal.
- Ukraine is also interested to join military alliance
- Leaders of the North Atlantic Treaty Organization, a 30-country regional security coalition that emerged from the cold war rivalry, met on June 29-30 in Madrid, Spain.

2. About NATO

- It is a military alliance that was established on 4th April, 1949 with 12 member countries after Second World War to create counterweight against soviet army that was stationed in eastern and north European region.
- Headquarter of NATO is located in Brussels, Belgium while headquarter of allied command operations in Mons, Belgium.
- It is also known as Washington treaty.
- Now NATO has 30 member countries, last country which has joined this group was North Macedonia.

3. Objectives of NATO

NATO has basically two main objectives;

- Political Objective – NATO promotes democratic values among member countries and enables countries to consult and cooperate on security related issues so that mutual trust and sovereignty of member countries could put at the paramount level.
- Military Objective – NATO is committed to the peaceful resolution of disputes. If diplomatic efforts fail, it has

4. NATO's Position Before On-going War

- It appeared to be weakened during the administration of former U.S. President Donald Trump.
- A further blow came when President Joe Biden pulled his country's troops out of Afghanistan.
- After disintegration of the USSR, Russia took over the empire as the main country and had been upping

ante against NATO publicly since late 2000s.

- Russia annexed Crimea in 2014 and invasion on Ukraine is going on steadily.

5. NATO's Recent Developments

- NATO allies firmly committed to financing the organization's military needs.
- Their combined defence investments have jumped by \$130 billion from 2014-19.
- NATO has announced that it will increase its forces at high readiness from 40,000 to over 3, 00,000 troops by the mid-2023.
- Sweden and Finland are set to join NATO because of strategic insecurity they face as the neighbours of Russia. It is noted that previously both countries have maintained neutral position.
- Once they join military group, both countries have to spend 2% of their GDP as defence budget.

6. Way Forward

- While NATO appears fortified and ready to face the strategic gauntlet thrown down by Russia, there is a real risk that the people of its member-nations are getting increasingly frustrated.
- There is unending economic pain and the leaders have pledged to meet the burgeoning demand for weapons and other military support required by Ukraine to hold on to its territories in the east.

the military power to undertake crisis like management operations.

- The heart of NATO is expressed in article 5 of its constitution, in which every member countries agree that an armed attack on any member country shall be considered as an attack against all.



NATO

1. Why in news?

- Besides placing three Singaporean satellites in precise orbit by PSLV-C53 mission, ISRO also achieved the feat of successfully launching the PSLV Orbital Experimental Module or 'POEM'.
- The four-stage, 44.4 metre tall PSLV-C53 that blasted off from the Satish Dhawan Space Centre.

2. About ISRO:

To spearhead the space research activities, Indian National Committee for Space Research (INCOSPAR) was set up in 1962 under the Department of Atomic Energy. Subsequently, Indian Space Research Organisation (ISRO) was established in August 1969, in place of INCOSPAR. The Government of India constituted the Space Commission and established Department of Space (DOS) in June 1972 and brought ISRO under DOS in September 1972.

3. About the Mission:

- PSLV-C53 is the second dedicated commercial mission of NewSpace India Limited (NSIL). It is designed to orbit DS-EO satellite along with two other co-passenger satellites from Singapore. This is the 55th mission of PSLV and 15th mission using PSLV-Core Alone variant.
- DS-EO is a 365 kg satellite while NeusAR weighs 155 kg. Both belong to Singapore and are built by Starec Initiative of the Republic of Korea, while the third satellite is a 2.8 kg SCOOB-1 of Nanyang Technological University (NTU), Singapore.

4. PSLV Orbital Experimental Module:

The PSLV Orbital Experimental Module (POEM) activity is performer in-orbit scientific experiments using the spent PS4 stage as an orbital platform. It is first time that PS4 stage would orbit the earth as a stabilized platform.

5. How POEM is 'alive and stable' in orbit?

- Altitude stabilization is achieved using a dedicated NGC system. The NGC will act as the platform's brain to stabilize it with specified accuracy.
- POEM derives the power from the solar panels mounted around the PS4 tank and a Li-Ion battery. It navigates using four sun sensors, a magnetometer, gyros & NavIC. It carries dedicated control thrusters using Helium gas storage. It is enabled with tele-

command feature. POEM carries six payloads including two from Indian Space Start-ups M/s Digantara and M/s Dhruva Space, enabled through IN-SPaCE and NSIL.

- PSLV Orbital Experimental Module (POEM) DS-EO carries an Electro-Optic, multi-spectral payload that will provide full colour images for land classification, and serving Humanitarian Assistance and Disaster Relief needs

6. Polar Satellite Launch Vehicle:

- The PSLV is an expendable medium-lift launch vehicle designed and operated by the Indian Space Research Organisation (ISRO). It was developed to allow India to launch its Indian Remote Sensing (IRS) satellites into sun-synchronous orbits, a service that was, until the advent of the PSLV in 1993. PSLV can also launch small size satellites into Geo-stationary Transfer Orbit (GTO).

- As of February 2021, PSLV has launched 342 foreign satellites from 36 countries. Most notable among these was the launch of PSLV-C37 on 15 February 2017, successfully deploying 104 satellites in sun-synchronous orbit, tripling the previous record held by Russia. These was highest number of satellites send record to space on a single launch, until 24 January 2021, when SpaceX launched the Transporter-1 mission on a Falcon 9 rocket carrying 143 satellites into orbit.

- Some notable payloads launched by PSLV include India's first lunar probe Chandrayaan-1, India's first interplanetary mission Mars Orbiter Mission (Mangalyaan) and India's first space observatory, Astrosat.

ISRO's 'POEM' platform

7. Has ISRO repurposed and used PS4 rocket junk earlier?

- The Indian space agency first demonstrated the capability of using PS4 as an orbital platform in 2019 with the PSLV-C44 mission that injected Microsat-R and Kalamsat-V2 satellites into their designated orbits. Subsequently, the fourth stage (PS4) of the vehicle was moved to a higher circular orbit of 453 km after two restarts of the stage, to establish an orbital platform for carrying out experiments.



The National Commission for Women has recently launched an Anti-Human Trafficking Cell. This cell will organize training and workshops related to human trafficking. Human trafficking is a form of organized crime that violates the human rights of the victims. The number of victims of human trafficking in the country is more than eight million, in which bonded labourers are the most.

1. Purpose:

This cell has been set up by the National Commission for Women with the objective of raising awareness among law enforcement officers and facilitating their capacity building.

2. Functions:

- Dealing with cases of human trafficking.
- Enhance capacity building of enforcement officers by increasing awareness among women and girls.
- Ensuring accountability of officials in cases related to human trafficking.
- Continuously making required improvements in the cell and monitoring mechanism.
- Encouraging government agencies to prevent trafficking and rehabilitation of victims
- Will provide need-based training to trafficking survivors.
- Organize awareness programs to prevent re-trauma of victims

3. Human Trafficking Reports:

- In the US State Department's report 'Trafficking in Persons Report-2020', India was placed in Tier-2 category like last year.
- According to the National Crime Records Bureau (NCRB), 76 percent of all human trafficking in India in the last decade is girls and women.
- Human trafficking is the second biggest crime in India according to NCRB.
- Tamil Nadu, Andhra Pradesh, Karnataka, West Bengal, Maharashtra and Chhattisgarh are the major human trafficking states.

4. Root causes of human trafficking:

Poverty, Unemployment, Oppression, Lack of resources, Social insecurity, Violence against women and children, Political instability, Corruption, Demand for cheap labour, Lack of knowledge, Broken or Displaced families, Cultural and Social stereotypes.

5. Consequences of Human Trafficking

- Emotional, Psychological and Physical effects on victims.
- The risk of diseases like AIDS and infection in the victims.
- Social boycott of victims.
- Negative impact on the economic and social security of the country.

6. Role of National Commission for Women

- The Commission on Human Trafficking proposed a Uniform Standard Operating Procedure (SOP) for the states. This SOP will not only guide the police, women welfare agencies and NGOs across the country but also in rescue and rehabilitation.
- At the Anti-Human Trafficking Awareness Seminar, NCW President, Rekha Sharma said that her "focus is on prevention of trafficking of girls and women".

7. About National Commission for Women

This commission was constituted in January, 1992 as a statutory body under the National Commission for Women Act, 1990

8. Functions of National Commission for Women

- To review constitutional and legal safeguards for women.
- To recommend remedial legislative measures.
- Facilitate redressal of grievances.
- Advising the government on all policy matters affecting women.

9. Constitutional Provisions in India :

- The Constitution of India, 1950 provides for the prohibition of human trafficking and forced labour, Article 23(1) of the Constitution states that human trafficking; Beggars and other forms of forced labour are strictly prohibited under the law. Violation of this is a punishable offence.
- Articles 39 (e) and (f) of the Constitution ensure that workers should neither be abused nor forced to enter into criminal activities. Adequate opportunities should be given to Children to develop their health.

Anti Human Trafficking Cell



Mains Special

Geography, Indian Society & Social Justice

1. Resource rich states of Eastern India like Jharkhand, Odisha, Chhattisgarh etc. are amongst the 'Bimaru' and 'Aspirational' states as per old and new terminology respectively. Account for this dichotomy in the developmental story of these states?

Ans.

These Aspirational states of India has been suffering from Resource curse or the Paradox of plenty, that is, a paradoxical situation in which a region underperforms socio-economically, despite being home to valuable natural resources.

The Dichotomy- Resource rich yet poor Socio-economic Development:

- Jharkhand, Chhattisgarh, Odisha alone accounts for more than 40% of country's mineral wealth (Geological Survey of India).

Mineral	Share
1. Coal	More than 80%
2. Iron ore	Around 75%
3. Bauxite	Around 60%

- Average forest cover in these states 35% of total geographical area (Indian State of Forest Report-2021).
- High poverty rate for ex Jharkhand – 42% (Multi-dimensional poverty Index- NITI Aayog).
- Low literacy rates and high dropout rates.
- Poor health indicator – high infant mortality rate (Chhattisgarh- 41 per thousand live births), maternal mortality rate (Odisha – 150 per 1,00,000 live births) etc.
- High prevalence of malnutrition and hunger.
- 39 out of 115 Aspirational Districts belongs to these three states.

Reasons for developmental paradox:

- Lack of effective and sensitive administration.
- Absence of good governance and high level of corruption, ex inefficiency in utilisation of District Mineral Foundation trust fund.
- Political instability, for example Jharkhand has 11 chief ministers in last 22 years.
- More than 25% of population belongs to Scheduled tribes (Census 2011), having special developmental needs.
- Difficult terrain being a plateau and heavily forested

region, creating logistical challenge.

- Security issues due to presence of naxalites.
- Poor availability of basic infrastructure, physical like roads, electricity etc., as well as social like health centres, schools etc.

In the words of honourable Prime Minister, these states need an urgent dose of SMART governance, so as to ensure sustainable and inclusive growth of these states as well as India.

2. Meeting the needs of India's soaring urban populations is a strategic policy matter. Highlight the critical issues that need to be addressed to achieve a sustainable urban growth.

Ans.

According to Census 2011, India's urban population was 37.7 crores, which is projected to grow to about 60 crores by 2030(Economic Survey – 2020-21). Addressing urbanisation associated issues is key to nation's socio-economic growth.

Strategic significance of India's urban population:

- Cities are engines of economic growth of nation.
- Covid-19 pandemic highlighted that cities houses large number of migrant population, vulnerable yet critical for growth.
- Key to addressing developmental issues like poverty, hunger, malnutrition etc.
- Urban areas have spill-over effect on the development of adjoining rural areas.
- They serve as the centres of higher education, research as well as tertiary health care facilities.

Critical urbanisation related issue that needs to be addressed:

- Expansion of slum and squatter, characterised by poor basic amenities. Around 6.55 crores live in slum(Census-2011).
- Over-crowding resulting in very high population density, ex: 11,300 persons per square kilometre in Delhi.
- High traffic congestion and inefficient public transport system.
- Sewerage problems leading to water accumulation in monsoon, at times culminating into Urban floods,

ex- Chennai floods.

- Around 62 million tonnes of municipal solid waste is generated in India annually, of which only 70% is collected and less than 20% treated.
- High urban unemployment, 8.7% in October-December (2021-22) as per Periodic Labour Force Survey.
- Poor housing facilities for masses and skyrocketing rent.
- High pollution level in cities due to rapid growth of industries and transport system.

Government of India with the strategic input from NITI Aayog is implementing numerous schemes like PM Awas Yojna, PM Gatishakti Mission, AMRUT, Smart Cities mission, National Clean Air programme, Skill India, Made in India etc. for addressing above issues.

3. India has taken various affirmative actions to ensure dignity and social justice to disadvantaged sections of population. Has dignity been delivered to those who were deprived of it?

Ans.

Development and empowerment of the marginalised sections to bring them at par with rest of the society is a commitment enshrined in the Constitution of India. Preamble and the Directive Principles of State Policy requires it to be achieved through social justice approach.

Affirmative actions adopted so far:

For Scheduled Castes:

- Reservation of seats in educational institution(Article 15(5)) and public employment(Article 16(4)).
- Prevention of Atrocities against Scheduled Caste, Scheduled Tribe Act,1989.
- Government schemes like- Scholarship for education, Stand up India, Scheme of venture capital Fund for Dalit Entrepreneur.

For Scheduled Tribes:

- Reservation of seats in educational institution(Article 15(5)) and public employment(Article 16(4)).
- Prevention of Atrocities against Scheduled Caste, Scheduled Tribe Act,1989.
- Administration of Scheduled and Tribal Areas as under 5th and 6th Schedule of the Constitution.

For women:

- SABLA scheme for empowerment of adolescent girls.
- Comprehensive Janani Suraksha Yojna- for pregnant and lactating mother.
- Beti Bachao Beti Padhao to promote well-being and literacy of girl child.

For Divyangjan:

- Accessible India Campaign

- Reservation in public employment.

For minorities:

- Nai Roshni scheme to promote leadership potential among minority women.
- USTAD scheme for promotion of entrepreneurship.

Has dignity being delivered?

Yes dignity has been delivered:

- Narrowing of gap between the literacy rate of general population and marginalised section. For ex-decadal increase in literacy rate of females is greater than males between 2001 and 2011 census.
- Increased self-assertion of rights, for example Dalit Activist like Bezwada Wilson appealing Dalits to give up manual scavenging and fighting for their rehabilitation.
- Enhanced digital and physical infrastructure like ramps, low floor buses etc. for Divyangs have resulted in them leading a dignified life.
- Increased access to sanitary napkins, family planning services etc. resulted into dignified and healthy life for girls and women.

No, dignity has not been delivered:

- Instances of violence against marginalised, for example public flogging of Dalits in Una, Brutal Gang rape of Dalit girl in Saharanpur.
- Illegal employment as manual scavengers continuing, evident from 472 manual scavenging deaths between 2016 and 2020(Safai Karamchari Andolan).
- Higher proportion of Scheduled castes and Scheduled tribes lacking material resources and houses (Socio-economic Caste Census 2011)
- Continuing prevalence of child marriage, crime against women, domestic violence, marital rapes etc. lowers the dignity of women.

Despite all these shortcomings these affirmative actions must be pushed more aggressively and effectively so as to bring silent revolution and transformation of traditional Indian society into a modern society realising Sustainable Development Goals 5(gender equality), 1(zero poverty)etc.

4. Identify the major glaciers around the world. What are the major threats to their existence? What eco-system services do glaciers provide?

Ans.

A glacier is a big chunk of ice that is created from falling and accumulated snow over a period of time. They get created in areas where the temperatures are exceedingly low. Around 10% of the earth's surface is covered by glaciers.

Major glaciers around the world

- Lambert Glacier, Antarctica
- Perito Moreno Glacier, Argentina
- Margerie Glacier, Alaska
- Furtwängler Glacier, Tanzania
- Pasterze Glacier, Austria
- Hispar Glacier, Baltoro Glacier etc in Karakoram Mountain range.

Major threats to Glaciers:

- Carbon dioxide and other greenhouse gases (GHGs) emitted into the atmosphere by industry, transportation, deforestation, and the use of fossil fuels, among other human activities, warm the globe and cause glaciers to melt.
- When black carbon is accumulated on the surface of snow and ice, it enhances solar radiation absorption by lowering the glacier surface albedo (ability to reflect sunlight).
- Ocean warming is one of the causes. Oceans absorb 90% of the Earth's heat, which influences the melting of marine glaciers, which are largely found at the poles and along Alaska's coasts (United States).
- Deforestation is also one of the probable causes. But there is division among the experts about its exact impact. New study finds link between disappearing trees and receding ice atop Africa's tallest mountains.
- Other factors include oil and gas drilling, ice breaking ships and rapid industrialization.

Services provided by Glaciers:

- **Food supply** - fisheries provide important sources of food in many regions.
- **Water supply** - in many regions large populations depend heavily on glacial sources not only for agriculture water but also, for drinking water.
- **Hydropower** - glacial runoff contributes significantly to hydropower generation. For example, in Switzerland, 25% of its electricity is sourced from glacial runoff.
- **Water quality** - glacial meltwater can dilute pollutants thus improving water quality.
- **Hazard mitigation** - reduced suspended sediment load caused by glacier retreat can lead to decreases in erosional processes Gives climate feedbacks via C cycling.
- **Tourism** - For example, the glaciers of Banff National Park, Canada attract more than 3 million visitors each year.
- **Religious belief** - Glacierized mountain peaks are

considered as spiritual and thus, accorded high cultural significance. For example, thousands of pilgrims annually traverse the Gangotri Glacier in India, considering it a sacred site.

- Recreation opportunities for year-round skiing.

Conclusion:

The intense melting of glaciers is producing a big ripple effect like extreme flooding and biodiversity loss, and scientists have warned that the world is losing its ice fast. Thus we need to act collaboratively to arrest such a loss.

5. Engines of growth have failed to spread to less dense secondary cities in India. Why is India's spatial development so lopsided? Suggest measures to achieve balanced regional development.

Ans.

The per capita income of the five richest states in India was 338% higher than that of the bottom states in 2017-18.

Reasons for uneven development in India-

- British industrialists mostly preferred to concentrate their activities particularly to three cities like Calcutta, Bombay and Madras and neglecting the rest of the country to remain backward.
- Geographical factors like climate, connectivity to sea or land route, terrain, soil, resources etc. play significant role.
- Due to inadequacy of infrastructure facilities like roads, rails etc., some regions remained much backward like North-Eastern region, Himachal Pradesh, Bihar etc.
- There are huge disparities between states in terms of facilities like health and education. Moreover, poorer states spend lesser this creates a vicious cycle.
- The Northern states are densely populated. However, there is visible lack of metropolitan centre in the region which has forced youth to migrate towards West and South India.
- In designing central schemes, the Union government fails to take into account the per capita requirements of each state. As a result, richer states often tend to gain more from such schemes compared to poorer states.

Measures needed for balanced growth:

- Focus on developing local industrial clusters. Several traditionally industrial cities such as Kanpur, Moradabad, Firozabad, Pithampur, and Cuttack need to be economically revived and made vibrant.
- Empowering local government and facilitating a co-ordinated action plan between centre, state and lo-

cal governments.

- Ensuring proper provisions for health and education even to the remotest part of India.
- Building physical infrastructure to connect the hinterland with the urban centers.
- Since a large population in India is dependent on agriculture, there is a need to ensure the sustainability and viability of agriculture.

Several initiatives have been taken to bridge the gap between richer and poorer state. The finance commission transfers, GST regime etc have created a conducive environment for even development. Government needs to roll out policies that support poorer state to achieve higher growth rate.

6. Recently government of India has come up with Green Hydrogen Policy. What is green hydrogen? Discuss the advantages and disadvantages of green hydrogen.

Ans.

Green hydrogen is defined as hydrogen produced by splitting water into hydrogen and oxygen using renewable electricity. Currently, less than 1% of hydrogen produced is green hydrogen.

Important provisions of Green Hydrogen

Policy:

- Manufacturers of Green Hydrogen can either buy renewable energy from a power exchange or build their own renewable energy capacity.
- Manufacturers can bank his unutilized renewable energy, up to 30 days, with distribution company and take it back when required.
- Manufacturers shall be given connectivity to the grid on priority basis.
- A single portal for carrying out all the activities including statutory clearances in a time bound manner.
- Removal of inter-state transmission charges for a period of 25 years.

Advantages of Green Hydrogen:

- It is 100% sustainable as it does not emit any polluting gases either during combustion or during production.
- Easy to store, which allows it to be used subsequently for other purposes.
- Very versatile as it can be transformed into electricity or synthetic gas.
- More efficient than other sources of energy like diesel or gas.

- It can be used in sectors such as chemicals, iron, steel, fertilizer and refining, transport, heating, and power.
- It can be used for long distance mobilisation such as in railways, large ships, buses or trucks, etc.

Disadvantages of Green Hydrogen:

- Renewable energy, which is essential for producing green hydrogen, is expensive to produce, making hydrogen more expensive to obtain.
- The production of hydrogen in general and green hydrogen in particular requires more energy than other fuels.
- Hydrogen is a highly volatile and flammable element. Therefore extensive safety measures are required to prevent leakage and explosions.
- Transportation is not easy through pipelines and shipping containers.

Conclusion:

Green Hydrogen is the future of the Indian energy and chemicals sector. In India, the path to a prosperous, clean energy future lies with green hydrogen. To give ourselves the best chance of following this path, however, we must act now.

7. What are the relations between earthquakes and tsunami? Identify the regions around the world which are vulnerable to tsunami.

Ans.

A tsunami is a series of destructive waves, sometimes tens of meters high, caused by the displacement of a large volume of water, usually an ocean. Earthquakes, volcanic eruptions, undersea explosions, landslides, and other mass movements are the most common causes of tsunamis. Nearly all large tsunamis in history have been caused by undersea earthquakes.

How do earthquakes generate tsunamis:

- Tsunamis can be generated when the sea floor abruptly deforms and vertically displaces the overlying water.
- Tectonic earthquakes are a particular kind of tremor associated with the earth's crustal deformation.
- When these earthquakes occur beneath the sea, the water above the deformed area is displaced from its equilibrium position.
- Most tsunamis are generated by shallow, great earthquakes at subductions zones.
- More than 80% of the world's tsunamis occur in the Pacific along its Ring of Fire subduction zones.
- However, undersea earthquakes do not necessarily

ly lead to tsunamis. Usually, it takes an earthquake with a Richter magnitude exceeding 7.5 to produce a destructive tsunami.

Regions prone to Tsunami:

- Coastal regions around the Pacific Ocean are particularly vulnerable to tsunamis: Chile and Peru, the West Coast of the United States, Japan, and New Zealand.
- These are not the only spots where a tsunami can hit, but due to the numerous large and active plate boundaries, these areas are not a surprise to be on the list.
- Other parts of the world more likely to be impacted by a tsunami are Newfoundland (on Canada's east coast), Portugal, India, and much of the Mediterranean.

Tsunami being a natural disaster can occur anywhere and at any time but its impact can be mitigated. Developing resilient infrastructure, early warning system, rapid response mechanism, etc. should be our top priority as it will abate the havoc wreaked by Tsunami.

8. What is Atlantic Meridional Overturning Circulation (AMOC)? Why we are witnessing decline in AMOC and what are its implications?

Ans.

The Atlantic Meridional Overturning Circulation (AMOC) is a large system of ocean currents. It is the Atlantic branch of the ocean conveyor belt or Thermohaline circulation (THC). It distributes heat and nutrients throughout the world's ocean basins.

Working of AMOC

- AMOC carries warm surface waters from the tropics towards the Northern Hemisphere, where it cools and sinks.
- It then returns to the tropics and then to the South Atlantic as a bottom current. From there it is distributed to all ocean basins via the Antarctic circumpolar current.

Reasons for decline in AMOC?

- Global warming caused by Greenhouse gases is one of the major reasons for the slowing down of Atlantic Meridional Overturning Circulation.
- Global warming has caused the Arctic to warm, Greenland to melt, rainfall to increase, and had intensified the flow of freshwater into the northern seas.
- The freshwater addition reduces the salinity and density of the water thus reducing the cooling rate of water. Now, the water is unable to sink in the 'conveyor belt' leading to a weaker AMOC.

Implications of AMOC decline:

- Decrease in marine productivity in the North Atlantic.
- Northern hemisphere will get very cold and decrease in rainfall over Europe.
- It can also have an effect on the El Nino.
- Less number of tropical cyclones in the Atlantic.
- Less Sahelian summer rainfall and South Asian summer rainfall.
- It can also shift monsoons in South America and Africa.
- It can increase regional sea level along the northeast coast of North America.

Conclusion:

The AMOC plays a critical role in redistributing heat and regulating weather patterns around the world. Its decline is not just a fluctuation or a linear response to increasing temperatures but likely means the approaching of a critical threshold beyond which the circulation system could collapse.

9. While the United Nations reports that India has more than 1.4 billion people, making it the world's second-most populous country, the world population review predicts that India will overtake China as the world's most populous country by 2030. Do you support the view that India needs population control law? Justify your answer.

Ans.

Various reports and surveys have highlighted the growing population of India. For example, World Population Prospects 2019 report states that by 2050 India will have 1.64 bn population. This burgeoning population has generated a debate around the need of having statutory limit on number of children.

The population control bill of 2019, which was withdrawn in 2022, proposed a two-child policy per couple and aimed to incentivize its adoption through educational benefits, free healthcare, better employment opportunities, home loans, and tax cuts.

Do India need population control law?

Yes

- Law creates a sense of enforcement thus it may prove effective in controlling the population growth.
- Many countries have population control laws. Ex-China, Vietnam, Nigeria etc.
- Repeated child-bearing negatively impacts women. This is often referred to as maternal depletion syndrome.
- Increasing population creates pressure on limited resources of the country that impacting the overall living condition.
- Huge population without commensurate health fa-

cilities especially in developing countries like India can create catastrophic situation as recently witnessed during Covid 19 crisis.

- In India, several states, including Andhra Pradesh, Assam, Rajasthan, Odisha, Rajasthan, Telangana, and Maharashtra, have enacted some form of two-child rule for those seeking elected office or government jobs. This could be implemented at national level.

No

- Coercive population control measures would encourage sex-selection and unsafe abortion given the collective desire for a male child.
- The policy to control and regulate the number of children violates such constitutional rights as Article 16 (equal opportunity in matters of public employment) and Article 21 (protection of life and liberty).
- In fact, international experience shows that any coercion to have a certain number of children is counter-productive and leads to demographic distortions. China had recently eased its population control measures to allow three-children households.
- Instead of law on population control, we must focus on better education and health care to reap the benefits of our human resource.
- Such a law may violate our fundamental right. The proposed population control bill violated Article 16 and Article 21 of the Constitution are among the rights that are violated by the policy to limit and restrict the number of children
- Current policies for population control are doing well. Recent NFHS 5 survey reports are testimony to it.

Thus we can say that we do not need population control law. As per the latest NFHS 5 survey India's Total Fertility Rate has declined from 2.2 in 2015-16 to 2.0 in 2019-21, below the replacement level of fertility of 2.1 children per women.

The Family Welfare Programme in India is voluntary in nature, which enables couples to decide the size of their family and adopt the family planning methods best suited to them, according to their choice, without any compulsion.

10. While discussing the issues faced by Dalits, highlight the measures taken by Government of India for Dalit empowerment.

Ans.

The term 'Dalit' refers to the people belonging to depressed classes, constitutionally there are called Scheduled castes. This term was used for those Indians who had suffered untouchability in the past. Dalits constitutes around 16.6% of India's population (Census-2011).

Issues faced by Dalits:

- Untouchability is still rampant in different forms. For example, reports of Dalits made to sit in separate rooms in many government schools.
- Dalits are relatively very poor and socially backward (SECC-2011). Due to this they are very vulnerable to caste-based slavery and forced prostitution.
- Dalits are seen as easy targets for sexual abuse, for ex Hathras gang rape and murder and other crimes like publically thrashing flogging Dalit youths.
- Discrimination faced by Dalits have a cascading effect. Discrimination in accessing education leads to high level of unemployment which subsequently leads to poverty and impoverishment.
- Dalits do not have access to basic amenities like clean water, enough food, housing, or clothing (World Bank study).
- Despite having similar rights and duties dalits are deprived of dignified life and basic human standards of living.
- Dalits face social humiliation as they are often prevented from entering religious places and other public places.
- Literacy rates among Dalits are lower, only 66.4% compared 74% of all India (Census 2011).
- Employment opportunities limited to what is referred to as dirty jobs. According to Dalit right activist not every Dalit is a safai Karamchhari but every safai Karamchhari is a Dalit.

Measures taken by Government:

- Constitutional provisions for safeguarding their rights and empowering them like Articles – 15,16,17,46,330 etc.
- National Commission of scheduled Castes constituted under Article 338 to protect their rights and promote their well-being.
- Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 describe certain activities against dalits as cognizable and non-bailable offence. For example, garlanding a SC/ST person with shoes, usurping the property of any SC/ST person, etc.
- Pre-matric and post-matric Scholarship schemes of both state and central government, distribution of laptops, bicycles, residential schools etc. to promote education.
- The 'Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013' (MS Act, 2013) provide for rehabilitation and resettlement of manual scavengers and their families.
- Stand-up India scheme to promote entrepreneurship among Dalits.
- Free Coaching for preparation of competitive exams

like NEET, JEE, Civil Services etc.

- Establishment of National Scheduled Caste Finance and Development Corporation (NSFDC) for economic empowerment.
- Venture capital fund and Credit Enhancement Guarantee Scheme for scheduled castes to ensure access to institutional credit.

Certainly above measures have improved the condition of Dalits, but it is often said that there is only certain islands of prosperity amid ocean of misery among Dalits. Therefore above measures must be implanted effectively through measures like e-Governance to usher in 'Sabka saath, Sabka Vikas', Sarvodaya and Antyodaya.

11. Disruptions to the global supply chain caused by Covid-19 pandemic have exposed the dependency of India's pharmaceutical industries on imported Chinese Bulk drugs. What are the reasons for underdeveloped Bulk drugs industry in India? Also mention measures for 'Atma-Nirbharta' (self-reliance) in Bulk drugs.

Ans.

Today pharma industry in India is valued at an estimated \$42bn. India is 3rd largest provider of medicines by volume, with 20% global share in pharmaceutical exports. However, most of the pharmaceuticals made in India are low-cost generic drugs. India is currently heavily dependent for as much as 58 APIs on China while the dependency rate on these APIs varies from 50 per cent to 100 per cent.

Reasons for underdeveloped bulk drug industry-

- Until 1995 India was very strong in fermentation technology. But after Drug Price Control Order, which was initiated in 1995, Indian companies had to resort to China for import as APIs were cheaper there. This continued for 15-20 years and now businesses are habituated. Today we cannot match API prices of China.
- Minerals and petrochemicals are the most common raw material required for API manufacture. While China has abundant mineral resources, India depends on import for most minerals. Utilities like electricity and water are more expensive in India due to distribution losses and insufficient supply. Financing is another issue.
- For fermentation-based materials like vitamins and antibiotics, which are imported from China, there has to be absolutely zero power cuts. In APIs power is a very important factor.
- The focus on finished formulations in the last two decades had resulted in negligence of in-house Indian manufacture of APIs. This consequently led to an increased reliance on China in particular.

- The upsurge in imports from China points towards China's large capacities (which are built up by the government and managed by private industry) and India's liberal approach in approving registrations for Chinese products.

Measures needed for Atma-Nirbharta (self reliance) in Bulk drugs:

- The Government of India must examine Chinese imports and chart a course of action. For strategic planning, GoI must use a hybrid bottom-up-top-down strategy. Various government agencies should do their own strategic planning with assistance from industry organisations and data mining.
- Identify existing process technologies that may be utilised to produce APIs in a cost-effective and environmentally responsible manner. One such potentially useful method was created by the University of Calicut for the synthesis of Penicillin from discarded fruits.
- Small and medium enterprises (SMEs) are major producers of APIs, especially those produced through chemical synthesis process. Such schemes need to be designed to benefit the actual producers of APIs.
- There is a business insecurity for private players in investing in API parks. This insecurity will be overcome if the API parks with common utilities are established by the Government and then enterprises are invited to establish their production units there.
- Support is necessary in terms of utility costs such as power, water, steam, and finance. The cost of land is also an issue. There is a need to streamline environmental approvals.

It is not in the best interests of the country to rely on a single supplier for something as vital as medications. India has taken the correct strategy in seeking other sources in the short term and developing local capabilities in the medium to long term. Recently launched schemes like Scheme for Strengthening Pharmaceutical Industry, PLI Scheme for Promotion of Domestic Manufacturing of critical key starting materials/Drug Intermediates and API in the country are step in right direction.

MCQs Based on Current Affairs

1. Choose the correct statement regarding 'World Population Day':

1. Every year 11 July is celebrated by the United Nations as World Population Day.
2. The theme of World Population Day 2022 is- "A world of 8 billion: Towards a resilient future for all – Harnessing opportunities and ensuring rights and choices for all."

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) 1 and 2
- (d) Neither 1 nor 2

Answer: C

2. Which of the following states has the most expressways?

- (a) Haryana
- (b) Uttar Pradesh
- (c) Punjab
- (d) Maharashtra

Answer: B

3. Recently in which state Internet Exchange Point was inaugurated?

- (a) Maharashtra
- (b) West Bengal
- (c) Uttar Pradesh
- (d) Orissa

Answer: B

4. With reference to G7, consider the following statements:

1. The 48th G7 summit held in 2022 was chaired by Germany.
2. The UK and Canada are members of the G7, but the EU is the only non-counting member of the G7.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) 1 and 2
- (d) Neither 1 nor 2

Answer: C

5. Consider the following countries:

1. Eritrea
2. Somalia
3. Rwanda
4. Ethiopia

Which of the above are parts of 'Horn of Africa'?

- (a) 1, 2 and 4 only
- (b) 2 and 4 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4

Answer: A

6. 'CAPSTONE', which was in news recently, is a satellite launched by which space agency?

- (a) ISRO
- (b) NASA
- (c) Japan Aerospace Exploration Agency (JAXA)
- (d) ROSCOSMOS (of Russia)

Answer: B

7. Aurangabad of Maharashtra has been renamed as ?

- (a) Kamal Nagar
- (b) Sohan Nagar
- (c) Sambhaji Nagar
- (d) Jijabai Nagar

Answer: C

8. Which of the following statements are true regarding Primary Agricultural Credit Societies (PACS)?

1. PACS are cooperative credit institutions that provide long-term agricultural loans to farmers for various agricultural and agricultural activities.
2. The first Primary Agricultural Credit Committee (PACS) was formed in the year 1904.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) 1 and 2
- (d) Neither 1 nor 2

Answer: C

9. Select the incorrect statement regarding Coalition for Disaster Resilient Infrastructure (CDRI)?

1. The Union Cabinet has approved the classification of Coalition for Disaster Resilient Infrastructure (CDRI) as an 'International Organization'.
 2. CDRI was launched by Prime Minister Narendra Modi in 2018.
- (a) 1 only
(b) 2 only
(c) 1 and 2
(d) Neither 1 nor 2

Answer: B

10. In which state/UT uranium has been discovered recently?

- (a) Maharashtra
(b) Uttar Pradesh
(c) Bihar
(d) Rajasthan

Answer: D

11. Recently ISRO launched 3 satellites of which country through PSLV-C53?

- (a) Singapore
(b) Bangladesh
(c) Bhutan
(d) Thailand

Answer: A

12. Select the false statement about National Investigation Agency (NIA):

1. It works under the Union Ministry of Home Affairs.
 2. The NIA is empowered to investigate crimes related to terrorism in the States, without special permission of the States, under a written proclamation from the Ministry of Home Affairs.
 3. Its headquarter is in Mumbai.
- (a) 1, 2 and 3
(b) 2 and 3 only
(c) 3 only
(d) 1 and 3 only

Answer: C

13. With reference to the Vice President of India, consider the following statements:

1. The nominated members of both the Houses of Parliament have no rights

to vote in the election of the President, they have the right to vote in the election of the Vice-President.

2. The Vice-President can be removed from office by a resolution of the Rajya Sabha, which is then passed by a simple majority of the members present, with the consent required by the Lok Sabha.

Which of the above statements is/are correct?

- (a) 1 only
(b) 2 only
(c) 1 and 2
(d) Neither 1 nor 2

Answer: B

14. In which country more than 6 million bees have been killed after the deadly Varroa plague broke out for the first time?

- (a) Japan
(b) Canada
(c) New Zealand
(d) Australia

Answer: D

15. India's largest floating solar power plant has been fully commissioned by NTPC in which state?

- (a) Andhra Pradesh
(b) Telangana
(c) Kerala
(d) Tamil Nadu

Answer: B

16. Choose the correct statement regarding Rim of the Pacific (RIMPAC) Exercise 2022:

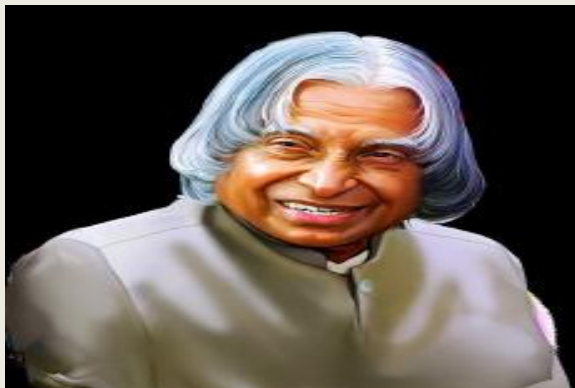
1. It was organized in the Hawaiian Islands of America.
2. India sends INS Satpura and P8I aircraft to participate in RIMPAC exercise.

Which of the above statements is/are correct?

- (a) 1 only (b) 2 only
(c) 1 and 2 (d) Neither 1 nor 2

Answer: C

APJ Abdul Kalam : The People's President



Born on 15th October 1931 at Rameswaram in Tamil Nadu, Dr. Avul Pakir Jainulabdeen Abdul Kalam, specialized in Aeronautical Engineering from Madras Institute of Technology. Dr. Kalam made significant contribution as Project Director to develop India's first indigenous Satellite Launch Vehicle (SLV-III) which successfully injected the Rohini satellite in the near earth orbit in July 1980 and made India an exclusive member of Space Club. He was responsible for the evolution of ISRO's launch vehicle programme, particularly the PSLV configuration.

After working for two decades in ISRO and mastering launch vehicle technologies, Dr. Kalam took up the responsibility of developing Indigenous Guided Missiles at Defence Research and Development Organisation as the Chief Executive of Integrated Guided Missile Development Programme (IGMDP). He was responsible for the development and operationalisation of AGNI and PRITHVI Missiles and for building indigenous capability in critical technologies through networking of multiple institutions. He was the Scientific Adviser to Defence Minister and Secretary, Department of Defence Research & Development from July 1992 to December 1999.

During this period he led to the weaponisation of strategic missile systems and the Pokhran-II nuclear tests in collaboration with Department of Atomic Energy, which made India a nuclear weapon State. He also gave thrust to self-reliance in defence systems by progressing multiple development tasks and mission projects such as Light Combat Aircraft (tejas).

As Chairman of Technology Information, Forecasting and Assessment Council (TIFAC) and as an eminent scientist, he led the country with the help of 500 experts to arrive at Technology Vision 2020 giving a road map for transforming India from the present developing status to a

developed nation. Dr. Kalam served as the Principal Scientific Advisor to the Government of India, in the rank of Cabinet Minister, from November 1999 to November 2001 and was responsible for evolving policies, strategies and missions for many development applications. Dr. Kalam was also the Chairman, Ex-officio, of the Scientific Advisory Committee to the Cabinet (SAC-C) and piloted India Millennium Mission 2020.

Dr. Kalam took up academic pursuit as Professor, Technology & Societal Transformation at Anna University, Chennai from November 2001 and was involved in teaching and research tasks. Above all he took up a mission to ignite the young minds for national development by meeting high school students across the country.

In his literary pursuit four of Dr. Kalam's books - "Wings of Fire", "India 2020- A Vision for the New Millennium", "My journey" and "Ignited Minds- Unleashing the power within India" have become household names in India and among the Indian nationals abroad. These books have been translated in many Indian languages.

Dr. Kalam was one of the most distinguished scientists of India with the unique honour of receiving honorary doctorates from 30 universities and institutions. He had been awarded the coveted civilian awards- Padma Bhushan (1981) and Padma Vibhushan (1990) and the highest civilian award Bharat Ratna (1997). He is a recipient of several other awards and Fellow of many professional institutions.

Dr. Kalam became the 11th President of India on 25th July 2002. His focus was on transforming India into a developed nation by 2020. He breathed his last on July 27, 2015 at the age of 83.

As Gandhiji said, "My life is my message". Similarly Dr APJ Abdul Kalam imbibed Gandhiji's philosophy of simple living high thinking and lived his life as an open book to inspire others.

He was not only a great scientist and statesman but also a true pioneer of Indian values and culture. From 'Missile Man of India' to 'People's President', he was everyone's favorite and is a source of inspiration for the generations to come.

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AN INTRODUCTION



Dhyeya IAS, two decades old institution, was founded by Mr. Vinay Singh and Mr. Q. H. Khan. Ever since its emergence it has unparalleled track record of success. Today, it stands tall among the reputed institutes providing coaching for Civil Services Examination (CSE). The institute has been very successful in making potential aspirants realize their dreams which is evident from the success stories of the previous years.

As the nation progresses, the young generations become more conscious and aware about their career options. There is plethora of jobs and one among them is civil services, the most prestigious service in the country, which needs no introduction. It attracts many young minds hailing from almost all spectra of academic disciplines. The popular belief that the examination for this service is only meant for the brilliant lots has become a taboo as it also attracts the hardworking, sincere and disciplined minds. The saying- "In the end passion and hard work can substitute natural talent" holds true. It gives immense power and opportunity for young folks to bring about the positive changes in the society which would bring harmony and development. It inculcates values, moral, ethos and feeling of national integrity.

Quite a large number of students desirous of building a career for themselves are absolutely less equipped for the fairly tough competitive tests they have to appear in. Several others, who have a brilliant academic career, do not know that competitive exams are vastly different from academic examination and call for a systematic and scientifically planned guidance by a team of experts. Here one single move may invariably put one ahead of many others who lag behind. Dhyeya IAS is manned with qualified & experienced faculties besides especially designed study material that helps the students in achieving the desired goal.

Civil Services Exam requires knowledge base of specified subjects. These subjects though taught in schools and colleges are not necessarily oriented towards the exam approach. Classes at Dhyeya IAS are different from classes conducted in schools and colleges with respect to their orientation. Classes are targeted towards the particular exam. Classroom guidance at Dhyeya IAS is about improving the individuals' capacity to focus, learn and innovate as we are comfortably aware of the fact that you can't teach a person anything, you can only help him find it within himself.

We feel that despite brilliance and diligence, most of the students are lacking proper guidance and aptitude needed to clear Civil Services Examination. This is why, we at Dhyeya IAS amalgamated the traditional as well as modern approach of teaching by incorporating best educators of the industry ably supported by Academic Associates, Class Notes and printed Study Material, routine as well as surprise Tests. Due to its arduous efforts, Dhyeya IAS is able to carve a niche among all the civil services coaching institutes in India. Access to an institution is as important as the quality of Institution. Our faith in this philosophy made us grow. With 12 Face to Face Centers located in different parts in India, Distance Learning Program, Live Streaming Centers and Residential Academy, we have made truly pan India presence. Ever since the foundation the institute has produced a heavy pool of bureaucrats both at central and state level. Dhyeya IAS not only aims at imparting the content of civil services in best way but also nurturing the aspirants as leaders of tomorrow who have a responsibility of fulfilling the dreams of around 1.4 billion Indians. Dhyeya IAS has guided over 50,000 aspirants with more than 4500 selections in civil services. Our journey is a small contribution for the development of the society and nation by nurturing the potential civil services aspirants.

Considering the toughness of Civil Services Exam, where success rate is a meager 0.1 percent, Dhyeya IAS has continuously produced phenomenal results over the years. Year after Year Dhyeya IAS is being recognized for imparting guidance to civil services aspirants using benchmarked quality practices. On the basis of scalability, innovation, achievements, impact potential our efforts and contribution have been acknowledged and rewarded with Education Excellence Awards by ET NOW, Brands Academy, Times of India, etc. This has enhanced motivation, pride and self-esteem of entire Dhyeya family.

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