

CURRENT AFFAIRS

WEEKLY

WEEK - 2
JANUARY, 2020

MAINS

PRELIMS

ECONOMY

- 2636 EV Charging Stations sanctioned under FAME-II
- First Silk Processing Plant in Gujarat
- Northeast Gas Grid Project

ENVIRONMENT & ECOLOGY

- Asia Pacific Drosophila Research Conference
- Bhitarkanika census finds an increase of 15 saltwater crocodiles from last year
- Delhi gets its first smog tower: What is it and how does it work?
- India Climate Report 2019
- MECOS 3: Global Marine Ecosystem Meet in Kochi
- Kerala to curb alien plants' growth in NBR'

GEOGRAPHY

- KVIC opened first silk processing plant in Gujarat to boost production of signature Patola Saree

GOVERNANCE

- National Company Law Appellate Tribunal (NCLAT)
- SC on Prohibition of Child Marriage Act, 2006

HISTORY

- Bibi Ka Maqbara
- What is the Historical Significance of Nankana Sahib in Pakistan?

POLITY

- Cyber Safe Women
- Tulu Language

SCIENCE & TECHNOLOGY

- Centralised Access Control System (CACS) & Training Module of e-BCAS
- Project NETRA

ECONOMY

- Mobilization of Resources
- The nominal GDP worry (lowest since 1975-76)

ENVIRONMENT & ECOLOGY

- What carbon numbers mean for climate target

GOVERNANCE

- Electoral Reforms

INTERNATIONAL RELATIONS

- Changing contours of India's Soft Power Diplomacy

POLITY

- Iran abandons the 2015 nuclear deal

GS SCORE

An Institute for Civil Services

www.iasscore.in

— Disclaimer —

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

CURRENT AFFAIRS ANALYST

WEEK-2 (JANUARY, 2020)

CONTENTS

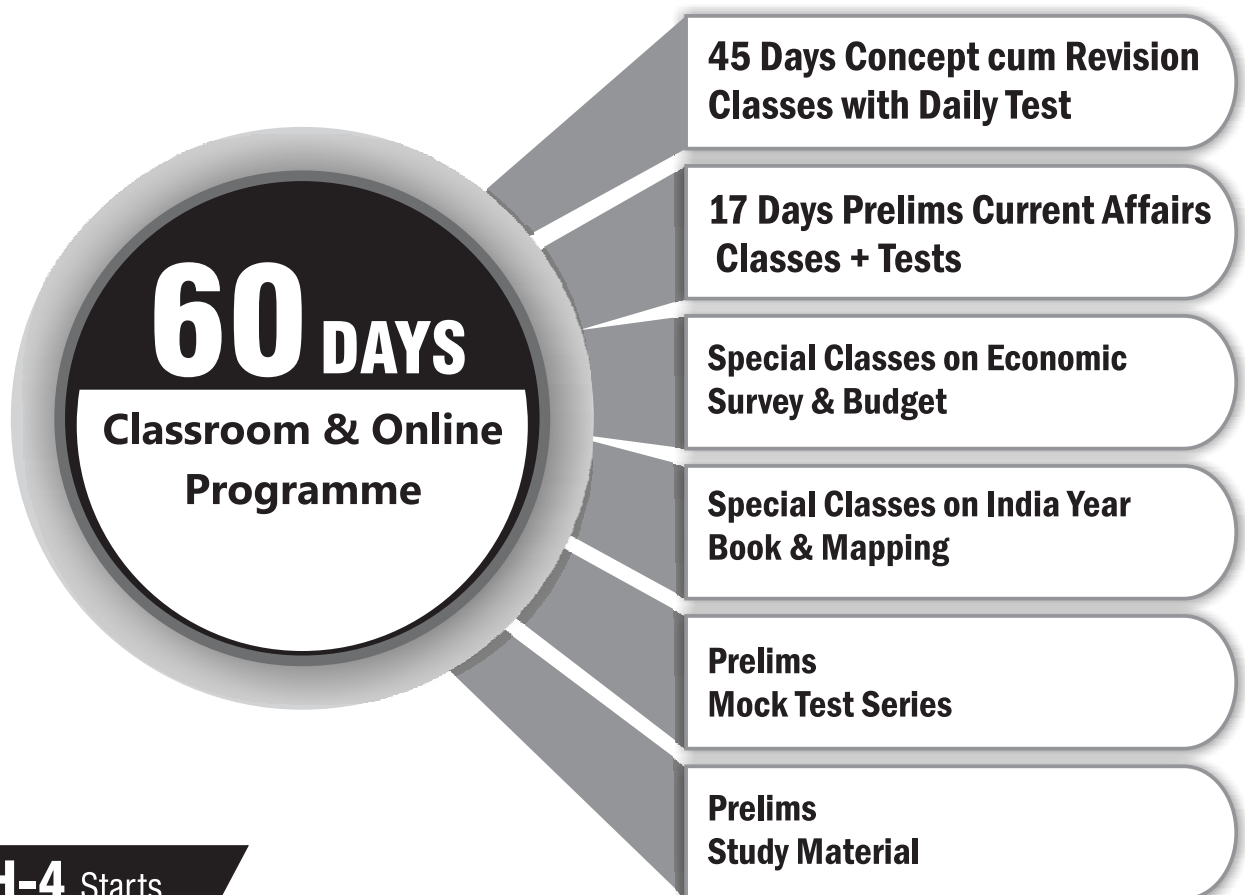
Section - A: MAINS CURRENT AFFAIRS		
Area of GS	Topics in News	Page No.
ECONOMY	• Mobilization of Resources	06
ENVIRONMENT & ECOLOGY	• The nominal GDP worry (lowest since 1975-76)	09
	• What carbon numbers mean for climate target	11
GOVERNANCE	• Electoral Reforms	13
INTERNATIONAL RELATIONS	• Changing contours of India's Soft Power Diplomacy	17
POLITY	• Iran abandons the 2015 nuclear deal	19

Section - B: PRELIMS CURRENT AFFAIRS		
Area of GS	Topics in News	Page No.
ECONOMY	• First Silk Processing Plant in Gujarat	23
	• Northeast Gas Grid Project	24
	• 2636 EV Charging Stations sanctioned under FAME-II	26
ENVIRONMENT & ECOLOGY	• Asia Pacific Drosophila Research Conference	27
	• Bhitarkanika census finds an increase of 15 saltwater crocodiles from last year	28
	• Delhi gets its first smog tower: What is it and how does it work?	29
	• India Climate Report 2019	30
	• MECOS 3: Global Marine Ecosystem Meet in Kochi	31
	• Kerala to curb alien plants' growth in NBR	32
GEOGRAPHY	• KVIC opened first silk processing plant in Gujarat to boost production of signature Patola Saree	34
GOVERNANCE	• National Company Law Appellate Tribunal (NCLAT)	35
	• SC on Prohibition of Child Marriage Act, 2006	36

HISTORY	• Bibi Ka Maqbara	37
	• What is the historical significance of Nankana Sahib in Pakistan?	38
POLITY	• Cyber Safe Women	39
	• Tulu Language	41
SCIENCE & TECHNOLOGY	• Centralised Access Control System (CACS) & Training Module of e-BCAS	42
	• Project NETRA	43

Target PT 2020

Complete Revision *through*
4000⁺ MCQs



BATCH-4 Starts

27 JANUARY, 2020

Test Timings: 9:00 AM to 10:00 AM

Class Timings: 10:00 AM onwards

Fee ₹ 18,000 + GST

SECTION: A
(MAINS)

CURRENT AFFAIRS

MOBILIZATION OF RESOURCES

CONTEXT

- Government of India has taken steps in the form of disinvestment, relaxing FDI norms, bringing new tax laws and rules and borrowings to mobilize resources for the development of the country. Recently, passenger fares in Railways were hiked on the recommendation of Bibek Debroy committee for mobilisation of resources for major railway projects and restructuring of railway ministry and railway board.

◎ BACKGROUND

- Resource Mobilization is the identification, organization and utilization of the available material resources within the country (including financial resources) to further its objectives of development missions and plans.
- Every country has economic resources within its territory known as domestic resources. But often they might not be available for collective use. The percentage of resources used when compared to the potential is often very low. For a country to grow, **identification and mobilization** of its resources is necessary. It should be available for easy use and for central and state level planning.
- **Types of Resources of India: There are two types of resources:**
 - Natural Resources – Coal, Petroleum, Natural Gas, Water, Spectrum etc.
 - Human Resources – The labour force and intellectual capacity of a nation.

◎ ANALYSIS

Why is Resource Mobilization so Important?

- It is helpful in maintaining Organizational Sustainability.
- It keeps a check and guarantees continuation of the organization's (government or non-government) service provision.
- It paves the way for improvement of the available services and products.
- It supports the expansion of the organization's products and services.
- It is crucial to any organizations existence, as any organization, be it in the public sector or private sector, must continually generate new business to maintain a perpetual presence.
- The proper utilization of these resources leads to generation of economic resources –savings, investment capital, tax, etc.

Mobilization of Natural Resources

- India, though a country with sufficient reserves, due to **policy bottlenecks**, is importing coal and iron. This **is increasing our Current Account Deficit**.
- India is also facing technological obstacles to exploit some of its the natural resources.
- India is also suffering from the domestic factors like political factors, resistance from tribal people to development and exploitation of resources, inter-state conflicts, disputes with neighboring countries, etc.

Mobilization of Human Resources

Organizing human potential for ready use is necessary for growth of India. In-fact, as country of 125 crore people, India now is eyeing more on its human resource potential. The demographic dividend is also in favour of India.

- Mobilization of human resources highlights the need to empower human resources.
- Weaker sections like women, children, SC, ST, OBC etc should be brought into mainstream.
- There should be right employment opportunities for human resources, and when there is lack of skill the job demands, there should be skill development programs.
- Utilize the demographic dividend.
- India is currently leveraging on its technologists – engineers, doctors and scientists.

Mobilization of Financial Resources

- If a country needs to grow, more goods and services should be produced. The production can be done by government sector, private sector or in PPP mode. But for that, the economic resources of a country should be mobilised.
- In India, despite having good savings rate, domestic investment is less. Indians are investing in less productive assets like gold and consumer durable. If India needs to grow, there should be more investments in agriculture, manufacturing or services.
- In India, tax collected is very less. The tax base has to be widened.

- Four factors of production- land, labour, capital and organization – should come together. There should be an atmosphere for growth and investment.
- Organizations do not “spontaneously emerge” but require the mobilization of resources.
- In modern capitalistic society, these resources are more “free flowing” and are easier to mobilize than in more traditional societies. Many factors impact the development of the organization.
- Initial Resource Mix: There are various resource needs in a starting organization (technology, labor, capital, organizational structure, societal support, legitimacy, etc.). But the right mix of resources is not always available.
- The most important resource of an organization is its people.
- More savings and more productive investment.

How does public and Private sector mobilize domestic resources?

- Public sector mobilises resources in two ways:
 - ▶ Taxation
 - ▶ Public revenue generation for investment in social services and infrastructure.
- Private sector mobilises resources in following ways:
 - ▶ The private sector mobilizes the savings of households and firms through financial intermediaries, which allocate these resources to investment in productive activities.

Issues with mobilisation of resources

Issues with mobilisation of resources include all those issues and problems highlighted in – mobilization of natural resources, human resources and financial resources. Some of them are discussed here:

- **Limited Domestic public resources:**
 - ▶ It makes least developed countries (LDCs) highly dependent on external resources which limit their policy space and create some dependency.
 - ▶ Their economic vulnerability is further exacerbated by indebtedness.
- **Weak Domestic taxation and fiscal policies:**
 - ▶ The fiscal discipline is hardly seen in developing countries. They often resort to deficit financing to pursue development.
 - ▶ The taxes are not broad-based and tax evasion is common in developing countries which squeeze out the chances for public

expenditure.

- **Lack of National and sub-regional development banks with rural penetration:**

- ▶ Though India is enjoying the presence of big national and international banks but the financial inclusion at rural level has been a myth.
- ▶ Moreover, 2008 financial crisis brought national development banks back onto the policy agenda, as countries sought sources of long-term financing to stimulate economic recoveries, and there is greater international acceptance of such banks. However, poorer and smaller developing countries may face greater obstacles in setting up such banks, due to funding and technical constraints.

- **Illicit financial flows from developing countries:**

- ▶ Illicit financial flows involve resources that have been obtained, transferred or used illegally or illicitly.
- ▶ A common concern with regard to illicit financial flows from developing countries is the identification of flows considered potentially damaging to economic development.
- ▶ In developing economies, vital development resources are being lost because of the ease with which capital flight can flourish in the context of a burgeoning yet opaque international financial system [and] closely related to this is the idea that illicit capital flows from developing economies are indicative of deeper structural problems of political governance in these countries.
- ▶ Concerns over illicit financial flows therefore reflect a range of relevant policy concerns, yet underlying analytical frameworks and empirical methodologies continue to be the subject of debate. Illicit financial flows need not be illegal if relevant legal frameworks do not adequately reflect wider public social and economic interests or do not cover such flows.

- **International tax cooperation:**

- ▶ The combating of illicit financial flows has been a core driver of international tax cooperation in recent years.
- ▶ In general, international tax cooperation assumes particular importance in a world of hyperglobalization, in which tax systems in some countries can affect public revenue collection in other countries.
- ▶ Such cross-national effects can result from tax evasion, for example if high net worth

individuals place financial assets in tax havens, as well as from illicit financial flows arising from the creative accounting or transfer pricing practices of multinational enterprises.

- **Lack of Multilateral development Banks:**

- ▶ Financing needs to support the achievement of the Sustainable Development Goals are considerable.
- ▶ Lack of financing is not due to a shortfall in global savings; at the global level, institutional investors currently have assets under their management totalling \$115 trillion. Most are in the form of developed country securities and other assets that offer low returns.
- ▶ Multilateral development banks and other international banks, existing and new, are therefore needed to bridge finance from end-savers to development projects. Development banks can thus be key players in development by providing long-term financing directly from their funding sources, by tapping into new sources and by leveraging additional resources, including private, through the co-financing of projects with other partners.

Why is Domestic Resource Mobilization (DRM) particularly important?

In low-income countries confronting widespread poverty, mobilizing domestic resources is particularly challenging, which has led developing countries to rely on foreign aid, foreign direct investment, export earnings and

other external resources. Nevertheless, there are compelling reasons to give much more emphasis to DRM.

- Greater reliance on DRM is vital to elevating economic growth, accelerating poverty reduction and underpinning sustained development.
- High-growth economies typically save 20-30 per cent or more of their income in order to finance public and private investment.
- DRM is potentially more congruent with domestic ownership than external resources.
- Foreign aid invariably carries restrictions and conditionality.
- FDI is primarily oriented to the commercial objectives of the investor, not the principal development priorities of the host country.
- DRM is more predictable and less volatile than aid, export earnings, or FDI.

◎ CONCLUSION

Resource in the form of investment is the most important factor affecting growth. Hence, resource mobilization to boost investment has always been a priority. The task of mobilizing resources involves deliberate decisions on selection of major investments, control of expenditures, monitoring of performance and realization of planned level of economic activity. Going further, it also includes prevention of tax evasion and tax avoidance.

THE NOMINAL GDP WORRY (LOWEST SINCE 1975-76)

CONTEXT

- The estimated growth of 7.53% in 'nominal' terms is the lowest since 1975-76. Also, this is the first time since 2002-03 that nominal GDP growth is projected to be in single digits. Why is this major concern?

◎ BACKGROUND

- National Statistical Office (NSO) released the first advance estimates of the national income that projected growth in India's GDP at market prices for 2019-20 at 4.98% in "real" terms, the lowest since the 3.89% in the global financial crisis year of 2008-09.
- But even more significant was the estimated growth of 7.53% in "nominal" terms, which is the lowest since the 7.35% for 1975-76.
- Also, this is the first time since 2002-03 that nominal GDP growth has been in single digits.

What is nominal GDP and how is it different from real GDP?

- GDP is the total market value of all goods and services produced in the economy during a particular year, inclusive of all taxes and subsidies on products.
- The market value taken at current prices is the nominal GDP.
- The value taken at constant prices — that is prices for all products taken at an unchanged base year — is the real GDP.
- In simple terms, real GDP is nominal GDP stripped of inflation.

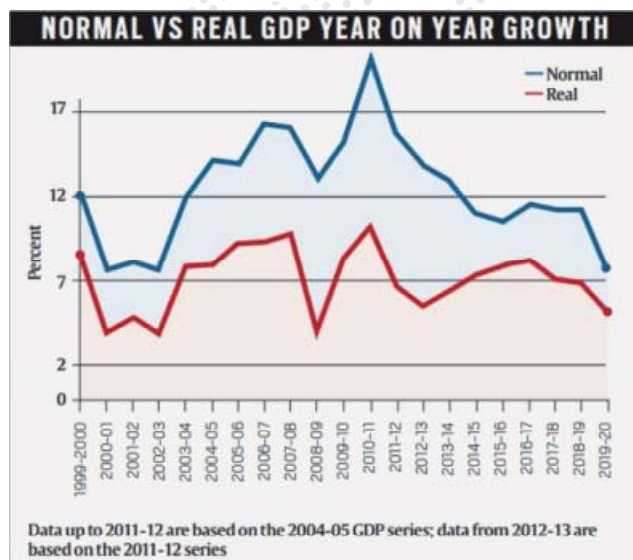
- Real GDP growth thus measures how much the production of goods and services in the economy has increased in actual physical terms during a year.
- Nominal GDP growth, on the other hand, is a measure of the increase in incomes resulting from rise in both production and prices.

But why should nominal growth matter at all?

- In the normal course, real growth is what one would ordinarily look at. But the current fiscal year seems extraordinary because the gap between nominal and real GDP growth is just 2.6 percentage points.
- This is marginally higher than the difference of 2.5 percentage points in 2015-16.
- But in that year, real GDP growth was 8%, which translated into a nominal growth of 10.5%.
- In 2019-20, not only is real GDP growth expected to be the lowest in 11 years, but also the implied inflation (also called GDP deflator, or the increase in prices of all the goods and services produced in the economy) is just 2.6%.
- Simply put, producers have not gained from either higher output or higher prices.
- Households and firms generally look at the "topline" — how much their income has grown relative to the previous year.
- When that growth falls to single digits in a country like India, which has been used to a minimum 5-6% GDP increase year after year and an equal rate for inflation, it is unusual.
- Low nominal GDP growth is associated more with developed western economies.

Other implications on corporates and the government

- In the past, listed companies have seen their turnover double in five years or so, which comes with a nominal year-on-year growth of 14-15%.
- If the latter falls to 7-8%, the same doubling would take 9-10 years.
- This can have a psychological impact — although it could also be the case that the value of their



inputs, including salaries paid to employees, would also be rising at a slower rate.

- Their net earnings or profits would not to the same extent.
- The problem is more serious when it comes to the government because as assumed nominal GDP would grow by 12% to Rs 211.01 lakh crore. However, the NSO's latest projection of nominal GDP for 2019-20 is only Rs 204.42 lakh crore, which is Rs 6,58,374 crore below the Budget estimate.
- High nominal GDP growth also makes the government's debt seem more manageable.
- For state governments too, low nominal GDP growth is a matter of concern because their budgets normally assume double-digit increases in revenues.
- The Centre's compensation formula to states from the Goods and Services Tax also promised to meet any annual revenue shortfall below 14%. That again, did not ever factor in the possibility of GDP growth (real plus inflation) falling to 7.5% levels.

What government can do about it?

- The government has exhausted its options to fill a widening hole.

- It has tapped the Reserve Bank of India (RBI) for extra dividend, held over several states' share in revenue and delayed payments to several agencies.
- The hope now is that divestment in its prized companies could fetch a large chunk.
- The government is also trying to hawk its land.
- Analysts believe that fiscal deficit would slip to 3.8-4% as against the budgeted 3.4% of GDP.
- The government will have to borrow more from the market to plug the widening deficit.
- Beyond the impact on market rates, the government and its agencies are already crowding out the private sector.
- With total public sector borrowing estimated at 9% of GDP, it leaves precious little of the savings in the economy for the private sector.

◎ WAY FORWARD

For GDP growth to revive private investment needs to recover and for that, funds need to flow. The economy is in a tight spot. It needs the government's push but not a complete takeover.

WHAT CARBON NUMBERS MEAN FOR CLIMATE TARGET

CONTEXT

- The unusually cold December this year could just be another instance of extreme climates becoming more and more frequent, a result of climate change. Across the world, the frequency and intensity of both heat waves and cold waves have increased in the last few years.

◎ BACKGROUND

- India, as part of its contribution to the global fight against climate change, has committed itself to creating an "additional carbon sink of 2.5 to 3 billion tonnes of carbon dioxide equivalent" by 2030.
- That is one of the three targets India has set for itself in its climate action plan, called Nationally Determined Contributions, or NDCs, that every country has to submit under the 2015 Paris Agreement.
- The other two relate to an improvement in emissions intensity, and an increase in renewable energy deployment.
- India has said it would reduce its emissions intensity (emissions per unit of GDP) by 33% to 35% by 2030 compared to 2005.
- It has also promised to ensure that at least 40% of its cumulative electricity generation in 2030 would be done through renewable energy.

What is the relationship between forests and carbon?

- Forests, by absorbing carbon dioxide from the atmosphere for the process of photosynthesis, act as a natural sink of carbon.
- Together with oceans, forests absorb nearly half of global annual carbon dioxide emissions.
- In fact, the carbon currently stored in the forests exceeds all the carbon emitted in the atmosphere since the start of the industrial age.
- An increase in the forest area is thus one of the most effective ways of reducing the emissions that accumulate in the atmosphere every year.

CARBON STOCK IN INDIAN FORESTS (not including tree cover)	
Year	Carbon stock (in mn tonnes)
2005	6,621.5
2013	6,941
2017	7,082
2019	7,124

How do the latest forest data translate into carbon equivalent?

- The latest forest survey shows that the carbon stock in India's forests (not including tree cover outside of forest areas) have increased from 7.08 billion tonnes in 2017, when the last such exercise had been done, to 7.124 billion tonnes now.
- This translates into 26.14 billion tonnes of carbon dioxide equivalent as of now.
- It is estimated that India's tree cover outside of forests would contribute another couple of billion of tonnes of carbon dioxide equivalent.

How challenging does this make it for India in meeting its target?

- An assessment by the Forest Survey of India (FSI) last year had projected that, by 2030, the carbon stock in forests as well as tree cover was likely to reach 31.87 billion tonnes of carbon dioxide equivalent in the business as usual scenario.
- An additional 2.5 to 3 billion tonnes of sink, as India has promised to do, would mean taking the size of the sink close to 35 billion tonnes of carbon dioxide equivalent.
- Considering the rate of growth of the carbon sink in the last few years, that is quite a stiff target India has set for itself.
- In the last two years, the carbon sink has grown by just about 0.6%. Even compared to 2005, the size of carbon sink has increased by barely 7.5%.
- To meet its NDC target, even with most optimistic estimates of carbon stock trapped in trees outside of forest areas, the sink has to grow by at least 15% to 20% over the next ten-year period.

Forest cover up but large tracts of dense forest have turned non-forest

- The biennial State of Forest Report (SFR) announced an overall gain of 3,976 sq km of forests in India since 2017.
- There is a loss of 2,145 sq km of dense forests that have become non-forests in those two years.

- Dense forests are defined by canopy cover: over 70% is considered very dense and 40-70% medium dense.
- Unlike natural forests, commercial plantations grow rapidly and show up as dense cover in satellite images.
- A monoculture, however, cannot substitute natural forests in biodiversity or ecological services
- Some of these are fast-growing species such as bamboo in the north-eastern region. Also rubber and coconut plantations in the southern states.
- Since 2003 when this data was first made available, 18,065 sq km — more than one third of Punjab's landmass — of dense forests has become non-forests in the country.
- Forestland roughly the combined area of Tamil Nadu and West Bengal holds no forests at all. There is no denial that the gain in forest cover is outside forestland.

© WHAT IS THE WAY FORWARD?

- There are two key decisions to be made in this regard — selection of the baseline year and

addition of the contribution of the agriculture sector to carbon sink.

- The baseline year can impact the business-as-usual projections for 2030. BAU projections are obtained using policies that existed in the baseline year. Now, there has been a far greater effort in recent years to increase the country's forest cover.
- So a 2015 baseline would lead to a higher BAU estimate for 2030 compared to a 2005 baseline when less effort were being made to add or regenerate forests.
- If 2005 baseline is used, India's targets can be achieved relatively easily.
- India's emissions intensity target uses a 2005 baseline, so there is an argument that the forest target should also have the same baseline.
- When India announced its NDC in 2015, it did not mention the baseline year. It has to decide on it before it reconfirms its NDC targets ahead of the next climate change meeting in Glasgow.

ELECTORAL REFORMS

CONTEXT

- Recently, Vice-President M. Venkaiah Naidu has termed Indian experience with democracy as a remarkable success story. However, he also pointed out two distortions in the form of enormous money power in politics and elections and the increasing attempts to entice the voters with freebies that hurt Indian democracy.

◎ BACKGROUND

- Electoral reforms refer to the development and benign change in election processes in India in order to facilitate better democracy, clean politics, ideal members of legislative houses, equality of representation and so on. Articles 324-329 deal with elections and electoral reforms. Electoral reforms are required to uphold the aspiration of our ancestors, to accomplish the ideals of our constitution and to have a true democracy in letter as well as in spirit by conducting fair elections.
- Among the MPs elected to the 16th Lok Sabha, out of the 542 winners analyzed, 185(34%) winners have declared criminal cases against themselves. 112 (21%) winners have declared serious criminal cases including cases related to murder, attempt to murder, communal disharmony, kidnapping, crimes against women etc. (Association for Democratic Reforms report)
- ADR also underlined that the chances of candidates with criminal charges were almost double as compared to clean candidates. The chances of winning of a candidate with criminal cases in the Lok Sabha 2014 elections are 13 percent while for a candidate with a clean record it is 5%.
- The **Goswami Committee on Electoral Reforms**, in 1990, highlighted the crippling effect of money and muscle power in elections.
- The **N.N. Vohra Committee** which submitted its report in October 1993 studied of the problem of criminalization of politics and the nexus among criminals, politicians, and bureaucrats in India. The committee had concluded that agencies, including the CBI, IB, RAW, had unanimously expressed their opinion that the criminal network was virtually running a parallel government.
- The **Law Commission of India, in its 244th report**, said that instead of politicians having suspected links to criminal networks, as was the case earlier, it was persons with extensive criminal backgrounds who began entering politics. The Law Commission said that in the 10 years since 2004, 18% of the candidates contesting either national or State elections had criminal cases against them.
- 18th Report presented by a parliamentary committee to the Rajya Sabha in March 2007 expressed feeling that politics should be cleansed

of persons with established criminal background". It said, "criminalization of politics is the bane of society and negation of democracy".

Constitutional articles related to electoral reforms:

- Article 324-329** deals with elections and electoral reforms.
- Article 324** deals with the Superintendence, direction and control of elections to be vested in an Election Commission.
- Article 325** states that no person to be ineligible for inclusion in, or to claim to be included in a special, electoral roll on grounds of religion, race, caste or sex.
- Article 326** deals with the Elections to the House of the People and to the Legislative Assemblies of States to be on the basis of adult suffrage.
- Article 327** provides power to the Parliament to make provision with respect to elections to Legislatures.
- Article 328** provides power to Legislature of a State to make provision with respect to elections to such Legislature.
- Article 329** provides to create a bar on court to make any interference by courts relating to electoral matters.

◎ ANALYSIS

Major Challenges in Indian electoral system

- Money Power:**
 - Electioneering is an expensive affair in every democratic polity which plays a more vital role in India.
 - Money power plays destructive role in our electoral system affecting seriously the working of periodic elections. It leads to all round corruption and contributes mainly to the generation of black money economy.
 - A prospective candidate in each constituency has to spend millions of money towards transport, publicity and other essential items of

election campaign. In recent years the election expenses have increased beyond any limits due to the desire on the part of every political party to spend more than their rivals in the fray.

- ▶ The elections were not as costly in 1952 as they have become today. Political leaders and workers considered it unethical to work with a desire for any reward. But scenario now has changed. The elections in Indian polity are becoming increasingly expensive and the gap between the expenses incurred and legally permitted is increasing over the years.
- **Muscle Power:**
 - ▶ Violence, pre-election intimidation, post-election victimisation, most of the riggings of any type, booth capturing both silent and violent are mainly the products of muscle power.
 - ▶ These are prevalent in many parts of the country like Bihar, Western Uttar Pradesh, Maharashtra etc. and this cancerous disease is slowly spreading to south like in Andhra Pradesh.
 - ▶ Criminalisation of politics and politicalisation of criminals, freely indulged in now, are like two sides of the same coin and are mainly responsible for the manifestation of muscle power at elections. By using of violence, the criminals are able to achieve success at elections for their benefactors
- **Misuse of Government Machinery:**
 - ▶ It is generally complained that the government in power at the time of election misuse official machinery to further the election prospects of its party candidates.
 - ▶ The misuse of official machinery takes different forms, such as issue of advertisements at the cost of government and public exchequer highlighting their achievements, disbursements out of the discretionary funds at the disposal of the ministers, use of government vehicles for canvassing etc.
 - ▶ The misuse of official machinery in the ways mentioned above gives an unfair advantage to the ruling party at the time of elections. This leads to misuse of public funds for furthering the prospects of candidates of a particular party.
- **Criminalisation of Politics**
 - ▶ The reason of the criminals behind entrance to politics is to gain influence and ensure that cases against them are dropped or not proceeded with. They are able to make it big in the political arena because of their financial clout. Political parties tap criminals for fund and in return provide them with political patronage

and protection.

- ▶ Rough estimates suggest that in any state election 20 per cent of candidates are drawn from criminal backgrounds

- **Non-Serious Candidates in Political Parties**

- ▶ In recent years there has been a steady increase in the number of candidates in elections. The number of candidates has swelled due to the participation of Independents. They contest elections light heartedly and lose their deposits.
- ▶ Non-serious candidates are largely floated by serious candidates either to cut sizeable portion of votes of rival candidates or to split the votes on caste lines or to have additional physical force at polling station and counting centers.
- ▶ The multiplicity of candidates causes inconvenience to election authorities in the management of elections. The voters are also handicapped in identifying the candidates of their own choice. This affects the sanctity of elections. This onslaught of non-seriousness has to be halted.

- **Incentives to entice Voters (freebies)**

- ▶ Freebies have actually compounded the problem of money power in politics.
- ▶ Free liquor or some goods or services to voters are acts of enticing voters.

- **Paid and Fake News**

- ▶ **Paid news is published as a news item in the form of advertisement. Fake news is news, stories or hoaxes created to deliberately misinform or deceive readers. Both are the threats to the free and fair electoral system.**

Steps Taken by Government

Following electoral reforms have been undertaken by authorities:

- **Lowering of Voting Age:** The 61st Amendment Act to the Constitution reduced the minimum age for voting from 21 to 18 years.
- **Deputation to Election Commission:** All personnel working in preparing, revising and correcting the electoral rolls for elections shall be considered to be on deputation to the EC for the period of such employment, and they shall be superintended by the EC.
- **Increase in the number of proposers and the security deposit:** The number of electors required to sign as proposers in the nomination papers

for elections to the Rajya Sabha and the State Legislative Councils has been raised to 10% of the electors of the constituency or ten such electors, whichever is less chiefly to prevent frivolous candidates. The security deposit has also been hiked to prevent non-serious candidates.

- **Electronic Voting Machine (EVMs):** First introduced in 1998 during the state elections of Delhi, Madhya Pradesh and Rajasthan, EVMs are used widely now as they are fool-proof, efficient and a better option in terms of the environment.
- **Disqualification on conviction for violating the National Honours Act, 1971:** This shall lead to disqualification of the person for 6 years from contesting to the Parliament and the state legislatures.
- **Restriction on contesting from more than 2 constituencies:** A candidate cannot contest from more than 2 constituencies.
- **Death of a contesting candidate:** Previously, the election was countermanded on the death of a contesting candidate. In the future, no election will be countermanded on the death of a contesting candidate. If the deceased candidate, however, was set up by a recognized national or state party, then the party concerned will be given an option to nominate another candidate within 7 days of the issue of a notice to that effect to the party concerned by the Election Commission.
- It is prohibited by law to go to or near a polling booth bearing arms. This is punishable by imprisonment for up to 2 years.
- On poll days, employees of organisations get a paid holiday and violation of this is punishable by a fine.
- **Prohibition on sale of liquor:** No liquor or other intoxicants shall be sold or given or distributed at any shop, eating place, or any other place, whether private or public, within a polling area during the period of 48 hours ending with the hour fixed for the conclusion of poll.
- **Time limit for bye-elections:** Bye-elections to any House of Parliament or a State Legislature will now be held within six months of the occurrence of the vacancy in that House.
- The period of campaigning has been reduced.
- **Ceiling on election expenditure:** At present, there is no limit on the amount a political party can spend in an election or on a candidate. But, the Commission has put a cap on individual candidates' spending. For the Lok Sabha elections, it is Rs. 50 – 70 lakh (depending on the state they are contesting the Lok Sabha seat from), and Rs. 20 – 28 lakh for an assembly election.
- **Restriction on exit polls:** The EC issued a statement before the 2019 Lok Sabha elections saying that

exit poll results could be broadcast only after the final phase of the elections were over. This was done to avoid prospective voters being misguided or prejudiced in any manner.

- **Voting through postal ballot:** In 2013, the EC decided to expand the ambit of postal ballot voting in the country. Previously, only Indian staff in missions abroad and defence personnel in a limited way, could vote via postal ballots. Now, there are 6 categories of voters who can use the postal ballot: service voters; special voters; wives of service voters and special voters; voters subjected to preventive detention; voters on election duty and Notified voters.
- **Awareness Creation:** The government decided to observe January 25th as 'National Voters Day' to mark the EC's founding day.
- Political parties need to report any contribution in excess of Rs 20000 to the EC for claiming income tax benefit.
- Declaring of criminal antecedents, assets, etc. by the candidates is required and declaring false information in the affidavit is now an electoral offence punishable with imprisonment up to 6 months or fine or both.

What needs to be done to make Indian electoral system fair and transparent?

- **Independent permanent electoral administration:**
 - At Present, the EC does not have independent staff of its own. Whenever elections take place, the Election Commission has to depend upon staff of Central and State Governments.
 - The dual responsibility of the administrative staff, to the government for ordinary administration and to the EC for electoral administration is not conducive to the impartiality and efficiency of the Commission. Along with it comes the problem of disciplinary control over the staff deputed to do election work which generally generates confrontation between the Government and the EC.
 - Now, when the elections have ceased to be a mere periodical affair, it is desirable that the EC should have a permanent electoral administration with adequate disciplinary control over the staff.
 - The CEC should not be at the mercy to Executive and Parliament for its requirements. He should have separate and independent election department to enhance its objectivity and impartiality.
- **Self-Regulation by Political Parties:**
 - Political corruption should be stopped by

providing funds to genuine candidates through political parties whose account should be auditable. Candidate involving in corruption should be disqualified.

- For having a true democracy the registration and recognition of the political parties should be fair and without any kind of influence.
- However, political parties don't show commitment to bring in necessary behavior that is required to make the electoral system more fair and transparent.

• **Neutrality by Mass Media**

- Mass Media should play a non-partisan role in election and as a safeguard of democracy.
- Paid and fake news must be avoided and media must adopt self-regulation to prevent dissemination of misinformation.
- Periodic elections are the foundation of a democratic system. For fair electoral system every aspiring candidate must have fettered freedom to offer himself as a candidate for election and to conduct his election campaign in his own way so long as he keeps him within the law.
- Exit polls and opinion polls have impact on election results mainly when elections are held in phases.

• **Educate People**

- Every voter must be perfectly free to vote as he/she likes without any fear of consequences and without being unduly influenced by anyone by improper means and inducement or pressure of any kind. They must reject candidates that resort to election mal-practices.
- The secrecy of voters' preference to any candidate should be maintained. The election machinery must function honestly and impartially at every stage.
- Parliament must pass a law dealing with this serious problem of de-listing of valid electorates from electoral rolls because illiterate electorate residing in far villages cannot watch over publication of electorate lists.
- Preparation of electoral rolls by EC is to be supervised at village level and certificates from officials who prepare electoral rolls to the effect

that the electoral rolls have been thoroughly revised. They do not include that persons and legally disenfranchised citizens and intentionally no name should be left in them. Accountability to be fixed for intentional exclusion of name of voters from electoral rolls.

• **Cap the party expenditure**

- Representation of Peoples Act, 1955 provides limits on the expenditure of an individual candidate while it does not provide the same for the expenditure of a political party.
- A candidate can't spend more than 70 lakhs in Lok Sabha elections or 20 lakhs in State Assembly elections. This cap is also not rational keeping in view the inflation in the present days.

• **Audit of Party Expenditure**

- Audit of the party expenditure should also be conducted regularly.
- Political parties must show spine by establishing an independent body for conducting the audit of the election expenditure of the parties.

• **Localizing Power**

- Voters generally don't vote for the candidate they vote for the party
- Parties are also not to be perceived as villains but they are the agents to respond to the incentives given.
- People can't become wise overnight and bring in transformation. It is a gradual evolution.
- We have centralized the power and there is no link between vote and consequences in a tangible manner. We have not empowered local governments and it is for the interest of the democracy to empower local governments and localize power.

◎ **CONCLUSION**

There is doubt that people vote for the identity and that identity is with the party and not with the candidate. The real politics is at the state level and it is of derivatives at the national level. In such case we must formalize the party vote and seek vote for the party on the basis of proportional representation. The share of votes is transferred into seats later.

'CHANGING CONTOURS OF INDIA'S SOFT POWER DIPLOMACY'

CONTEXT

- In recent times, India has unleashed its true potential and maintained a strong focus for its use as an instrument of public diplomacy. The article aims to analyse the increasing importance of soft power and how it has shaped India's foreign policy and behaviour.

◎ BACKGROUND:

- India's soft power is strong, and it has been so, long before such a concept was made famous by American political scientist **Joseph Nye** (an American political scientist) in **1990**.
- For centuries, India's soft power was already being recognised in many parts of the world, where people learned about and accessed the arts and culture of one of the world's oldest civilisations.
- But the most important time, is the past decade when India has increased its use of soft power in a more systematic way.
- Several initiatives have been launched to push India to the forefront of the international community, including:
 - the creation of a public diplomacy division within the Ministry of External Affairs in 2006
 - the worldwide expansion of the Indian Council for Cultural Relations (ICCR)
 - the Ministry of Tourism's 'Incredible India' campaign
 - the work of the Ministry for Overseas Indians
 - the promotion of business and trade
 - the current government's diplomatic efforts
- These collaborative efforts have not only helped emphasise the social and cultural assets of India abroad, but they also support the country's major foreign-policy initiatives.
- In the last few years, the government is focusing on four specific soft power assets of India for achieving diplomatic successes and furthering the country's national interests:
 - Buddhism
 - Diaspora
 - Yoga
 - economic leverage

- While conventional, hard power relies on the State's military and economic resources, soft power works on persuasion, aiming at furthering a country's 'attractiveness'.
- It is based on three main categories of a country's resources:
 - Culture
 - political values
 - foreign policies
- Soft power is mostly based on intangibles such as the power of example. E.g. Yoga, Buddhism, movies, music, spirituality etc.
- Today, most countries use a combination of soft power and hard power, together called 'smart power'.

Why is it so significant?

- Soft power enables a change of behaviour in others, without competition or conflict, by using persuasion and attraction. Soft power can, no doubt, play a vital role in producing benevolence.
- It has the capacity to influence broader international audiences at large, in shaping the perceptions about the legitimacy and influencing environment of the permissive boundaries in which economic and military power is used.
- Even in the ancient time's scholars like Kautilya and Kamandak had advocated the use of soft power for achieving progress in state affairs.
- A country's soft power influence rests on how effectively it uses resources of culture, values, and economic policies.
- Soft power is power and at times, it is more powerful than hard power.

The true picture of soft power in India:

- As the world's largest democracy that is also home to the world's largest number of impoverished people, India is variously described as a model of soft power or a country that makes remarkably poor use of it.
- For some, its rich culture and democracy stand in contrast to other authoritarian and revisionist great powers, and indeed many Indian leaders speak positively about the country's soft power potential.

◎ ANALYSIS:

Soft power: An instrument of public diplomacy

- 'Soft power' refers to the ability to persuade others to do something using neither force nor coercion (Joseph Nye).

- By contrast, as implied by its absence from The Soft Power 30 Index, India evidently does not yet benefit as much from international awareness, positive associations or investments in cultural diplomacy as many other countries.
- In reality, the picture is mixed. Indeed, there are many ways in which India fares poorly in terms of elements of national attraction.
- It has a widespread (and often justified) reputation for corruption, endemic poverty and hostility to business.
- Reports in the international media of pollution in urban areas, child labour and violence against women have also detracted expatriates, tourists, business people and other visitors.
- At the same time, India's associations have started to change over the past quarter-century from a land of poverty and Mother Theresa to a source of software programmers and techies.

Challenges:

- **Poor digital penetration & technologies:** Though India may be home to more top 30 unicorns (billion-dollar start-ups) than any country (other than the United States and China), its digital penetration remains low, with millions of its population still without access to electricity, and basic digital technologies.
- **Poor cultural diffusion:** Second, India rates badly on any measure of state-driven cultural diffusion rather than the more organic and natural private sector and citizen-led efforts.
 - ▶ Though most Indian cultural diffusion to overseas audiences—from yoga to Bollywood—has occurred.
 - ▶ The Indian government has is also promoting the study of Hindi abroad in large part because of its linguistic diversity at home.
- **Poor tourism story:** India has a high number of UNESCO World Heritage sites, but still fares poorly on tourism and education on a per capita basis.
- **Lack of infrastructure for cultural development:** India was plagued by impoverishment, missing out on positive associations, coupled with lack of investment in cultural diplomacy, a reputation of deep-rooted corruption, hostile business environment, red-tapism, lack of infrastructure and severe pollution in urban areas.
- **Brain drain:** There are Indian contributions that are not necessarily associated with the country. E.g.- the export of India's largest car manufacturer Tata Motors is Jaguar Land Rover, manufactured primarily in Britain and Buddhism.

Looking at the positive side:

In recent years, dynamism and policy changes have reshaped India's perceptions in the outside world.

The Government has made concerted efforts to connect with the influential Indian Diaspora in all countries. The recent developments in this way can be learnt from the following:

- **A separate ministry for Indian Diaspora:** A separate revitalized ministry was established to address the concerns of the outside Diaspora and re-establish their Indian connect so as to make them active participants in the extension of the country's goodwill and influence.
- **Maintaining Indian legacy:** The government was also successful in projecting yoga and Ayurveda as quintessentially Indian legacy. Recognition by UN of June 21, as International Yoga Day on the insistence of Indian government has been a step in the right direction.
- **Alliances with neighbours:** Extension of the line of credit to its neighbours including Russia has helped cement new mutually beneficial alliances in tune with India's policy of having collaborative, soft diplomacy.
- **Resolving contentious issues:** India has further deepened its strategic relationship with the US, improved relations with SAARC countries except for Pakistan, and improved its relations with UAE and Saudi Arabia. Even with China, efforts have been to find common grounds of mutual convergence and find solutions to resolve contentious issues.
- **Alliances with strong platforms:** New alliances in the formation of Quad, active role in BRICS, ASEAN, IBSA, G-4 are all indicators of a newly assertive and confident India.
- **Emerging as a crusader of environment protection:** India has also projected itself as a crusader of environment protection and taken a strong stance against climate change.

With India focussing on domestic economic goals, strategic ties with the US, strengthening relations with all major powers including China and moving away from a Pak centric approach are all policy changes in line with it seeking a much larger, relevant position at the world stage.

The Road Ahead:

India, a large democracy with a rich culture and a modicum of principle in its international engagement, the country has often benefited in tangible ways from its soft power. Today, India is building upon a range of ongoing political and diplomatic efforts, from unveiling its 'Incredible India' tourism campaign, getting International Yoga D recognized by the United Nations, Make in India initiative, improving its ease of doing business ranking, it can be expected that India soft power are going to gradually grow in the coming times.

IRAN ABANDONS THE 2015 NUCLEAR DEAL

CONTEXT

- Iran has announced that it would no longer abide by any restrictions on its nuclear program, just days after the United States killed a top Iranian military commander in an airstrike in Baghdad.

◎ BACKGROUND:

- The deal officially called Joint Comprehensive Plan of Action (JCPOA) commonly known as the Iran deal was signed on July 14, 2015.
- It was signed between Iran, the U.S., China, France, Russia, the U.K., Germany, and the European Union.
- P5 is the 5 permanent members of the UNSC (US, China, France, Russia, and the UK).
- In May 2018, the United States President Donald Trump pulled the United States out of the treaty, calling it "a horrible one-sided deal that should have never, ever been made," and imposed punitive new sanctions as part of a "maximum pressure" campaign.
- The other signatories — Europe in particular, but also Russia and China — tried hard to preserve the agreement.
- And Iran initially said it would adhere to its treaty obligations.
- But Tehran has since taken a series of steps away from the treaty, and analysts fear that it may now renounce all of its obligations.

- In return, Iran will recover assets worth \$100 billion frozen in overseas banks, and sanctions on the country by the U.S., the U.N., and the E.U. will be lifted.

What was the controversy behind the Deal?

- The deal failed to address Iran's missile program or its contribution to discord in the Middle East.
- While that nuclear deal was built to curb Iran's nuclear weapons capacity, it was not created to destroy Iran's missile capabilities.
- Not only this, Iran also supported terrorist groups such as Hezbollah and Hamas in the Middle East and continues to back the Syrian President Bashar Assad.
- Iran provided weapons to Houthi rebels in Yemen, which puts the US in a particularly delicate position given the rebels' attacks on Saudi Arabia (an ally to the US).

The current issue:

- The current announcement came as fallout from the killing of Soleimani, one of Iran's most powerful military and political figures, stoked growing tensions in the Middle East.
- The Atomic Energy Organization of Iran said that from now on, "Iran's nuclear program no longer faces any operating restrictions," including how many kilograms of uranium it can enrich and how much it can enrich it.
 - Low-enriched uranium is suitable for powering nuclear reactors; highly enriched uranium is needed to make a bomb.
- Iran is throwing off any limits on the number of centrifuges that it can operate; under the terms of the 2015 agreement.
- It was limited to a little over 5,000 first-generation centrifuges, which constrained its ability to enrich uranium to the levels needed to build a bomb.
- Now, Iran can install more of the older and less-efficient centrifuges (it has plenty) as well as arrays of more advanced, and more efficient, centrifuges that can enrich more uranium more quickly.
- That's important because the quicker Iran can enrich uranium, the quicker it can build a big stockpile of the stuff and proceed to further enrich it.

◎ ANALYSIS

About the Deal:

- Iran's nuclear deal came after years of tension over Iran's alleged efforts to develop a nuclear weapon.
- Though Iran had always insisted that its nuclear programme was entirely peaceful, but the international community did not believe Iran.
- Under the Joint Comprehensive Plan of Action, Iran agreed to limit its sensitive nuclear activities and allow in international inspectors in return for the lifting of crippling economic sanctions.
- Key-Points:** The deal aimed at curbing Iran's nuclear programme
 - Iran agreed not to build any more heavy water facilities.
 - Eliminate its stockpile of medium-enriched uranium.
 - Cut its stockpile of low-enriched uranium, and reduce the number of its gas centrifuges.

- Previously, Iran had eschewed limits, the latest step creates the potential of a more robust enrichment program that would be necessary to turn a ton or so of low-enriched uranium into about 25 kilograms of highly enriched uranium, the minimum needed for an atomic weapon.

Significance of Iran for India:

For India, Iran is beneficial in many directions such as-

- **Chabahar port:** From Indian perspective, Chabahar port is vital to building up of strategic close relationship with Iran and Central Asia. This would entirely bypass Pakistan, which would help India to directly compete with China's growing influence in the region.
- **Geopolitical:** Iran is a gateway to Central Asia and the region is going to be the scene of renewed great power rivalry.
- **Energy:** Iran oil is comparatively cheap and can decrease the dependence on Saudi for oil.
- **Role in Afghanistan:** India is constructing a 560-mile long railway line linking the Iranian port with the iron ore mines in **Hajigak** in southern Afghanistan. The project will potentially afford India some strategic benefits especially increasing India's position and leverage in Afghanistan and the central Asian region.

Implications for India:

- **Risk to Chabahar port agreement:** In 2016, India and Afghanistan had signed a transit agreement on Chabahar port, to enhance trade with Afghanistan without Pakistan's role. Now, US sanctions could slow the plans or even can bring the plans to a halt.

- **Inflation:** Iran is India's third biggest supplier of crude oil, and any increase in prices will hit both inflation level and the rupee.
- **SCO membership:** India has joined the Shanghai Cooperation Organization and China is planning to induct Iran in the organization to bring the nation closer for investment purpose. If Iran enters into the group, it will create the image of the SCO as an anti-American block, which will affect India's image for US.
- **US-India ties:** Though US's withdrawal is not a huge problem for India, but it can create complications that will require it to expend time and resources that are already in short supply. It can also add another difficult item to the US-India agenda.
- **Global uncertainty:** The move will reinforce concerns about US reliability and it will have broader implications for the Middle East, which is a critical region for India. Moreover, it will create more space for China in Iran and the region more broadly. The decision will add to the global uncertainty that will affect India's geopolitical, economic, and political options.

Both Iran and the United States are strategically and economically significant for India and India wants to have good relations with both the countries. No doubt, the US is an indispensable partner for India, in the context of new threats and challenges emerging in Asia. However, in the present situation, the US should understand that like any other bilateral relationship, there will be differences between itself and India on various issues, especially on the Iran issue. India should not be made to choose between the US and Iran.

SECTION: B
(PRELIMS)

CURRENT AFFAIRS

To Attempt
Weekly Current Affairs Test, Visit

www.iasscore.in

FIRST SILK PROCESSING PLANT IN GUJARAT

◎ CONTEXT

- In a historic initiative taken by Khadi and Village Industries Commission (KVIC), a first Silk Processing Plant has been inaugurated at Surendranagar in Gujarat.

Key-details of the plant:

- The plant has been set up by a khadi institution at a cost of Rs 75 lakh in which KVIC has contributed Rs 60 lakh.
- The unit has employed 90 local women, 70 of which belong to the Muslim community.
- The plant would help cut down the cost of production of silk yarn drastically and increase the sale and availability of raw material for Gujarati Patola Sarees locally.
- Surendranagar district is a backward district in Gujarat where KVIC has invested Rs. 60 Lakhs to build the Silk Processing Plant, in order to generate livelihood and boost sales of Patola Sarees by making silk more ready available at a low cost, for the Patola Saree manufacturers in the nearby area.

What was the need to setup plant in Gujarat?

- Reason being the raw material silk yarn is purchased from Karnataka or West Bengal, where silk processing units are situated, thus increasing the cost of the fabric manifolds.
- Now, cocoons will be brought from Karnataka and West Bengal and Silk yarn will be processed in house.
- It will reduce the cost of production and give a major boost to the sale of famous Gujarati Patola Sarees.

Patola Sarees:

- Patola, the trademark Saree of Gujarat, is considered to be very costly and worn only by the Royals or the Aristocrat.
- Traditionally, every region in India has had its own unique weave for the Silk Saree.
- It is quite notable that Patola Silk Saree is amongst the top five silk weaves which are desired in every Indian Saree Lover's wardrobe.
- Given is the list of famous silk sarees found in different state of India:

Famous Silk Sarees	State
Benarasi Silk Saree	Uttar Pradesh
Kanjeevaram Silk Sarees	Tamil Nadu
Kasavu Saree	Kerala
Paithani Silk Saree	Maharashtra
Bandhini Saree	Gujarat
Chanderi Saree	Madhya Pradesh
Muga Silk Saree	Assam
Leheriya Saree	Rajasthan
Jamdani Saree	Bengal
Sambalpuri Ikat Saree	Odisha

Pochampally Saree	Telangana
Baluchari Silk Saree	West Bengal
Phulkari Saree	Punjab
Chikankari Saree	Lucknow
Kalamkari Saree	Rajasthan
Bomkai Saree	Odisha
Tant Saree	West Bengal

Quick facts on 'silk' for Prelims:

- Silk, one of the oldest fibers known to man, originated in China. India is the second largest producer of natural silk after China.
- Silk is produced from the cocoons of mulberry silkworm via a process called Sericulture. The yarns produced from the process of sericulture are used to weave a variety of textiles.
- India produces four varieties of silk produced:
 - Mulberry
 - Eri
 - Tasar
 - Muga
- In India, the Central Silk Board, a statutory body, under the administrative control of the Ministry of Textiles is responsible for the development of silk industries across the country.

About Khadi and Village Industries Commission (KVIC):

- The Khadi and Village Industries Commission (KVIC) is a statutory body established by an Act of Parliament.
- In April 1957, it took over the work of former All India Khadi and Village Industries Board.
 - The broad objectives that the KVIC has set before it are:
 - The social objective of providing employment.
 - The economic objective of producing saleable articles.
 - The wider objective of creating self-reliance amongst the poor and building up of a strong rural community spirit.

NORTHEAST GAS GRID PROJECT

◎ CONTEXT

- Recently, the Cabinet Committee on Economic Affairs, chaired by Prime Minister Narendra Modi, has given its approval for viability Gap Funding/ Capital Grant of 60% of the estimated cost of Rs. 9,265 crore for the Northeast Gas Grid project to Indradhanush Gas Grid Limited (IGGL) who implements it.

◎ ABOUT

- The Northeast Gas Grid Project will connect **Guwahati to the major Northeast cities and major load centers. It is 1, 656 km long.**

- The project is being implemented under ambitious **Urja Ganga Gas Pipeline Project**.
- Besides connecting all the state capitals in the region, the pipeline will also connect with the National Gas Grid through Barauni-Guwahati Gas Pipeline, which is being laid by GAIL.
- The pipeline will enable the supply of piped cooking gas to households and CNG to automobiles, besides fuel to industry.
- **Implementing Agency:** The North-East pipeline grid is to be implemented by Indradhanush Gas Grid, a joint venture of state-owned GAIL India, Indian Oil Corp (IOC), Oil and Natural Gas Corp (ONGC), Oil India Ltd (OIL) and Numaligarh Refinery Ltd (NRL).

Objectives of National Gas Grid

- To remove regional imbalance within the country with regard to access for natural gas and provide clean and green fuel throughout the country.
- To connect gas sources to major demand centres and ensure availability of gas to consumers in various sectors.
- Development of City Gas Distribution Networks in various cities for the supply of CNG and PNG.

◎ SIGNIFICANCE

- The funding support to the project is actually a leg of a broader goal of the government to raise the share of natural gas in the country's energy mix to 15% by 2030 from current 6.2%.
- The government has envisaged developing the National Gas Grid. At present, about 16,788 km natural gas pipeline is operational and about 14,239 km gas pipelines are being developed to increase the availability of natural gas across the country.
- Socio-Economic and Environmental Benefits
 - Development of industrial climate in eight states of the north-eastern region i.e. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura will help in reduction in the usage of kerosene, wood, etc. due to increased usage of

Pradhan Mantri Urja Ganga project:

The gas pipeline project aims to provide piped cooking gas to residents of Varanasi and later to millions of people in states like Bihar, Jharkhand, West Bengal and Odisha.

- From Varanasi's perspective, an 800-km long MDPI pipeline will be laid and 50,000 households and 20,000 vehicles will get PNG and CNG gas respectively. The government estimates that around 5 lakh gas cylinders will be sent at rural areas annually.
- According to GAIL, with the Urja Ganga project, 20 lakh households will get PNG connections. The project is said to be a major step towards collective growth and development of the Eastern region of India.
- GAIL has built a network of trunk pipelines covering the length of around 11,000 km. With Urja Ganga project, this number will further increase by 2540 km.

Viability Gap Funding

- It is usually seen that many projects, like a road connecting a rural area, generates high economic returns, but the financial returns may not be sufficient for a profit seeking investor.
- In such condition, the project would not attract private investment. In such cases, the government extends its support to the investors by sharing a fraction of the cost, making the project viable.
- For the successful completion of such projects, the government has designed Viability Gap Funding (VGF).
- Viability Gap Finance means a grant to support projects that are economically justified but not financially viable.

environment friendly fuel natural gas thereby improving the environment in the region.

- Improvement in the standard of living of peoples living in the region.
- It will boost Exploration & Production activities and connect regional gas sources with pipeline network for early monetisation of natural resources in the region.

◎ CONCLUSION

- The Northeast Gas Grid is a part of the larger vision to usher in Gas based economy and to increase the share of natural gas in country's primary energy mix.

2636 EV CHARGING STATIONS SANCTIONED UNDER FAME-II

◎ CONTEXT

- In a bid to give a further push to clean mobility in Road Transport Sector, the government has sanctioned 2636 charging stations in 62 cities across 24 States/UTs under FAME India (Faster Adoption and Manufacturing of Electric Vehicles in India) scheme phase II.

What is FAME India Scheme?

- The FAME India (Faster Adoption and Manufacture of (Hybrid and) Electric Vehicles) Scheme, launched in 2015, is an incentive scheme for the promotion of electric and hybrid vehicles in the country.
- The scheme aims to promote electric mobility and the scheme gives financial incentives for enhancing electric vehicle production and creation of electric transportation infrastructure.
- The incentives are provided in the form of subsidies to manufactures of electric vehicles and infrastructure providers of electric vehicles.
- FAME India is a part of the National Electric Mobility Mission Plan. Main thrust of FAME is to encourage electric vehicles by providing subsidies.

Phase-I of the Scheme:

- The Phase-I of this Scheme was initially launched for a period of 2 years, commencing from 1st April 2015, which was subsequently extended from time to time and the last extension was allowed up to 31st March 2019.
- The 1st Phase of FAME India Scheme was implemented through four focus areas namely:
 - Demand Creation
 - Technology Platform
 - Pilot Project
 - Charging Infrastructure
- Market creation through demand incentives was aimed at incentivizing all vehicle segments i.e. 2-Wheelers, 3-Wheelers Auto, Passenger 4-Wheeler vehicles, Light Commercial Vehicles and Buses.

What's new in the second phase?

- FAME II will cover buses with EV technology; electric, plug-in hybrid and strong hybrid four wheelers; electric three-wheelers including e-rickshaws and electric two-wheelers.

- Under the second phase of the Faster Adoption and Manufacturing of Electric Vehicles in India (FAME-II) scheme, 10 lakh registered electric two-wheelers with a maximum ex-factory price will be eligible to avail incentive of Rs 20,000 each.
- It will also support 5 lakh e-rickshaws having ex-factory price of up to Rs 5 lakh with an incentive of Rs 50,000 each.
- FAME-II will offer an incentive of Rs 1.5 lakh each to 35,000 electric four-wheelers with an ex-factory price of up to Rs 15 lakh, and incentive of Rs 13,000 each to 20,000 strong hybrid four-wheelers with ex-factory price of up to Rs 15 lakh.
- It will support 7,090 e-buses with an incentive of up to Rs 50 lakh each having an ex-factory price of up to Rs 2 crore.

The current sanction:

- As many as 317 EV charging stations have been allotted in Maharashtra, 266 in Andhra Pradesh, 256 in Tamil Nadu, 228 in Gujarat, 205 in Rajasthan, 207 in Uttar Pradesh, 172 in Karnataka, 159 in Madhya Pradesh, 141 in West Bengal, 138 in Telangana, 131 in Kerala, 72 in Delhi, 70 in Chandigarh, 50 in Haryana, 40 in Meghalaya, 37 in Bihar, 29 in Sikkim, 25 each in Jammu & Kashmir and Chhattisgarh, 20 in Assam, 18 in Odisha and 10 each in Uttarakhand, Puducherry and Himachal Pradesh.

Benefits of using Electric Vehicles:

Though there are numerous benefits of using electric vehicles, the major are divided on the basis of environment and economy:

- **Environment:** Using electric vehicles (EVs) can significantly contribute in achieving the target of "Paris climate agreement". EVs are carbon dioxide neutral as there is no direct emission from the vehicle.
- **Economy:** EVs, more efficiently help in saving money of government, which can be utilized in other productive work. Effective adoption of electric and shared vehicles could help the economy save more than \$60 billion in diesel and petrol along with cutting down as much as 1 gigatonne (GT) of carbon emissions, most probably by 2030.

ASIA PACIFIC DROSOPHILA RESEARCH CONFERENCE

◎ CONTEXT

- Pune is set to host the fifth edition of the Asia Pacific Drosophila Research Conference (APDRC5), which is being organised in the country for the first time by the Indian Institute of Science Education and Research (IISER).

About Asia Pacific Drosophila Research Conferences

- The Asia Pacific *Drosophila* Research Conferences (APDRC) are biennial events that aim to promote the interaction of *Drosophila* Researchers in the Asia-Pacific region with their peers in the rest of the world.
- The conference includes sessions, like Gametogenesis & Stem Cells, Pattern Formation, Morphogenesis & Mechanobiology, Hormones & Physiology, Cellular Neurobiology, Behavioural Neurobiology, Infection & Immunity, and Ecology & Evolution.
- The 5th Conference (6th Jan to 10th Jan) will feature 430 delegates: 330 Indian and 100 foreign.
- It will see the participation of two Nobel laureates, **professors Eric Wieschaus** and **Michael Rosbash**, known for their seminal contribution to the fields of developmental biology and chronobiology respectively.
- The last four editions of this conference took place in **Taipei, Seoul, Beijing** and **Osaka**.

What is Drosophila?

- The fruit fly (*Drosophila melanogaster*, 'Drosophila' hereafter) is the most extensively used and one of the most well understood of all the model organisms.

A model organism is a species that has been widely studied, usually because it is easy to maintain and breed in a laboratory setting and has particular experimental advantages.

- *Drosophila* is ideal for the study of genetics and development.
- Several discoveries in biology have been made using this. Its genome is entirely sequenced and there is enormous information available about its biochemistry, physiology and behaviour.
- The complete genome sequence of the *Drosophila* was published in 2000.
- Its genome is 168,736,537 base pairs in length and contains 13,937 protein-coding gene

Why Drosophila is vital for humans?

- **Close similarities:** The relationship between fruit fly and human genes is so close that often the sequences of newly discovered human genes, including disease genes, can be matched with equivalent genes in the fly. 75 percent of the genes that cause disease in humans are also found in the fruit fly.
- **Easy observation:** *Drosophila* has a short, simple reproduction cycle. It is normally about 8-14 days, depending on the environmental temperature. This means that several generations can be observed in a matter of months.
- **Inexpensive researches:** Fruit fly is small (3 mm long) but not so small that they can't be seen without a microscope. This allows scientists to keep millions of them in the laboratory at a time. They are inexpensive to maintain in the laboratory.
- **Polytene chromosomes:** *Drosophila* has 'polytene' chromosomes, which means that they are oversized and have barcode-like banding patterns of light and dark. During early *Drosophila* research scientists could therefore easily identify chromosomal re-arrangements and deletions under the microscope.
- The long and distinguished history of research devoted to the study of the fruit fly means that a remarkable amount is now known about its biology.

The Indian Institute of Science Education and Research:

- The Indian Institute of Science Education and Research Pune is a premier institute dedicated to research and teaching in the basic sciences.
- It was established in 2006 by the Ministry of Human Resource Development. In 2012, it was declared as an Institute of National Importance by an Act of Parliament.
 - It was ranked 601-800 in 2019 Times Higher Education (THE) World University Rankings
 - It was ranked 109 in the 2019 THE Emerging Economies University Rankings
 - It was ranked 401-500 in the Physical Sciences subject category in 2019 THE World University Rankings
 - It was ranked 101-150 in the 2019 THE Young University Rankings

BHITARKANIKA CENSUS FINDS AN INCREASE OF 15 SALTWATER CROCODILES FROM LAST YEAR

© CONTEXT

- The population of the saltwater or estuarine crocodile (*Crocodylus porosus*) has increased in the water bodies of Odisha's Bhitarkanika National Park and its nearby areas in Kendrapara district, with forest officials counting 1,757 individuals in this year's annual reptile census on January 3, 2020.

◎ ABOUT

- The Bhitarkanika National Park, famous for the endangered saltwater crocodiles, has seen an increase of the rare species to 1,671, an annual census conducted by the Forest Department this year has found.
- The enumerators also sighted around 12 albino crocodiles and four giant crocodiles more than 20 feet long in the water bodies of Bhitarkanika during the census.
- In the Bhitarkanika area 1,580 and outside it 91 crocodiles were identified. In the Kanika 1,284, Rajnagar 296, Mahakalapada 69, Gahirmatha 22 were spotted.
- The peak winter is the ideal time to carry out the census as it exposes more than 50% of mud banks.

Bhitarkanika National Park

- Bhitarkanika National Park is located in northeast Kendrapara district in Odisha.
- It obtained the status of a Ramsar site in 2002.
- It is surrounded by Bhitarkanika Wildlife Sanctuary. Gahirmatha Beach and Marine Sanctuary is to the east, separating swamp region and mangroves from the Bay of Bengal.
- The national park and wildlife sanctuary is inundated by the rivers Brahmani, Baitarani, Dhamra, Pathsala.
- It hosts many mangrove species, and is the second largest mangrove ecosystem in India.
- The national park is home to saltwater crocodile, Indian python, king cobra, black ibis, darters and many other species of flora and fauna.
- This huge area of mangrove forests and wetlands is intersected by a network of creeks with Bay of Bengal on the East.

Saltwater Crocodile

- The saltwater crocodile is a crocodilian native to saltwater habitats and brackish wetlands from India's east coast across Southeast Asia and the Sundaic region to northern Australia and Micronesia.
- It has been listed as Least Concern on the IUCN Red List since 1996.
- The saltwater crocodile is often claimed to be the largest living crocodilian.
- Saltwater crocodiles can live more than 70 years.
- Saltwater crocodiles are most commonly found in coastal waters or rivers where they can swim between freshwater and brackish water.
- Saltwater crocodiles communicate using several sounds, including barking, hissing, growling and chirps.

DELHI GETS ITS FIRST SMOG TOWER: WHAT IS IT AND HOW DOES IT WORK?

◎ CONTEXT

- The Supreme Court had directed the Centre and the Delhi government to prepare a plan to install 'smog towers' across the capital to deal with air pollution.

◎ ABOUT

- Smog towers are structures designed to work as large-scale air purifiers.
- They are usually fitted with multiple layers of air filters, which clean the air of pollutants as it passes through them.
- The 20-metre (65 feet) high tower will trap particulate matter of all sizes suspended in the air.

- Large-scale air filters shall draw in the air through fans installed at the top before passing it through the filters and releasing it near the ground.
- The filters installed in the tower will use carbon Nano fibres as a major component and will be fitted along its peripheries.
- The smog tower is expected to purify around 2,50,000 to 6,00,000 cubic meter air per day and release fresh air in return.

Who developed it?

- The project is collaboration between the Indian Institute of Technology (IIT) Bombay, IIT-Delhi and the University of Minnesota.
- The latter having helped design a similar tower of over 100 metres in China's Xi'an city.
- The Central Pollution Control Board (CPCB) will also be involved with the project.

Why does Delhi need smog towers?

- Delhi has in recent years been battling alarmingly toxic air quality every winter.
- Delhi's overall AQI in the "severe" category, according to the ministry of earth sciences' air quality monitor system of air quality and weather forecasting and research (SAFAR).

Other examples in the world

- China, which has been battling air pollution for years, has two smog towers — in its capital Beijing and in the northern city of Xi'an.
- The Xi'an tower is dubbed the world's largest, and has reportedly brought down PM 2.5 by 19% in an area of around 6 sq km in its vicinity.
- The 100-metre (328 feet) high tower has produced 10 million cubic metres of clean air every day since its launch, and on severely polluted days, is able to bring down smog close to moderate levels.
- The tower in Beijing, built by Dutch artist Daan Roosegaarde, has been able to compress the carbon waste generated during purification to produce gemstones.

Upon compression for 30 minutes, the smog particles turn into dark gems, which are used for rings and cufflinks.

INDIA CLIMATE REPORT 2019

◎ CONTEXT

- Recently, India Meteorological Department (IMD) has released India Climate Report 2019.

◎ ABOUT

- The India climate report 2019 confirms that the **extreme weather events have become par for the course in the country.**
- This is what climate scientists have been claiming for more than half a decade.
- It notes **that excessive heat, cold and rainfall killed 1,562 people in 2019.**
- **In 2019, the mean temperature was 0.36 above normal** while the country also recorded excess rainfall during both the southwest and northeast monsoons.
- Intense dry spells were interspersed with floods in several parts of the country.
- This is a phenomenon that policymakers will increasingly be called to factor while drawing up projects in areas as diverse as agriculture, urban planning, water resources and disaster management.
- The IMD report should be seen in conjunction with long-term meteorological trends.
- The World Meteorological Organisation, for example, reckons that the decade starting

2011 remains on track to be the warmest on record.

- At the same time, data from the European Centre for Medium Range Forecast shows that the relative humidity in the mid-troposphere in the Subcontinent has increased by about 2% in the past four decades.
- Such warming has increased the capacity of oceans to form intense cyclonic disturbances.

Causes of India's vulnerability to Climate Risk

- India's increasing vulnerability is **due to severe rainfall, heavy flooding and landslide.**
- The state of Kerala was especially impacted. The floods were described as the worst of the last 100 years.
- India was struck by two cyclones in October and November 2018 that also nearly killed 1,000 people.
- India also suffered from **extreme heat**. While human death toll was kept considerably low due to public measures, the economic damages were quite severe

What needs to be done?

- Increasing **their resilience calls for efficient rainwater storage and use.**
- The changing dynamics of weather also demand cooperation between states that share a river basin.
- This year, Maharashtra and Karnataka debated over opening the gates of the Almati dam on the Krishna. By the time the two states agreed over the amount of water to be discharged from the dam, the damage was already done.

© CONCLUSION

- It's clear that dealing with exceptional weather will require interventions at the national, state and local levels. The Statement on Climate of India 2019 drives home the urgency of such interventions. However, there is still no specific UN climate finance facility to reimburse the loss of land, culture and human lives. So far, the industrialised countries have refused to even negotiate it in 2019 Climate summit (CoP 25) at Madrid recently. The world climate body must wake up in establishing a financial facility to reimburse the loss of land, culture and human lives due to climate change.

Facts

- **India ranks 5th in Global Climate Risk Index** released by Environment think tank, **Germanwatch.**
- India has also recorded the highest number of fatalities due to climate change and the second highest monetary losses from its impact in 2018.
- India's high rank is due to severe rainfalls, followed by heavy flooding and landslide that killed over 1000 people.

MECOS 3: GLOBAL MARINE ECOSYSTEM MEET IN KOCHI

© CONTEXT

- Recently, the third international conference on Marine Ecosystems-Challenges and Opportunities (MECOS) was held in Kochi in January, 2019.

© ABOUT

- The conference is aimed at reviewing the concerns involved in marine ecosystem and formulating strategies for the better and sustainable utilisation of marine wealth by enhancing livelihood options.
- The symposium is organized by the **Marine Biological Association of India.**

- It will also serve as a platform for discussions on a range of topics, including the impact of the climate crisis on marine ecosystems and an unusual warming of the Arabian Sea.
- The conference would focus on the **Sustainable Development Goal of the United Nations, SDG-14** which says '**conserve and sustainably use the oceans and its resources for sustainable development**'.

Marine Biological Association of India

- The Marine Biological Association of India was established in the year **1958**.
- It serves the cause of promotion of research on marine sciences in the Asia-Pacific region.
- It also aims to create an active interest among its members in the field of marine biology and allied marine sciences.

Significance of the conference:

- Healthy oceans, coasts and related ecosystems are crucial for economic growth and food production.
- Billions of people worldwide, especially the world's poorest rely on healthy oceans to provide jobs and food underscoring the urgent need to sustainably use and protect this natural resource.
- However, numerous issues such as depletion of resources, marine pollution, extreme weather conditions and rising sea surface temperature pose a threat to the sustainable utilisation of marine resources.
- Hence, the conference would come up with a roadmap to deal with these issues.

© CONCLUSION

- Eminent marine scientists, oceanographers, fishery researchers and marine biotechnologists from across the globe has assembled in Kochi and stressed the need for the preservation of marine ecosystem. Moreover, the symposium itself has been designed in an eco-friendly way. No printed materials and single-use plastics will be used at the symposium. Natural materials will be used for presenting mementos to the guests and certificates will be sent to the participants in digital form. This will have stronger impact on the behavior of people as well the state and non-state actors to play a major role in marine ecosystem conservation.

KERALA TO CURB ALIEN PLANTS' GROWTH IN NBR

© CONTEXT

- The Forest and Wildlife Department is planning to adopt steps to arrest the rampant growth of invasive plants, especially *Senna spectabilis*, in the forest areas of the Nilgiri Biosphere Reserve (NBR), including the Wayanad Wildlife Sanctuary.

The need:

- The spread of invasive plants, especially *Senna spectabilis*, is posing a major threat to the forest areas of the reserve, owing to its quick growth and coppicing character.
- **Invading larger areas:** A recent study of the Ferns Nature Conservation Society recorded the presence of the plant in 78.91 sq km area of the sanctuary. The tree species was found in nearly 10 sq km area of the 344.44 sq km sanctuary around five years ago. Now, it had invaded to more than 50 sq km of the sanctuary.
- **Emerging as a trap for open lands:** Due to mass flowering and drying of bamboo species in Wayanad, lots of open spaces were created which had been occupied by *Senna spectabilis*. The vyal ecosystem (marshy land) of the forest area now has this plant in large numbers.

- **Threat to tiger reserves:** With the adjacent tiger reserves (Bandipur and Nagarhole tiger reserves in Karnataka and the Mudumalai tiger reserve in Tamil Nadu) also under threat.

What are the Invasive alien species?

- Invasive alien species are plants, animals, pathogens and other organisms that are non-native to an ecosystem, and which may cause economic or environmental harm or adversely affect human health.
- In particular, they impact adversely upon biodiversity, including decline or elimination of native species - through competition, predation, or transmission of pathogens - and the disruption of local ecosystems and ecosystem functions.
- In 2016, the Zoological Survey of India (ZSI) has for the first time compiled a list of 157 alien invasive animal species.
- Out of the total species, 99 are found in the marine ecosystem, while 58 are found on land and in freshwater habitat.
- The species found on land and in freshwater comprise of 19 fish species, 31 species of arthropods, 3 of molluscs and birds, 2 of mammals and 1 of reptile.
- Among 99 alien invasive marine species, genus *Ascidia* accounts for maximum number of species (31), followed by Arthropods (26), Annelids (16), Cnidarian (11), Bryzoans (6), Molluscs (5), Ctenophora (3), and Entoprocta (1).
- Some important species include: **African apple snail (*Achatina fulica*)**, **Papaya Mealy Bug (*Paracoccus marginatus*)**, **Cotton Mealy Bug (*Phenacoccus solenopsis*)**, **Amazon sailfin catfish (*Pterygoplichthys pardalis*)** and others.

Senna Spectabilis:

- *Senna spectabilis* is a medium to large tree from tropical America, listed in the Global Compendium of Weeds as an 'environmental weed', 'garden thug', and 'naturalised weed'.
- The species is extremely fast-growing, flowers and sets seed profusely, and re-sprouts readily when cut.
- An adult tree grows up to 15 to 20 metres in a short period of time and every year distributes thousands of seeds after gregarious flowering.
- The thick foliage arrests the growth of other indigenous tree and grass species and causes food shortage for the wildlife population, especially herbivores.

Why alien plants are so dangerous?

- **Greatest threat to biodiversity:** Invasive alien species, introduced and/or spread outside their natural habitats, have affected native biodiversity in almost every ecosystem type on earth and are one of the greatest threats to biodiversity.
- **Contributor to animal extinction:** Since the 17th century, invasive alien species have contributed to nearly 40% of all animal extinctions for which the cause is known (CBD, 2006).
- **Problem for ecology and economy:** The problem continues to grow at great socio-economic, health and ecological cost around the world. Invasive alien species exacerbate poverty and threaten development through their impact on agriculture, forestry, fisheries and natural systems, which are an important basis of peoples' livelihoods in developing countries.
- This damage is aggravated by climate change, pollution, habitat loss and human-induced disturbance.

KVIC OPENED FIRST SILK PROCESSING PLANT IN GUJARAT TO BOOST PRODUCTION OF SIGNATURE PATOLA SAREE

◎ CONTEXT

- In a historic initiative taken by Khadi and Village Industries Commission (KVIC), a first Silk Processing Plant was inaugurated at Surendranagar in Gujarat.

◎ ABOUT

- This would help cut down the cost of production of silk yarn drastically and increase the sale and availability of raw material for Gujarati Patola Sarees locally.
- Patola, the trademark Saree of Gujarat, is considered to be very costly and worn only by the Royals or the Aristocrat.
- Cocoons will be brought from Karnataka and West Bengal and Silk yarn will be processed in house, thus reducing the cost of production and giving a major boost to the sale of famous Gujarati Patola Sarees.
- Traditionally, every region in India has had its own unique weave for the Silk Saree.
- It is quite notable that Patola Silk Saree is amongst the top five silk weaves which are desired.

The Khadi and Village Industries Commission (KVIC)

- The Khadi and Village Industries Commission (KVIC) is a statutory body formed by the Government of India, under the Act of Parliament, 'Khadi and Village Industries Commission Act of 1956'.
- It is an apex organisation under the Ministry of Micro, Small and Medium Enterprises, with regard to khadi and village industries within India.
- It seeks to - "plan, promote, facilitate, organise and assist in the establishment and development of khadi and village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.
- The KVIC may also undertake directly or through other agencies studies concerning the problems of Khadi and/or village industries besides research or establishing pilot projects for the development of Khadi and village industries.
- The KVIC is authorized to establish and maintain separate organisations for the purpose of carrying out any or all of the above matters besides carrying out any other matters incidental to its activities.
- The broad objectives that the KVIC has set before it are:
 - The social objective of providing employment.
 - The economic objective of producing saleable articles.
 - The wider objective of creating self-reliance amongst the poor and building up of a strong rural community spirit.

Patola Saree

- Patola is the trademark Saree of Gujarat.
- Patola is a double ikat woven sari, usually made from silk, made in Patan.
- The word patola is the plural form; the singular is patolu.
- It is one of the most eminent symbols of Indian Craftsmanship.
- It is priced very high and is out of reach of common women.
- The raw material is purchased from Karnataka or West Bengal, where the silk processing units are situated. This increases the cost of fabric manifolds.

- Velvet patola styles are also made in Surat.
- It can take six months to one year to make one sari due to the long process of dying each strand separately before weaving them together.
- Highly valued in Indonesia, became part of the local weaving tradition there.
- The sarees are painted with motifs and patterns inspired from animals and other elements of nature.

Even though the Patola fabric is said to be of Gujarati origin, its earliest mentions can be found in religious texts mentioning that they were a part of the South Indian culture too.

NATIONAL COMPANY LAW APPELLATE TRIBUNAL (NCLAT)

◎ CONTEXT

- Recently, National Company Law Appellate Tribunal (NCLAT) has reinstated Cyrus Mistry as chairman of Tata Sons.

◎ ABOUT

- National Company Law Appellate Tribunal (NCLAT) was constituted under **Section 410 of the Companies Act, 2013** for hearing appeals against the orders of National Company Law Tribunal(s) (NCLT), with effect from 1st June, 2016.
- **Hon'ble Justice Shri S.J. Mukhopadhaya**, former Judge of the Supreme Court, is now the Chairperson of NCLAT.

Functions:

- NCLAT is also the Appellate Tribunal for hearing appeals against the orders passed by NCLT(s) under Section 61 of the Insolvency and Bankruptcy Code, 2016 (IBC), with effect from 1st December, 2016.
- NCLAT is also the Appellate Tribunal for hearing appeals against the orders passed by Insolvency and Bankruptcy Board of India under Section 202 and Section 211 of IBC.
- NCLAT is also the Appellate Tribunal to hear and dispose of appeals against any direction issued or decision made or order passed by the Competition Commission of India (CCI) – as per the amendment brought to Section 410 of the Companies Act, 2013 by Section 172 of the Finance Act, 2017, with effect from 26th May, 2017.

Composition:

- The President of the Tribunal and the chairperson and Judicial Members of the Appellate Tribunal shall be appointed after consultation with the Chief Justice of India.
- The Members of the Tribunal and the Technical Members of the Appellate Tribunal shall be appointed on the recommendation of a Selection Committee consisting of:
 - Chief Justice of India or his nominee—Chairperson.
 - A senior Judge of the Supreme Court or a Chief Justice of High Court— Member.
 - Secretary in the Ministry of Corporate Affairs—Member.
 - Secretary in the Ministry of Law and Justice—Member.
 - Secretary in the Department of Financial Services in the Ministry of Finance— Member.

◎ CONCLUSION

- Tribunals have released pressure on ordinary courts. NCLAT has been doing well in adjudicating the business and company matters and saves times and resources of the involved parties.

SC ON PROHIBITION OF CHILD MARRIAGE ACT, 2006

◎ CONTEXT

- In a recent judgement, the Supreme Court has held that the anti-child marriage law does not intend to punish a male aged between 18 and 21 years for marrying a “female adult”.

Supreme Court's stand:

- A Bench led by Justice Mohan M. Shantanagoudar was interpreting **Section 9** of the **Prohibition of Child Marriage Act, 2006**, which says:
*“Whoever, being a **male adult above 18 years of age, contracts a child marriage shall be punishable with rigorous imprisonment which may extend to two years or with fine which may extend to one lakh rupees or with both.**”*
- The court said neither does the provision punish a child for marrying a woman nor a woman for marrying a male child.
- The sole objective of the provision is to punish a man for marrying a minor girl. “The intention behind punishing only male adults contracting child marriages is to protect minor girls,”
- The 2006 Act also gives an option for prospective grooms who are between 18 and 21 years old to opt-out of marriages.

◎ BACKGROUND

- The case at hand concerned a boy who married a 21-year-old woman when he was 17 years old.
- The Punjab and Haryana High Court had set aside its own order providing protection to the couple and initiated prosecution against the boy for contracting a child marriage, in which he himself was the child.
- The Supreme Court set aside the HC order, saying the intent behind Section 9 was not to punish a child for contracting a child marriage.

What is the Prohibition of Child Marriage Act, 2006?

- The Prohibition of Child Marriage Act, 2006 (PCMA, 2006) recognises child marriage as valid but “voidable” at the option of the minor involved the amendment will make all future child marriages in the country invalid from the outset.
- The Act in its current form makes the marriage of a man who is over 18 years with a woman under 18 a cognisable and a non-bailable offence punishable with imprisonment of two years and a fine of Rs 1 lakh but recognises the union as valid.
- The following persons can be punished under the Law include:
 - Whoever performs, conducts or directs or abets any child marriage (Section 10, PCMA 2006)
 - A male adult above 18 years marrying a child (Section 9, PCMA 2006)
 - Any person having charge of the child, including –
 - ▶ parent or guardian
 - ▶ any member of organisation or association, promoting, permitting, participating in a child marriage or failing to prevent it (Section 11, PCMA 2006).

BIBI KA MAQBARA

◎ CONTEXT

- The marble domes of Bibi Ka Maqbara, the famous 17th-century Mughal-era monument in the city, are set to get a new shine.

Bibi Ka Maqbara:

- The structure, known as the 'Taj of the Deccan' because of its striking resemblance to the Taj Mahal, was built in 1668 by Azam Shah, the son of Aurangzeb to commemorate his mother Dilras Begum who was titled Rabia Durani post her death.
- Also called the **Tomb of the Lady**, Bibi Ka Maqbara was designed by Ataullah, the son of Ahmad Lahauri, the architect of the Taj Mahal which explains its appearance heavily based on the prime marvel.
- According to the "Tarikh Namah" of Ghulam Mustafa, the cost of construction of the mausoleum was Rs. 6,68,203 - 7,00,000.
- Bibi Ka Maqbara or tomb of Rabia Durani stands as a lone soul in the southern part.
- It was Aurangzeb's long-standing governorship of Aurangabad that the shrine came to exist in the city and is today one of the most famous historical monuments in Maharashtra.

The story of Dilras Banu:

- Dilras Banu, born in the Safavid royal family of Iran, was the daughter of Shahnawaz Khan who was the then viceroy of the state of Gujarat.
- She married Aurangzeb in 1637 thus becoming his first consort and wife.
- Both Aurangzeb and his eldest son, Azam Shah couldn't bear the loss of the most important woman in their lives.
- It was then in 1668 that Azam Shah ordered for a mausoleum to be built for his beloved mother on the lines of Taj Mahal, which was the resting place of Banu's mother-in-law and Aurangzeb's mother, Mumtaz Mahal.

Conservation of the structure:

- The domes and other marble parts of the mausoleum will undergo scientific conservation.
- The domes and minarets of the structure, which are built-in marble, as well as the marble screens inside would undergo scientific conservation.
- The conservation work will involve cleaning and carrying out a chemical treatment to give it a new glow.

Archaeological Survey of India:

- The Archaeological Survey of India, established in 1861 is an attached office under the Ministry of Culture dedicated to the protection, preservation and conservation of the national monuments.
- It is a multidisciplinary organization including exploration and excavation, chemical conservation, Horticultural operation, Museum, underwater archaeology, Pre-History Branch, Epigraphy, Publication etc.
- With the expansion of the Survey, the scope and sphere of the activities of all the branches increased rapidly. As on today, there are 3667 centrally protected monuments including 22 World Heritage Monuments/Sites.
- The present organization is the successor of 'The Asiatic Society of India', which was founded in its current form in 1861 by Sir Alexander Cunningham with the help of the then Viceroy Canning.

WHAT IS THE HISTORICAL SIGNIFICANCE OF NANKANA SAHIB IN PAKISTAN?

◎ CONTEXT

- Tension mounted in Nankana Sahib in Pakistan and there was outrage in India after a mob, led by the family of a Muslim man who had married a Sikh teenage girl, hurled stones at Gurdwara Janam Asthan, the birthplace of Guru Nanak Dev, and threatened to convert it into a mosque.

◎ ABOUT

- Nankana Sahib is a city of 80,000 in Pakistan's Punjab province, where Gurdwara Janam Asthan (also called Nankana Sahib Gurdwara) is located.
- The shrine is built over the site where Guru Nanak, the founder of Sikhism, was believed to be born in 1469.
- It is 75 kms to the west of Lahore, and is the capital of Nankana Sahib district.
- The city was previously known as Talwandi, and was founded by Rai Bhoi, a wealthy landlord.
- Rai Bhoi's grandson, Rai Bular Bhatti, renamed the town 'Nankana Sahib' in honour of the Guru. 'Sahib' is an Arabic-origin epithet of respect.

Other information

- Besides Gurdwara Janam Asthan, Nankana Sahib has several important shrines, including Gurdwara Patti Sahib, Gurdwara Bal Leela, Gurdwara Mal Ji Sahib, Gurdwara Kiara Sahib, Gurdwara Tambu Sahib — all dedicated to stages in the life of the first Guru.
- There is also a Gurdwara in memory of Guru Arjan (5th Guru) and Guru Hargobind (6th Guru).
- Guru Hargobind is believed to have paid homage to the town in 1621-22.
- The Janam Asthan shrine was constructed by Maharaja Ranjit Singh, after he visited Nankana Sahib in 1818-19 while returning from the Battle of Multan.
- During British rule, the Gurdwara Janam Asthan was the site of a violent episode when in 1921, over 130 Akali Sikhs were killed after they were attacked by the Mahant of the shrine.
- The incident is regarded as one of the key milestones in the Gurdwara Reform Movement, which led to the passing of the Sikh Gurdwara Act in 1925 that ended the Mahant control of Gurdwaras.
- Until Independence, Nankana Sahib's population had an almost equal number of Muslims, Sikhs, and Hindus, which since Partition has been predominantly Muslim.

Other important places

- **Gurdwara Nankana Sahib (Janam Asthan):** Gurdwara Nankana (Janam Asthan) is built at the site of Guru Nanak Dev's birthplace and childhood home. It is the most prominent of all the gurdwaras located in the town of Nankana, Pakistan. It is the host of annual gurpurab festivities commemorating Guru Nanak's birth which are celebrated on the full moon in the latter part of the year.
- **Gurdwara Bal Lilah:** Gurdwara Bal Lilah is one of several gurdwaras which dot the town Nankana. It is located in an area where Guru Nanak used to play as a boy with his friends.

- **Gurdwara Kiara Sahib:** Gurdwara Kiara Sahib is one of several small gurdwaras in Nankana. It stands on the site of the former pasture where a miraculous incident occurred when Guru Nanak's cattle destroyed a farmer's crops while he meditated.
- **Gurdwara Mall Ji Sahib:** Gurdwara Mall Ji Sahib is one of the smallest gurdwaras in Nankana. It is built site of the former pasture where both the incident of the Jal tree, and Guru Nanak's encounter with a cobra took place. The interior of the gurdwara is decorated with ancient ceramic tiles, about four inches square, each depicting a cobra.

CYBER SAFE WOMEN

◎ CONTEXT

- Maharashtra Government has launched a 'Cyber Safe Women' initiative to educate women about how the web is used by anti-social elements and child predators to commit various types of crimes.

About the initiative:

- The Cyber Safe Women initiative aims to create awareness on the cyberspace in light of the increasing number of cases where women and children are targeted.
- This initiative was launched in 34 districts and 90 places across the state, all at once.
- It will help in educating women about how the web is used by anti-social elements and child predators to commit various types of crimes.

Cybercrimes in India:

Cybercrime is defined as a crime in which a computer is the object of the crime (hacking, phishing, spamming) or is used as a tool to commit an offence (child pornography, hate crimes). Cybercrime encompasses a wide range of activities, but these can generally be broken into two categories:

- Crimes that target computer networks or devices. These types of crimes include viruses and denial-of-service (DoS) attacks.
- Crimes that use computer networks to advance other criminal activities. These types of crimes include Posting of obscene photographs, Child pornography, Online theft of personal data, Sending fake e-mail messages to get personal information, Misusing personal information, Inciting religious feeling of hatred, Online theft and Fake financial transaction etc.
- As per a recent ASSOCHAM-NEC joint study, India has witnessed a 457% rise in cybercrime incidents under the Information Technology (IT) Act, 2000 from the year 2011 to 2016.
- India is ranked third after the United States and China in terms of cybercrime incidents.
- According to the annual report released by the National Crime Records Bureau (NCRB) in 2016, with 762 cases, Bengaluru had the second-highest number of cybercrime cases among the metros, behind Mumbai with 980 cases.
- Other metro cities were far behind, with Hyderabad recording 291 cases, Kolkata 168, Delhi 90 and Chennai 36.

Favourite techniques of Cybercriminals to steal computer:

- **Phishing:** Phishing is a fake email masquerading as legitimate. Hackers create phishing emails through which they intend to steal your confidential information like passwords and bank account details. This kind of email appears to have come from a well-known person or organisation like your bank or company that you work for. These emails generally try to create urgency or panic to trick users into giving out their personal details.

- **Malware:** It is malicious software that is written with the intent of compromising a system and stealing the data available on the system. It can steal or delete sensitive data, modify the system's core functionalities, and secretly track the victim's activities.
- **Cyberextortion:** This cybercrime involves an attack or threat of an attack coupled with a demand for money to stop the attack.
- **Cryptojacking:** It is the illegal use of another person's computer to mine cryptocurrency.
- **Ransomware:** It is a form of malware that locks a user out of files or devices and then demands online payment anonymously to restore access. Threats to mobile devices and crypto-jacking were also increasing.

Legal frameworks to deal with cybercrimes:

Following are the protection provided under the Indian legal framework against cybercrimes in India:

- **Indian Penal Code, 1860:** Indian Penal code (IPC) is India's universal criminal law. Thus, it covers almost all the crime.
 - IPC, 1860 was amended to include the word "electronic" and expanding its scope by treating electronic records and documents on a par with physical records and documents.
 - Sections such as 192, 204, 463, 464, 468 to 470, 471, 474, 476 which deal with the false document or false entry were also amended to include 'electronic record and electronic document'.
- **Information Technology Act 2000:** The IT Act deals with cybercrime and electronic commerce in India. It provides legal recognition to e-commerce and e-governance and facilitates its development as an alternative to paper-based traditional methods.
 - Though the Act does not expressly define cyber-crime but includes both cyber-crimes and cyber contraventions.
 - The important provision related to cyber-crime and their punishments are as given below:

Section	Particulars
Section 43	Damaging the computer system
Section 66	Offences related to computer
Section 67	Publication or transmission of obscene material in electronic form
Section 68	Not complying with the direction of the controller
Section 70	Protected system
Section 72	Breaking confidentiality of the information of computer
Section 73	Publishing of false digital signatures
Section 74	Publishing of digital signature for fraudulent people

TULU LANGUAGE

© CONTEXT

- There has been a growing demand to include Tulu in the Eighth Schedule of the

Constitution. At present, Tulu is not an official language in India or any other country.

◎ ABOUT

- **Tulu is a Dravidian language** whose speakers are concentrated in the region of **Tulu Nadu**, which comprises the districts of **Dakshina Kannada and Udupi in Karnataka and the northern part of Kasaragod district of Kerala**.
- **Kasaragod** district is called '**Sapta bhasha Samgama Bhumi** (the confluence of seven languages)', and Tulu is among the seven.
- **The oldest available inscriptions in Tulu are from the period between 14th to 15th century AD.**

Case for Inclusion in the Eighth Schedule

- **Global Efforts:** The **Yuelu Proclamation** made by United Nations Educational Scientific and Cultural Organization (UNESCO) at Changsha, China, in 2018 plays a central role in guiding the efforts of countries and regions around the world to protect linguistic resources and diversity.
- The United Nations General Assembly has proclaimed **2019 as the International Year of Indigenous Languages (IYIL)**. The IYIL 2019 strives to preserve, support and promote indigenous languages at the national, regional and international levels.
- **Constitutional Safeguard:** Article 29 of the Indian Constitution deals with the "Protection of interests of minorities". It states that any section of the citizens residing in any part of India having a distinct language, script or culture of its own, shall have the right to conserve the same.
- **Number of Speakers:** According to Census-2011, there are more than 18 lakh native speakers of Tulu in India. The Tulu-speaking people are larger in number than speakers of Manipuri and Sanskrit, which have the Eighth Schedule status.
- **Literary Recognition:** Robert Caldwell (1814-1891), in his book, A Comparative Grammar of the Dravidian or South-Indian Family of Languages, called Tulu as "one of the most highly developed languages of the Dravidian family".

Yuelu Proclamation

- Yuelu Proclamation was adopted at the first international conference on language resources protection in Changsha, Central China's Hunan province in 2018 by UNESCO. It is a document on protection and promotion of the world's linguistic diversity.
- It calls upon the international community, states, governments and non-governmental organizations, among others, to reach a consensus on the protection and promotion of linguistic diversity in the world.

Advantages of Recognition in Eighth Schedule

- If included in the Eighth Schedule, Tulu would get the following benefits
- Recognition from the Sahitya Akademi.
- Translation of Tulu literary works into other languages.
- Members of Parliament (MP) and Member of the Legislative Assembly (MLA) could speak Tulu in Parliament and State Assemblies, respectively.
- Option to take competitive exams in Tulu including all-India competitive examinations like the Civil Services exam.
- Special funds from the Central government.
- Teaching of Tulu in primary and high school.

◎ WAY FORWARD

- India has a lot to learn from the Yuelu Proclamation. Placing of all the deserving languages on equal footing will promote social inclusion and national solidarity.
- It will reduce inequalities within the country to a great extent. So, Tulu, along with other deserving languages, should be included in the Eighth Schedule of the Constitution in order to substantially materialise the promise of equality of status and opportunity

mentioned in the Preamble.

CENTRALISED ACCESS CONTROL SYSTEM (CACS) & TRAINING MODULE OF E-BCAS

◎ CONTEXT

- In the latest development, the government has launched the Biometric enabled Centralised Access Control System (CACS) and 'e-BCAS Project Training Module', with the objective to enhance security and ease of doing business at airports.

Knowing the Projects:

• Centralised Access Control System (CACS) Project:

- CACS project is aimed to digitize the employee movement process at the airports.
- It covers 43 Airports of AAI (Airports Authority of India) and 5 Joint Venture (JV) airports.
- This multi-layered security system encompasses the uniqueness of the Airport Entry Permit (AEP) users, biometric authentication in addition to PIN-based identity verification through contactless smart card technology.
- It will manage access of personnel along with RFID based automated vehicle access control system according to the region, terminal, zone, and gate access privileges.
- The cost of the card is Rs. 225, which shall be valid for three years.
- Biometric ID (Biometric enabled Centralised Access Control System having chip-embedded smart AEPs) thus issued, is non-duplicable.
- **Benefits:**
 - The project is bound to assist around 2 Lakhs employees of various stakeholders who move in and out of the airport on a daily basis.
 - It will facilitate:
 - the ease of processing
 - enhanced security
 - prevent unauthorized entry into the airport
 - alert authorities to an attempted intrusion or other irregularities for immediate response

• e-BCAS Project Training Module:

- The 'e-BCAS Project: Training Module' is aimed at helping more than 1.5 lac employees of various stakeholders by migrating from manual process of training to a digital platform.
- All 29 Aviation Security Training Institutes (ASTIs) have been registered as user entities and now they can make nominations for various courses online.
- Moreover, the system will also allow its users to check the approvals by BCAS, declaration of results and QR coded online certificate generation will also be done through this project only.
- This would result in making the entire training ecosystem of BCAS transparent as well as efficient.

A move towards paperless office:

- The 'e-BCAS' project envisaged achieving a "paperless office" under e-Governance initiative of GoI.

- It is aimed at facilitating external stakeholders to access BCAS system by digital automation of all internal office procedures in 2016, the project was approved by Ministry of Civil Aviation (MoCA) at an estimated cost of Rs.21.69 crore.
- The e-BCAS project included Training module, Quality Control and Operational module and Administration etc.
- After modifications, the current training module part has been completed at an estimated cost of Rs.30.00 lakhs approximately only.
- In due course of time, with the integration of all three modules into the platform of e-BCAS, the processing time in giving clearances and approvals will be reduced considerably.
- These steps will ease the process of training, audit/inspections, enhance the throughput as well as a lot of time, energy and precious man-hours of all stakeholders.

Benefits:**• It will benefit by:**

- By making all the activities in the BCAS transparent, user-friendly, and efficient
- By providing ease of doing business with the stakeholders
- By achieving the aim of the paperless office.

PROJECT NETRA

◎ CONTEXT

- The Indian Space Research Organization (ISRO) has initiated 'Project NETRA' to safeguard Indian space assets from debris and other harm.

What is Project NETRA?

- Project NETRA is an early warning system in space to detect debris and other hazards to Indian satellites.
- The project is estimated to cost ₹400 crores.
- NETRA's eventual goal is to capture the GEO, or geostationary orbit, the scene at 36,000 km where communication satellites operate.
- Under NETRA, or Network for space object Tracking and Analysis, the ISRO plans to put up many observational facilities:
 - connected radars, telescopes
 - data processing units
 - a control centre
- They can, among others, spot, track and catalogue objects as small as 10 cm, up to a range of 3,400 km and equal to a space orbit of around 2,000 km.

How ISRO will achieve this?

- In the plans, are a high-precision, **long-range telescope in Leh** and a radar in the North East.
- With these, ISRO will also use the **Multi-Object Tracking Radar (MOTR)** at the Satish Dhawan Space Centre in Sriharikota, and the telescopes at Ponmudi and Mount Abu to get a broad SSA picture.

What is Space Situational Awareness (SSA)?

- Space Situational Awareness (SSA) refers to the capability of detecting and tracking man-made and natural threats.

- India's SSA will be first for low-earth orbits or LEO which have remote-sensing spacecraft.
- The new SSA centre would consolidate debris tracking activities that are now spread across ISRO centres.
- The SSA also has a military quotient to it and adds a new ring to the country's overall security.

Why space debris matters?

- Space debris could be floating particles from dead satellites or rocket parts that stay in orbit for many years.
- Satellite agencies agonise over even a speck of paint or fragment floating towards their spacecraft as it can disable onboard electronics and cripples the satellite worth several hundred crore rupees besides many services that run on it.
- Agencies constantly look for debris at the time of launch and through the life of a satellite.

The need:

- Though India still has a collision avoidance manoeuvres on its satellites. But to do that, the country depends on data from NORAD and others available in the public domain.

NORAD, or the North American Aerospace Defense Command, is an initiative of the U.S. and Canada that shares selective debris data with many countries.

- But, the country, do not get accurate or comprehensive information.
- Currently, there are 15 functional Indian communication satellites in the geostationary orbit of 36,000 km; 13 remote sensing satellites in LEO of up to 2,000 km; and eight navigation satellites in medium earth orbits.
- By establishing an observation system of its own, India will become part of the global network and can access precise data.

Significance of the project:

- **Capability to predict threats from debris:** Once in place, the project will give India its own capability in space situational awareness (SSA) like the other space powers, which is used to 'predict' threats from debris to Indian satellites.
- **An eye for space attacks:** It also goes so far as to serve as an unstated warning against missile or space attack for the country.
- **Contributing in international efforts:** NETRA effort would make India a part of international efforts towards tracking, warning about and mitigating space debris.
