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**WEEKLY CURRENT AFFAIRS
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GS II: Governance

SCHEMES FOR THE WELFARE OF SCHEDULED TRIBES

1. Special Central Assistance to Tribal Sub-Scheme (SCA to TSS)

Implementing Agency –Ministry Of Tribal Affairs

(i)Funding Pattern

Special Central Assistance to Tribal Sub-Scheme (SCA to TSS) is a 100% grant from the Government of India (since 1977-78). It is charged to the Consolidated Fund of India (except grants for the North Eastern States, a voted item) and is an additive to State Plan funds and efforts for Tribal Development.

(ii) Scope

This grant is utilized for the economic development of the Integrated Tribal Development Project (ITDP), Integrated Tribal Development Agency (ITDA), Modified Area Development Approach (MADA), Clusters, Particularly Vulnerable Tribal Groups (PVTGs), and dispersed tribal populations.

(iii)States Covered

SCA to TSS covers 23 States. Andhra Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Himachal Pradesh, Jammu &Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Odisha, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttarakhand, Uttar Pradesh, and West Bengal.

2. Grants-in-aid under Article 275(1) of the Constitution

(i)Funding Pattern

Grants-in-aid under Proviso to Article 275(1) of the Constitution of India is a 100% annual grant from the Government of India to States. It is charged to the Consolidated Fund of India

(except grants for NE States, a voted item) and is an additive to State Plan funds and efforts for Tribal Development.

(ii) Scope

Funds are utilized for the socio-economic development of ITDA, MADA, Clusters, and PVTGs.

(iii) States Covered

Grant is provided to 27 States, namely, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Manipur, Maharashtra, Meghalaya, Mizoram, Nagaland, Odisha, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand, and West Bengal.

3. Development of Particularly Vulnerable Tribal Groups (PVTGs)

(i) Scope

Activities covered are housing, land distribution, land development, agricultural development, animal husbandry, construction of link roads, and installation of non-conventional sources of energy for lighting purposes, social security including Janashree Bima Yojana or any other innovative activity meant for the comprehensive socio-economic development of PVTGs. The scheme is flexible as it enables the States to focus on areas that they consider relevant to PVTGs and their sociocultural environment.

(ii) States Covered

The scheme of Development of PVTGs covers 75 identified PVTGs in 18 States and UT of Andaman & Nicobar Islands

4. Institutional Support for the Development & Marketing of Tribal Products / Produce (Central Sector Scheme)

(i) Funding

Under the scheme, Grants-in-aid are released to State Tribal Development Cooperative Corporations (STDCCs) and Tribal Cooperative Marketing Development Federation of India Ltd. (TRIFED) which is a multi-State Cooperative under the Ministry of Tribal Affairs (MoTA).

(ii) Scope

To give comprehensive support for people belonging to various tribes in the entire range of production, product development, preservation of traditional heritage, support to both forest and agricultural produce of tribal people, support to Institutions to carry the above activities, provisions of better infrastructure, development of designs, dissemination of information about price and the agencies which are buying the products, support to Government agencies for sustainable marketing and thereby ensure a reasonable price regime.

Sharing of information with Gram Panchayats and Gram Sabhas, Skill upgradation, and development of utilitarian products for an increase in value in the market.

(iii) Objective

The Scheme is to create institutions for the Scheduled Tribes to support the marketing and development of activities they depend on for their livelihood. These are sought to be achieved by specific measures like

- market intervention;
- training and skill up-gradation of tribal Artisans, Craftsmen, Minor Forest Produce (MFP) gatherers, etc.;
- R&D/IPR activity; and
- Supply chain infrastructure development.

5. 'Mechanism for Marketing of Minor Forest Produce (MFP) through Minimum Support Price (MSP) and Development of Value Chain for MFP' as a measure of social safety for MFP gatherers (Centrally Sponsored Scheme)

(i) Objective

The Ministry introduced this scheme from the year 2013-14, a centrally sponsored scheme of 'Mechanism for marketing of Minor Forest Produce (MFP) through Minimum Support Price (MSP) and Development of Value Chain for MFP' as a measure of social safety for MFP gatherers who are primarily a member of Scheduled Tribes and other traditional forest dwellers whose very livelihood depends on collection and selling of MFP.

(ii) Scope

The scheme seeks to establish a system to ensure fair monetary returns for their efforts in the collection, primary processing, storage, packaging, transportation, etc. It also seeks to get

them a share of the revenue from the sales proceeds with the cost deducted. It also aims to address other issues for the sustainability of the process.

The scheme envisages fixation and declaration of Minimum Support Price for the selected MFP. Procurement & Marketing operations at pre-fixed MSP will be undertaken by the designated State Agencies. Simultaneously, other medium & long-term issues like sustainable collection, value addition, infrastructure development, knowledge base expansion of MFP, market intelligence development, and strengthening the bargaining power of Gram Sabha/ Panchayat will also be addressed.

(iii) States covered

To start with, the scheme had been implemented in States having areas under Schedule V of the Constitution and covered ten MFP items. Recently, however, the guidelines of the scheme ‘Mechanism for Marketing of Minor Forest Produce (MFP) through Minimum Support Price (MSP) and Development of Value Chain for MFP’ has been modified after discussion with various stakeholders and TRIFED, and MSP of the existing MFP items has been revised as also fourteen more MFP items have been added to the list

6. Support to National Scheduled Tribes Finance and Development Corporation (NSTFDC)/State Scheduled Tribes Finance and Development Corporations (FDCs)

(i) Funding

NSTFDC a fully owned Public Sector Enterprise of the Government of India is provided with 100% equity share capital contribution by the Ministry of Tribal Affairs. The authorized share capital of the Corporation is Rs. 750.00 crores.

The STFDCs are catering to STs in various States and are assisted in the form of contributions towards share capital by this Ministry. The ratio of its contribution is in the share 51:49 between the State Government and Central Government

(ii) Scope

To identify economic activities of importance to the Scheduled Tribes to generate self-employment and raise their income level. To upgrade their skills and processes through both institutional and on-the-job training. To make existing State/ UT Scheduled Tribes Finance and Development Corporations (SCAs) and other developmental agencies engaged in the economic development of the Scheduled Tribes more effective. To assist SCAs in project formulation, implementation of NSTFDC-assisted schemes, and in imparting training to their

personnel. To monitor the implementation of NSTFDC-assisted schemes to assess their impact

(iii) Objective

The main objectives of the scheme are:-Identification of eligible ST families and motivating them to undertake economic development schemes. Sponsoring those schemes to financial institutions for credit support. Providing financial assistance in form of margin money at a low rate of interest, and Providing necessary linkage/ tie-up with other poverty alleviation programs.

(iv) States Covered

The STFDCs are catering to STs in various States and are assisted in the form of contributions towards share capital by this Ministry.

7. Educational Sector Schemes

1. PRE-MATRIC SCHOLARSHIPS TO ST STUDENTS (Class IX and X)

(i) Funding

Central assistance in the share of 75:25 (90:10 for NER and Hilly States) to State Governments/UT Administrations is available from the Government of India. The scholarship is distributed through the State Government/UT Administration.

(ii) Target Group

Applicable to students who are studying in Classes IX–X. Parental income from all sources should be less than Rs.2.00 lakhs per annum, which is proposed to be revised to Rs.2.50 lakhs per annum

(iii) Provisions

Scholarships are paid @ Rs.150/- per month for Day Scholars and @Rs.350/- per month for Hostellers, for 10 months in a year

(iv) Proposed Changes

This is proposed to be revised from the existing Rs.150/- to Rs.225/- p.m. for Day Scholars, and from Rs.350/- to Rs.525/- p.m.



2. POST MATRIC SCHOLARSHIPS TO ST Students (Class XI and above)

(i) Funding

Central assistance in the share of 75:25 (90:10 for NER and Hilly States) to State Governments/UT Administrations is available from the Government of India

(ii) Implementing Agency

The scholarship is distributed through the State Government/UT Administration.

(iii) Eligibility

Parental income from all sources should be less than Rs.2.50 lakhs per annum.

(iv) Target Group

Applicable to students who are studying in any recognized course from a recognized institution for which the qualification is Matriculation/Class X or above.

Compulsory fees charged by educational institutions are reimbursed subject to the limit fixed by the concerned State Fee fixation committee and the scholarship amount of Rs.230 to Rs.1200 per month, depending upon the course of study is paid.

3. NATIONAL OVERSEAS SCHOLARSHIPS (NOS) for ST students studying abroad

(i) Implementing Agency

Disbursement of scholarships through the Ministry of External Affairs/ Indian Missions abroad

(ii) Eligibility

Parental/family income from all sources should not exceed Rs.6.00 lakhs per annum.

(iii) Provisions

Provides financial assistance to selected students to pursue Post Graduation, Ph.D. & Post-Doctoral study abroad.

A total of 20 awards are given every year. Of these, 17 awards are for STs, and 3 awards are for students belonging to Particularly Vulnerable Tribal Groups

Annual maintenance allowance of ₹9900/-, annual contingency & equipment allowance of ₹1116/-, tuition fees as per actuals, and other admissible fees are provided for candidates in the United Kingdom.

For candidates in the USA, an annual maintenance allowance of \$15400/-, annual contingency & equipment allowance of \$1532/-, tuition fees as per actuals, and other admissible fees are provided.

8. NATIONAL FELLOWSHIP & SCHOLARSHIP FOR HIGHER EDUCATION OF ST STUDENTS:

1. SCHOLARSHIP FOR HIGHER EDUCATION (earlier known as Top Class Education) For ST students

(i) Eligibility

Family income from all sources does not exceed Rs.6.00 lakhs per annum.

(ii) Provisions

The scholarship is given to ST students for pursuing studies in prescribed courses in any of the 246 institutes of excellence across the country like IITs, AIIMS, IIMs, and IITs, etc. identified by the Ministry.

The total number of scholarships is 1000 per year.

The scholarship amount includes tuition fees, living expenses, and allowances for books and computers.

2. FELLOWSHIP (earlier known as RGNF) SCHEME FOR ST STUDENTS)

(i) Provisions

750 fellowships are provided to ST students each year for pursuing higher studies in India for MPhil and Ph.D.

Fellowship is granted as per UGC norms, @Rs.25, 000/- for JRF and @Rs.28, 000/- for SRF.

3. Scheme of Strengthening Education among ST Girls in Low Literacy Districts

(i) Aim

The scheme aims to improve the socio-economic status of the poor and illiterate tribal population through the education of women. The Scheme aims to bridge the gap in literacy levels between the general female population and tribal women and is meant exclusively for ST Girls.

(ii) Objective

The primary objective of this Central Sector Scheme is the promotion of education among tribal girls in the identified low-literacy districts of the country

(iii) States covered

it is being implemented in 54 identified low literacy districts where ST Population is 25% or more and ST female literacy rate is below 35% as per the 2001 census

The Scheme has been revised with effect from 1.4.2008.

(iv) Provisions

The educational complexes are established in rural areas of identified districts and have classes I to V with a provision for upgradation up to class XII, provided there is sufficient accommodation for classrooms, a hostel, a kitchen, gardening, and for sports facilities. The educational complexes impart not only formal education to tribal girls but also train the students in agriculture, animal husbandry, other vocations, and crafts to make them economically strong.

4. Scheme of Grant-in-aid to voluntary organizations working for the welfare of Scheduled Tribes

(i) Funding

The scheme is Central Sector Scheme. The grants are provided to the non-governmental organizations on application, in a prescribed format, duly recommended by the multi-disciplinary State Level Committee of the concerned State Government / UT Administration.

Funds are generally provided to the extent of 90% by the Government. The voluntary organization is expected to bear the remaining 10% balance from its resources

(ii) Objective

The prime objective of the scheme is to enhance the reach of welfare schemes of the Government and fill the gaps in service-deficient tribal areas, in the sectors such as education, health, drinking water, agro-horticultural productivity, social security net, etc. through the efforts of voluntary organizations, and to provide a favorable environment for socio-economic upliftment and overall development of the Scheduled Tribes (STs).

Any other innovative activity having a direct positive impact on the socio-economic development or livelihood generation of STs may also be considered through voluntary efforts

The Scheme was launched in 1953-54 and was last revised w.e.f. 1st April 2008.

5. Vocational Training in Tribal Areas

(i) Funding

100% grants under the scheme are provided to the State, Union Territories, and other Associations implementing the Scheme

(ii) Aim

The main aim of the Scheme is to develop the skills of the ST youth for a variety of jobs as well as self-employment and to improve their socio-economic condition by enhancing their income.

(iii) Target Group

Free vocational training facilities are extended only to tribal youth.

(iv) Provisions

Each Vocational Training Centre (VTC) under the Scheme may cater to 5 vocational courses in traditional skills depending upon the employment potential of the area. Keeping in view the limited potential of even skilled persons in interior areas, each ST boy/girl is trained in two trades of his/her choice, the course in each trade being for three months. Each trainee is to be attached at the end of six months to a master craftsman in a semi-urban/urban area for six months, to learn his/her skills through practical experience.

The scheme has been revised with effect from 1.4.2009 to provide enhanced financial norms and to ensure linkages of vocational courses with a recognized certificate/diplomas through affiliation/accreditation of courses and institutions under the Modular Employable Skills and Craftsman Training Scheme by the National Council of Vocational Training of Ministry of Labour and Employment

(v) States Covered

The scheme covers all the State and Union Territories.

6. Support to Tribal Research Institutes (TRIs) and Tribal Festivals, Research Information, and Mass Education;

(i)Funding

Funding under this Scheme is 100% grant-in-aid by the Ministry of Tribal Affairs to the TRIs on a need basis with the approval of the APEX Committee

(ii)Provisions

To preserve tribal art and culture, financial assistance is provided to TRI to carry out various activities to preserve and promote tribal culture and heritage across the country through research and documentation, maintenance and preservation of art & artifacts, setting up of a tribal museum, exchange visits for the tribals to other parts of the State, organizing tribal festivals, etc.

TRIs would be responsible to prepare the proposal and detailed action plans for the year along with budgetary requirement and submit it to the Ministry through State Tribal Welfare Department.

GS II: Governance

ONE NATION ONE ELECTION

1. Context

Prime Minister Narendra Modi repeated from the ramparts of the Red Fort Thursday his idea of simultaneous elections in all of India. The Prime Minister has been committed to the idea for several years now, and he announced soon after being reelected to office that a committee would be formed to discuss the idea with all political parties.

2. Key takeaways

- One Nation, One Election would reduce the cost of holding elections, and limit all elections to a single season
- At present, elections happen somewhere or the other almost all the time, and it is often argued that the Model Code of Conduct gets in the way of the government announcing projects or policy plans for the benefit of the people.
- Holding just one mega election would be too complex an exercise to tackle in a country as large and as complex as India, It would be a logistic nightmare requiring, about twice as many electronic voting machines and Voter Verifiable Paper Audit Trail machines as are used now.
- India did start with simultaneous elections, Lok Sabha and state legislatures went to polls together in 1952 and 1957
- The cycle was first broken in Kerala, in July 1959, when the government of Jawaharlal Nehru used Article 356 of the Constitution to dismiss the government of the Communist E M S Namboodiripad.
- EMS had become Chief Minister after the elections of April 1957 and, Kerala voted for a new five-year Assembly again in February 1960.
- In the 1967 elections, the Congress suffered setbacks in Bihar, UP, Rajasthan, Punjab, West Bengal, Orissa, Madras and Kerala, and governments of the Samyukta Vidhayak Dal, comprising the Bharatiya Kranti Dal, Samyukta Socialist Party, Praja Socialist Party, Swatantra Party, Bharatiya Jana Sangh and defectors from the Congress, were formed.
- The governments were unstable, there were rampant defections, and many of these Assemblies were dissolved before their terms were over, resulting in the separation of the election cycles of many states from that of the Lok Sabha.
- At present, Assembly elections in only Andhra Pradesh, Odisha, Arunachal Pradesh and Sikkim are held together with the Lok Sabha elections.

3. Origin of the idea

In 1983, the Election Commission suggested simultaneous elections, The Law Commission headed by Justice B P Jeevan Reddy, in its 170th Report in May 1999

In 2003, Prime Minister Atal Bihari Vajpayee took up the matter with Congress but the idea could not be ultimately pursued.

In 2015, the Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice, headed by E M Sudarsana Natchiappan, prepared a report on the 'Feasibility of Holding Simultaneous Elections to House of People (Lok Sabha) and State Legislative Assemblies'.

The report said that simultaneous elections would help to reduce the:

1. The massive expenditure that is currently incurred for the conduct of separate elections
2. The policy paralysis that results from the imposition of the Model Code of Conduct during election time
3. The impact on the delivery of essential services
4. The burden on crucial manpower that is deployed during election time

In a draft report on August 30, 2018, the Law Commission headed by Justice B S Chauhan said simultaneous elections could not be held within the existing framework of the Constitution.

Appropriate amendments to the Constitution, the Representation of the People Act 1951, and the Rules of Procedure of Lok Sabha and state Assemblies

The Commission recommended that all elections due in a calendar year should be conducted together. To preempt the disruption that a no-confidence motion, if carried, may cause, the Commission recommended that the “no-confidence motion” should be replaced with a “constructive vote of no-confidence” through appropriate amendments and that a government may be replaced only if there is confidence in an alternative government.

COURT VACATIONS

1. Context

Chief Justice of India (CJI) D Y Chandrachud said on Friday that the Supreme Court will not have a vacation bench when it breaks next week for its annual winter vacation.

2. Court vacations

The Supreme Court has 193 working days a year for its judicial functioning while the High Courts function for approximately 210 days and trial courts for 245 days.

- High Courts have the power to structure their calendars according to the service rules.
- The Supreme Court breaks for its annual summer vacation which is typically for seven weeks it starts at the end of May and the court reopens in July.
- The Court takes a week-long break each for Dussehra and Diwali and two weeks at the end of December.

- While this judicial schedule has its origins in colonial practices, it has come under criticism for quite some time now.

2.1. Vacation benches

- Generally, a few judges are available for hearing urgent cases even when the court is in recess.
- The combination of two or three judges called "**vacation benches**", hear important cases that cannot wait.
- Cases such as bail, eviction, etc., often find precedence in listing before vacation benches.
- It is not uncommon for courts to hear important cases during vacation.
- For example, in 2015, a five-judge Bench of the Supreme Court heard the challenge to the constitutional amendment setting up the National Judicial Appointments Commission (NJAC) during the Summer vacation.
- In 2017, a Constitution Bench led by then CJI J S K hehar held a six-day hearing in the case challenging the practice of triple talaq during summer vacation.

3. Criticism about Court vacations

- The extended frequent vacations are not good optics, especially in light of the mounting pendency of cases and the snail's pace of judicial proceedings.
- For an ordinary litigant, the vacation means further unavoidable deals in listing cases.
- The colonial origins of the practice are not lost on the critics.
- The summer break perhaps began because European judges of the Federal Court of India found Indian summers too hot and took the winter break for Christmas.

3.1. Justice Malimath Committee

- In 2000, the Justice Malimath Committee, set up to recommend reforms in the criminal justice system, suggested that the period of vacation should be reduced by 21 days, keeping in mind the long pendency of cases.
- It suggested that the Supreme Court work for 206 days and High Courts for 231 days every year.

3.2. Law Commission of India report

- In its 230th report, the Law Commission of India headed by Justice A R Lakshmanan in 2009 called for reform in this system.

- Considering the staggering arrears, vacations in the higher judiciary must be curtailed by at least 10 to 15 days and the court working hours should be extended by at least half an hour.

3.3. Supreme Court notified Rules

- In 2014, when the Supreme Court notified its new Rules, it said that the period of summer vacation shall not exceed seven weeks from the earlier 10-week period.
- In the past, Chief Justices of India have tried to reform vacation cycles given the criticism.
- In 2014, when the pendency of cases hit the 2 crore mark, then CJI R M Lodha suggested keeping the Supreme Court, High Courts and trial courts open around the year.
- CJI Lodha suggested that the schedules of individual judges should be sought at the beginning of the year and the calendar should be planned accordingly.
- With Justice Lodha's tenure lasting just five months, that proposal did not see the light of day.
- Former CJI T S Thakur also suggested holding court during vacations if parties and lawyers mutually agreed. That proposal too did not take effect.

4. Arguments in favour of court vacations

- Within the legal fraternity, the long breaks are strongly defended.
- Lawyers have often argued that vacations are much needed for rejuvenation in a profession that demands intellectual rigour and long working hours both from lawyers and judges.
- Judges typically work for over 10 hours daily. Apart from the day's work in court from 10.30 am to 4 pm, they also spend a few hours preparing for the next day.
- A frequently-made argument is that judges, utilise the vacation to write judgements.
- Another argument is that judges do not take leave of absence like other working professionals when the court is in session.

In 2015, even after the Supreme Court heard a midnight plea against the execution of Yakub Menon, Justices Dipak Misra and Prafulla Pant returned to work the next morning. Family tragedies and health are rare exceptions, but judges rarely take the day off for social engagements.

- Legal experts also point out that cutting down on court vacations will not see a dramatic decrease in the pendency of cases, at least in the Supreme Court.

- Data show that the Supreme Court roughly disposes of the same number of cases as are instituted before it in a calendar year.
- The issue of pendency relates largely to legacy cases that need to be tackled systemically.
- The argument that cutting the vacation period would be a solution to the pendency is not backed by data and takes away from real issues that contribute to the pendency problem.

5. The practice in other countries

- The Indian Supreme Court has the highest caseload among the apex courts worldwide and works the most.
- In terms of the number of judgements delivered too, with 34 judges, the Indian Supreme Court leads the way.
- In 2021, 29, 739 cases were instituted before the Supreme Court and 24, 586 cases were disposed of by the court in the same year.
- This year, between January 1 and December 16, the Supreme Court delivered 1, 255 judgements.
- This is apart from the usual workload of daily orders and hearings in cases where judgments are yet to be delivered.
- By contrast, the US Supreme Court hears approximately 100-150 cases a year and sits for oral arguments for five days a month.
- From October through December, arguments are heard in the last two weeks of each month.
- In the UK, High Courts and Courts of Appeals sit for 185-190 days a year.
- The Supreme Court sits in four sessions throughout the year, spanning roughly 250 days.

MARITAL RAPE

1.Context

The court was hearing a clutch of four petitions challenging the constitutionality of the exception to Section 375. Apart from the petitioners, who include the All India Democratic

Women's Association (AIDWA), the court heard several intervenors, including a men's rights organisation and amicus curiae senior advocates Rajshekhar Rao and Rebecca John.

2. What is the marital rape exemption?

Section 375 defines rape and lists seven notions of consent which, if vitiated, would constitute the offence of rape by a man.

However, the provision contains a crucial exemption: "Sexual intercourse or sexual acts by a man with his own wife, the wife not being under eighteen years of age, is not rape."

This exemption essentially allows a marital right to a husband who can with legal sanction exercise his right to consensual or non-consensual sex with his wife.

The exemption is also under challenge before the Gujarat High Court on the grounds that it undermines consent of a woman based on her marital status.

Separately, the Karnataka HC has allowed the framing of marital rape charges against a man despite the exemption in the law.

3. Government's Stand

Supreme Court challenging the constitutionality of Section 124A IPC (sedition), the Centre initially defended the rape exception and later changed its stand and told the court that it was reviewing the law, and that "wider deliberations are required on the issue"

Solicitor General Tushar Mehta brought to the court's notice a 2019 committee set up by the Ministry of Home Affairs to review criminal laws in the country

The Delhi government argued in favour of retaining the marital rape exception. The government's arguments spanned from protecting men from possible misuse of the law by wives, to protecting the institution of marriage.

4. Marital laws in other countries

The marital rape immunity is known to several post-colonial common law countries. Australia (1981), Canada (1983), and South Africa (1993) have enacted laws that criminalise marital rape.

In the United Kingdom, the House of Lords overturned the exception in 1991

In their landmark decision in the case known as R v R, the Lords took the view that the time had “arrived when the law should declare that a rapist remains a rapist subject to the criminal law, irrespective of his relationship with his victim”

Subsequently, in 2003 marital rape was outlawed by legislation in the UK.

GS III: Economy

STOCK EXCHANGE ROUTE

1. Context

The Securities and Exchange Board of India (SEBI) has decided to phase out the buyback of shares of listed companies through the exchange route.

The regulator favours the repurchase of shares by companies from shareholders on a proportionate basis through the tender offer because that is considered more equitable, transparent and fair.

2. Share buyback

- When a listed company buys its shares from the existing shareholders, it is known as a share buyback, which is also called share repurchase.
- The process reduces the number of outstanding shares in the open market over a period which can lead to better valuation and Earnings Per Share (EPS).
- Currently, a company can buy back its shares from shareholders on a proportionate basis through a tender offer, from the open market via a book-building process or from the odd-lot holders.
- The maximum limit of any buyback is 25 per cent or less of the aggregate of paid-up capital and free reserves of a company.

3. Stock exchange route

- Under the stock exchange route, a company can buy back shares only on the stock exchanges having nationwide trading terminals.
- The buyback of shares is made only through the order-matching mechanism.

- In this method, the promoters or persons in control of a company are not allowed to participate.
- Paytm, which witnessed a 76 per cent crash in share prices after its IPO last year, recently decided to opt for the open market route through the stock exchanges method for share buyback, which is to be completed within a maximum period of 6 months.
- While TCS, which came out with share buybacks recently, used the tender route, Infosys opted for the stock exchange method for its recent buyback.

4. SEBI opposing the exchange route

- As per the recommendations of the Keki Mistry-headed committee, set up by Sebi to review the buyback regulations, under the stock exchange route, there is a possibility of one shareholder's entire trade getting matched with the purchase order placed by the company, thus depriving other shareholders of availing the benefit of buyback.
- This runs contrary to the principle of equitable treatment, which forms the basis of all corporate actions.
- The tender route is the more equitable route for buybacks.

The other routes are vulnerable to favouritism because nobody knows in the exchange mechanism when the company is going to come to buyback shares and only a few people may be aware of it and benefits may flow to those few people. So, it (Buyback through exchange) is not an equitable mechanism.

5. Phased out of exchange route

- As recommended by the Keki Mistry Committee, Sebi will phase out buyback through the stock exchange route with effect from April 1, 2025.
- Many experts termed Sebi's decision to phase out stock buyback through the exchange route as positive as it will allow all the shareholders to participate.
- This move aims to make the buyback process more robust, efficient, transparent and shareholder-friendly.

6. Benefit to shareholders

- The entire process of buyback via stock markets may or may not have benefitted smaller investors as they may not have known when the buyback was taking place.
- With the tender offer process being the only process going forward, all shareholders would now be provided with an opportunity to participate in the buyback.
- Especially as tender offers also require a reservation for small shareholders.
- In a way, it democratises the process and creates a fair and equitable platform.

7. Buyback via a tender offer

- A tender offer means an offer by a company to buy back its shares or other specified securities through a letter of offer from the holders of the shares or other specified securities of the company.
- The buyback is done on a proportionate basis as per the buyback ratio and the additional shares tendered over and above the prescribed buyback ratio get accepted if there are any unaccepted shares. It is a fixed-price buyback offer.

8. Changes in the tender system

- Sebi has reduced the timeline for completion of the buyback through a tender offer by 18 days, by removing the requirement of filling a draft letter of offer with it.
- It also permitted an upward revision of the buyback price until one working day before the record date.
- The process of offering shares under the tender process is similar to buying shares through an online Demat account.
- When the company launches a buyback, shareholders will find an option of "**offer for sale**" when they log into their Demat account.
- Shareholders who wish to sell their shares can submit them to the Company for sale.
- The price under this mechanism is fixed and is offered higher than the market price to attract a large number of shareholders to sell their shares.
- Fifteen per cent of the buyback size is reserved for small shareholders.
- All shareholders as on the record date are eligible to participate in the process.

CPI-AL and RL

1. Context

The All-India Consumer Price Index Number for Agricultural Labourers and Rural Labourers (CPI-AL and RL) for November 2022 is released by the Labour Bureau of the Ministry of Labour and Employment.

2. Key points

- The CPI-AL and RL for November 2022 increased by 8 points each to stand at 1167 and 1178 points respectively.

- The major contribution towards the rise in the general index of Agricultural Labourers and Rural Labourers came from the food group to the extent of 4.05 & 3.56 points respectively.
- It is mainly due to the increase in prices of rice, wheat-atta, jowar, bajra, pulses, meat goat, mustard-oil, milk, ghee, onion, chillies dry, mixed spices, tea-readymade, etc.

3. Consumer Price Index

- CPI is a measure that examines the weighted average of prices of a basket of goods and services which are of primary consumer needs. It includes transportation, food, and medical care.
- CPI is calculated by taking price changes for each item in the predetermined basket of goods and averaging them based on their relative weight in the whole basket.
- It calculates the difference in the price of commodities and services. **its base year is 2012.**

There are four types of CPI

1. CPI for Industrial worker (IW)
 2. CPI for Agriculture Labour (AL)
 3. CPI for Rural Labour (RL)
 4. CPI Urban and rural combined
- The first three are compiled by the **Labour Bureau of the Ministry of Labour and Employment**, fourth is compiled by **National Statistics Organisation (NSO) by the Ministry of Statistics and Programme Implementation.**

4. CPIs AL and RL

- These are used to fix the minimum wages of agricultural labourers and rural unskilled employees.
- The Labour Bureau is also expected to bring out a new series of the CPI-AL/RL, which currently has the base year of 1986-87.

4.1 CPIs AL

- The rise/ fall in the index varied from State to State.
- It recorded an increase of 1 to 16 points in 17 states and a decrease of 1 to 9 points in 3 states.

- Tamil Nadu with 1345 points topped the index table whereas Himachal Pradesh with 912 points stood at the bottom.

4.2 CPIs RL

- It recorded an increase of 1 to 16 points in 18 states and a decrease of 5 to 9 points in 2 states.
- Tamil Nadu with 1333 points topped the index table whereas Himachal Pradesh with 965 points stood at the bottom.
- Amongst states, the maximum increase in the Consumer Price Index Numbers for Agricultural and Rural Labourers was experienced by Bihar State (16 points each) mainly due to a rise in the prices of wheat-atta, maize, fish fresh, onion, firewood, vegetables and fruits, etc.
- On the contrary, the maximum decrease in the Consumer Price Index Numbers for Agricultural Labours and Rural Labourers was experienced by Assam state (9 points each) mainly due to a fall in the prices of rice, fish-fresh, firewood, vegetables and fruits etc.

5. Inflation rate

- Point-to-point rate of inflation based on the CPI-AL and CPI-RL stood at 6.87 per cent and 6.99 per cent in November 2022 compared to 7.22 per cent and 7.34 per cent respectively in October 2022 and 3.02 per cent and 3.38 per cent respectively during the corresponding month of the previous year.
- Similarly, the food inflation stood at 6.19 per cent and 6.05 per cent in November 2022 compared to 7.05 per cent and 7 per cent respectively in October 2022 and 0.88 per cent and 1.07 per cent respectively during the corresponding month of the previous year.

INFLATION

1. What is inflation

Any inflation rate essentially tells us the rate at which prices have been rising in an economy. For every month, inflation rates are calculated both on a year-on-year basis how prices have changed over the past year as well as on a month-on-month basis how prices have changed over the past month

Inflation rates are calculated for all commodities and commodity groups. So, we have inflation rates for onions as well as for all food items.

Inflation rates are also calculated for rural and urban markets for better policy analysis

2. WPI vs CPI

The two most-often used inflation rates in the country are the year-on-year

1. The wholesale price index (WPI) based inflation rate and

2. The consumer price index (CPI) based inflation rate

- The former is called the wholesale inflation rate and the latter is called the retail inflation rate.
- Both WPI and CPI are price indices. In other words, these are two different baskets of goods and services.
- The government assigns different weights to different goods and services based on what is relevant for those two types of consumers.
- The CPI-based inflation data is compiled by the Ministry of Statistics and Programme Implementation (or MoSPI) and the WPI-based inflation data is put together by the Department for Promotion of Industry and Internal Trade (or DPIIT)
- WPI is dominated by the prices of manufactured goods while the CPI is dominated by the prices of food articles
- If food prices go up sharply, it will bump up the retail inflation rate far more than it would spike the wholesale inflation rate
- A key difference that must not be missed is that the WPI does not take into account the change in prices of services
- If services such as transport, education, recreation and amusement, personal care etc. get significantly costlier, then retail inflation will rise but there will be no impact on wholesale price inflation
- Since these two inflation rates are calculated based on two very different indices, it is not uncommon to find them at considerable variance with each other

GLOBAL MINIMUM TAX RATE

1. Context

Members of the European Union agreed in principle to implement a minimum tax of 15% on big businesses. Last year, 136 countries agreed on a plan to redistribute tax rights across jurisdictions and enforce a minimum tax rate of 15% on larger multinational corporations.

2. What is Global Minimum Tax Rate?

- The Organisation for Economic Cooperation and Development (OECD) has stated that 136 nations have reached an agreement on a global pact to ensure that large corporations pay a Global Minimum Tax (GMT) rate of 15 percent. This rate will be referred to as the "GMT" (including India).
- Together, the economies of the countries that supported the deal amounted to more than 90 percent of the total world GDP. The Global minimum corporate tax arrangement was supported by the G20 leaders for implementation beginning in 2023. The Organisation for Economic Cooperation and Development (OECD) reports that Kenya, Nigeria, Pakistan, and Sri Lanka have not yet signed the pact.
- If an agreement on a global minimum tax rate is reached, India may be required to remove the equalization levy and the digital services tax, as well as make a commitment not to implement new taxes of this kind in the future. The international tax system is undergoing a significant overhaul, and as part of this process, 136 countries including India, have agreed to a revamp of global tax norms.
- The goal of this reform is to ensure that multinational corporations pay taxes whenever they operate, at a rate of at least 15 percent.
- EU members have agreed to implement a minimum tax rate on big business by Pillar 2 of the global tax agreement framed by the Organisation for Economic Cooperation and Development (OECD) last year. This is to ensure that big businesses with global operations do not benefit by domiciling themselves in tax havens to save on taxes.

3. Need for a Global Minimum Tax Rate?

3.1 Financial diversion to tax heavens:

Income from intangible sources such as drug patents, software, and royalties on intellectual property has increasingly migrated to Tax havens, allowing companies to avoid paying higher taxes in their traditional home countries.

The GMT targets to stop this outflow of tax revenue from the origin countries.

3.2 Mobilizing Financial Resources:

The OECD has estimated that the minimum tax will generate \$150 billion in additional global tax revenues annually.

3.3 Global Tax Reforms:

After the inception of the Base Erosion and Profit Shifting (BEPS) program, the proposal for GMT is another positive step towards global taxation reforms.

BEPS refers to tax avoidance strategies that exploit gaps and mismatches in tax rules to artificially shift profits to low or no-tax locations. OECD has issued 15 action items to address this.

4. Future Concerns

- Some governments, particularly those of traditional tax havens, are likely to disagree and stall the implementation of the OECD's tax plan. High-tax jurisdictions like the EU are more likely to fully adopt the minimum tax plan as it saves them from having to compete against low-tax jurisdictions.
- Low-tax jurisdictions, on the other hand, are likely to resist the OECD's plan unless they are compensated sufficiently. Since the OECD's plan essentially tries to form a global tax cartel, it will always face the risk of losing out to low-tax jurisdictions outside the cartel and cheating by numbers with the cartel.
- After all, countries both within and outside the cartel will have the incentive to boost investments and economic growth within their respective jurisdictions by offering lower tax rates to businesses.

5. What good will the OECD's tax plan do to the global economy?

- Many believe that the plan will also help counter rising global inequality by making it tougher for large businesses to pay low taxes by availing the services of tax havens.
- Critics of the OECD's proposal, however, see the global minimum tax as a threat. They argue that without tax competition between governments, the world would be taxed a lot more than it is today, thus adversely affecting global economic growth.

BRETTON WOODS TWINS

1.Context

Bangladesh reached out to the International Monetary Fund (IMF) seeking help. According to an IMF press release, Bangladesh will receive economic assistance worth \$4.5 billion (around Rs 37, 000 crores).

2.About bretton woods twins

The International Monetary Fund (IMF) was set up along with the World Bank after the Second World War to assist in the reconstruction of war-ravaged countries.

Leaders felt that financial stability was best achieved when countries worked in an environment of interdependence.

The two organisations were agreed to be set up at a conference in Bretton Woods in the US. Hence, they are known as the Bretton Woods twins.

IMF was supposed to oversee and monitor the economic performance of member countries and warn them of any developing economic crisis. There are 147 members in IMF.

If any crisis does develop and a country approaches IMF for help, the organisation chalks out a recovery plan which includes imposition of conditions for keeping the economies on a particular path

3.India and IMF bailout package

- The Indian government faced with a balance of payment crisis in 1991, took a loan and agreed to the reform process
- The liberalisation of the economy is part of the concomitant of the that need
- The IMF report is part of its mandate under Article IV of its constitution
- The fund holds consultations with finance ministries and central banks of each member countries annually for its spring meeting in washington
- The decision of the IMF to intervene in any country is based on the governing board's decision
- The voting rights are determined historically by the economic strength of the countries
- India, because of its rapidly growing economic clout, has demanded re-drawing of the voting rights but that did not happen

4.Role of World bank

It works to provide soft loans for the development of social and economic infrastructure to countries

It also has a set of conditions that it often follow and broadly follows the IMF prescription

INDIA'S TRADE WITH CHINA

1. Context

Amid fresh demands for snapping of trade ties with China in the wake of the Tawang Skirmish, official data show that India's imports from the neighbouring country spiked sharply post the 2020 Galwan clash in which 20 Indian soldiers were killed.

2. Key points

- China is India's second biggest trading partner after the United States.
- In 2021-22, India-China bilateral trade stood at \$115.83 billion, which was 11.19 per cent of India's total merchandise trade of \$ 1, 035 billion.
- The US was just a notch above, with 11.54 per cent (\$119.48 billion) share.

3. India's trade with China

- Till 20 years ago, China figured at the 10th position (2001-12) or lower (12th in 2000-01; 16th in 1999-00; 18th in 1998-99).
- However, from 2002-03, it started an upward march and became India's top trading partner in 2011-12.
- In the next year, the UAE dislodged it to second place.
- However, China bounced back and again became India's top trading partner in 2013-14 and remained there till 2017-18.
- For the next two years (2018-19 and 2019-20), the US was at the top but in 2020-21, China again became India's number trading partner.
- While China and the US have both been India's top trading partners in recent years, there is a big difference between the trade with the world's two largest economies.
- While with the US, India had a trade surplus of \$ 32.85 billion during 2021-22, with China, it had a trade deficit of \$ 73.31 billion, the highest for any country.
- India's trade deficit with China during 2021-2022 was double the previous year's level (\$44.02 billion) and it was an all-time high.

Apart from the US and China, the other eight countries and regions among India's top-10 trading partners during 2021-22 were UAE, Saudi Arabia, Iraq, Singapore, Hong Kong, Indonesia, South Korea and Australia.

4. India's trade deficit

- India's trade deficit with China has increased from \$1 billion to \$73 billion in the past 21 years.
- Data show that imports from China have skyrocketed since the beginning of this century from \$ billion in 2001-02 to \$ 94.57 billion in 2021-20.
- However, during this period, India's exports to China have increased at a snail's pace from about \$ 1 billion to \$21 billion.
- Due to this surge in imports, India's trade deficit with China increased from about \$1 billion in 2001-02 to \$ 73 billion.
- It is expected to rise further this year.
- During the first seven months (April-October) of the current financial year (2022-23), India's trade deficit with China stood at \$ 51 billion, which was 39 per cent higher than the figure (\$37 billion) recorded in the corresponding period of the last fiscal.
- China alone accounted for over one-third of India's total trade deficit (\$ 191 billion) during 2021-22.
- The rising gap between imports and exports from China is evident from the fact that two decades ago, India's imports accounted for about 60 per cent of the total bilateral trade between the two countries, but now it is over 80 per cent.

5. India's Imports

- An analysis of the trade data shows that the recent spike in trade with China is due to an unprecedented surge in imports from the neighbouring country in recent years.
- The monthly figure for imports from China, which hit a low of \$ 3.32 billion in June 2020 during the Covid lockdown, started rising soon after the easing of restrictions and rose to \$ 5.58 billion in the following month (July 2020).
- Since then, it continued rising and scaled a new peak of \$ 10.24 billion in July this year.
- The figure for average monthly imports from China has increased from \$ 5.43 billion in 2020-21 to \$ 7.88 billion in 2021-22.
- In the first seven months (April-October) of the financial year 2022-23, the figure reached \$ 8.61 billion.
- In the pre-Covid times, the average monthly import figure stood at \$ 5.43 billion during 2019-20.
- For the first time since June 2020, there has been a slight dip in imports from China in October 2022, with the figure coming down to \$ 7.85 billion from \$ 8.69 billion a year ago.

5.1. Commodities that India imports from China

- During 2021-22, 15.42 per cent (\$94.57 billion) of India's total imports (\$613.05 billion) came from China.

The top commodities that India bought included:

1. Electrical machinery and equipment and parts thereof;
 2. Sound recorders and reproducers, television image and sound recorders and reproducers and parts
 3. Nuclear reactors, boilers, machinery and mechanical appliances and parts thereof
 4. Organic chemicals
 5. Plastic and plastic articles and
 6. Fertilisers.
- A look at the item-wise list of imports shows that the most-valued Chinese item in the Indian import basket was the personal computer (laptop, palmtop etc), which accounted for \$5.34 billion in 2021-22.
 - It was followed by "Monolithic integrated circuits digital (\$4 billion), lithium-ion (\$1.1 billion), solar cells (\$ 3 billion) and urea (\$1.4 billion).
 - As far as the US is concerned, India imported petroleum crude, coking coal, LNG, diamonds, almonds, turbo-jets, etc.

6. India's exports to China

In 2021-22, India's exports to China stood at \$21.25 billion, which was 5 per cent of India's total shipments (\$ 422 billion).

Among the top commodities, China bought from India included:

1. Ores, slag and ash (\$ 2. 5 billion);
2. Organic chemicals (\$ 2.38 billion), mineral fuels, mineral oils and products of their distillation, bituminous substances, mineral waxes (\$1.87 billion)
3. Iron and steel (\$1.4 billion)
4. Aluminium and articles of thereof (\$1.2 billion) and
5. cotton (\$1.25 billion).
6. Among single items, light Naphtha (\$ 1.37 billion) was India's most valued export item to China during 2021-22.

As far as the United States is concerned, diamonds, gold jewellery set with diamonds vannamei shrimp and turbo-jets were among the top items imported from India.

GS III: Science & technology

XBB VARIANT

1. Context

The Union Ministry of Health has issued a statement emphatically rejecting the “fake and misleading” claims on social media that the **XBB sub-variant of Omicron is “5 times more virulent than the Delta** variant and has a higher mortality rate”.

India’s deadly second wave of April-May 2021 was driven by Delta. XBB is the dominant variant now, and caused more than 65% of the infections in the country in November 2022.

2. About XBB Variant

- XBB is a recombinant of two Omicron sub-variants, BA.2.10.1 and BA.2.75
- Several studies have shown that XBB is more immune evasive that is, it has the ability to circumvent immunity from vaccination-induced infection and has a growth advantage over other currently circulating variants of Omicron
- This essentially means that the variant is more likely to cause re-infection or breakthrough infections in people.
- This, however, does not mean that the variant can lead to more severe disease, hospitalisations, or deaths.
- According to WHO-There has been a broad increase in prevalence of XBB in regional genomic surveillance... The current data do not suggest there are substantial differences in disease severity

3. Does XBB affects Lungs?

- That is what has been claimed and it is not true.
- Unlike the Delta variant that went deep into the lungs and led to a fall in oxygen saturation, Omicron variants are known to affect the upper respiratory tract the nostrils, nasal cavity, mouth, and throat
- The virus can go into the lungs in some cases, but it is not the location of choice for the variant.
- XBB follows a disease pattern that is similar to its forbear Omicron variants.
- This, coupled with the high vaccination rate and high infection rate in India, has meant that the Omicron wave resulted in fewer fatalities in the country.

4. Key takeaways

In most people, the XBB variant is likely to lead to a fever, cough, and cold — and most people are not even getting tested now.

XBB accounted for 8% of all the cases in the country in September, increasing to 45.2% in October, and 65.6% in November and it is now the dominant variant in India

If XBB had the potential to drive a surge in cases, hospitalisations, and deaths, some indications would be visible by now.

UNCONTROLLED RE-ENTRIES OF SATELLITES

1. Context

More than 140 experts and dignitaries have signed an open letter published by the Outer Space Institute (OSI) calling for both national and multilateral efforts to restrict uncontrolled re-entries the phenomenon of rocket parts falling back to earth in an unguided fashion once their missions are complete.

2. Key points

- The Soviet Union launched the first artificial satellite in 1957.
- Today, there are more than 6, 000 satellites in orbit, most of them in low-earth (100-2, 000 km) and geostationary (35, 786 km) orbits, placed there in more than 5, 000 launches.
- The number of rocket launches has been surging with the advent of reusable rocket stages.

3. Stages in the rocket launch

- Rockets have multiple stages. once a stage has increased the rocket's altitude and velocity by a certain amount, the rocket sheds it.

- Some rockets jettison all their larger stages before reaching the destination orbit; a smaller engine then moves the payload to its final orbit.
- Others carry the payload to the orbit and then perform a deorbit manoeuvre to begin their descent.
- In both cases, rocket stages come back down in controlled or uncontrolled ways.

4. About Uncontrolled re-entry

- In an uncontrolled re-entry, the rocket stage simply falls.
- Its path down is determined by its shape, angle of descent, air currents and other characteristics. It will also disintegrate as it falls.
- As the smaller pieces fan out, the potential radius of impact will increase on the ground.
- Some pieces burn up entirely while others don't.
- Because of the speed at which they are travelling, debris can be deadly.

A 2021 report from the **International Space Safety Foundation** said, "an impact anywhere on an airliner with the debris of mass above 300 grams would produce a catastrophic failure, meaning all people on board would be killed".

- Most rocket parts have landed in oceans principally because the earth's surface has more water than land. But many have dropped on land as well.

5. Falling off Rockets

- The examples of parts of a Russian rocket in 2018 and China's Long March 5B rockets in 2020 and 2022 striking parts of Indonesia, Peru, India and the Ivory Coast, among others.
- Many news reports have focused on Chinese transgressions of late, but historically, the U.S. has been the worst offender.
- Parts of a **Space X Falcon 9** that fell in Indonesia in 2016 included two "**refrigerator-sized fuel tanks**".
- If re-entering stages still hold fuel, atmospheric and terrestrial chemical contamination is another risk.

5.1 RISAT-2

- India's 300-kg RISAT-2 satellite re-entered earth's atmosphere in October after 13 years in low-earth orbit.

- The ISRO tracked it with its system for safe and sustainable space operations management a month beforehand.
- It plotted its predicted paths using models in-house.
- The RISAT-2 eventually fell into the Indian Ocean on October 30.

6. Scientists' concerns

Conservative estimates place the casualty risk from uncontrolled rocket body re-entries as being on the order of 10 per cent in the next decade and that countries in the "**Global South**" face a "**disproportionately higher**" risk of casualties.

7. ODMSP

- The U.S. Orbital Debris Mitigation Standard Practices (ODMSP) require all launches to keep the chance of a casualty from a re-entering body to be below 0.01 per cent.
- But the U.S. Air Force and NASA have waived this requirement on multiple occasions.
- A July 2022 study by researchers in Canada found that this threshold, which some other countries have also adopted, is arbitrary and makes little sense in an era when new technologies and mission profiles enable controlled re-entries, and because many places have become more densely populated.

8. Liability Convention 1972

- There is no international binding agreement to ensure rocket stages always perform controlled re-entries nor on the technologies with which to do so.
- The Liability Convention 1972 requires countries to pay for damages, not prevent them.
- These technologies include wing-like attachments, de-orbiting brakes and extra fuel on the re-entering body and design changes that minimise debris formation.

9. The Wayforward

- Any kind of re-entry will inevitably damage some ecosystems, it recommends that bodies aim for an ocean to avoid human casualties.
- The future solutions be extended to re-entering satellites as well.
- Advances in electronics and fabrication have made way for smaller satellites, which are easier to build and launch in large numbers.
- These satellites experience more atmospheric drag than if they had been bigger, but they are also likelier to burn up during re-entry.

INTERNET OF THINGS AND ARTIFICIAL INTELLIGENCE IN AGRICULTURE

1. Context

The government has taken up various activities using the Internet of Things (IoT) and Artificial Intelligence (AI) in Agriculture. Applications include areas of Precision Farming, Agricultural Drones and Hopping systems, Livestock Monitoring, Monitor Climate Conditions, Smart Greenhouses, AI and IoT-based Computer imaging, etc.

2. Government Initiatives

Department of Agriculture & Farmers Welfare appointed 5 Knowledge partners and 24 Agribusiness Incubators to promote innovation and agriprenuership by providing financial support and nurturing the incubation ecosystem.

2.1 Various activities have been taken up by the government, using the Internet of Things (IoT) and Artificial Intelligence (AI) in agriculture.

Department of Science & Technology (DTS) is implementing a National Mission on Interdisciplinary Cyber-Physical systems (NM-ICPS). Under the Mission, 25 Technology Innovation Hubs (TIHs) have been set up in the premier institutes of national importance across the country in advanced technology verticals. Three of these TIHs are involved in the applications of the Internet of Things (IoT) and Artificial Intelligence (AI) in Agriculture to carry out research, translation, and technology development for various technologies including IoT and AI, namely

- Technology and Innovation Foundation in the technology vertical of "Technologies for Agriculture and Water" set up at the Indian Institute of Technology (IIT), Ropar.
- TIH Foundation of IoT and Internet of Everything (IoE) in the technology vertical of "Technologies for Internet of Things and Internet for Everything" set up at IIT Bombay.
- AI4ICPS foundation in the technology vertical "Artificial Intelligence and Machine Learning" set up at IIT Kharagpur.

2.2 Some of the applications of AI and IoT in Agriculture are in the areas of Precision Farming, Agricultural Drones and Hopping systems, Livestock Monitoring, Monitor Climate Conditions, Smart Greenhouses, AI and IoT-based Computer imaging, etc. The work/activities taken by the above 3 institutes are given below:

- IIT Ropar-Technology and Innovation Foundation is working towards IoT-based devices and sensors that are being introduced to saffron production and supply all over India.
- TIH Foundation of IoT and IOE is executing a project of effective and efficient agriculture technology, which aims to develop an end-to-end solution for Agriculture Technology (Agri Tech) to predict crop production in the season. EAgrIS is an IoT-based platform developed for this purpose. As an application of IoT in Precision Agriculture, the TIH focuses on Aerial Robotics for Soil Parameters Monitoring, Drone based Imaging, and Drone-based spraying. For the application of AI in Precision Agriculture, the focus of TIH is to develop a predictive data analysis model to make intelligent decisions based on ambient conditions (temperature, humidity, wind speed, and direction rainfall), soil parameters (moisture, temperature, electrical conductivity, pH, NPK, Sulphur) and leaf wetness.
- AI4ICPS Foundation is developing AI-based technologies for Precision Agriculture, Predictive and Forecasting models using AI for Crop Health Monitoring and Soil Health Monitoring.

3. Other Initiatives

- Under the Digital India initiatives, the Ministry of Electronics and Information Technology (MeitY) along with NASSCOM and the state governments has set up Centres of Excellence on the Internet of Things at Bengaluru, Gurugram, Gandhi Nagar, and Vishakapatnam. One of the objectives of these centers is to enable India to emerge as an innovation hub in IoT through the democratization of innovation and the realization of prototypes. One of the focus areas of Centres of Excellence on IoT at Vishakapatnam is Agri-tech and it connects various entities such as startups, enterprises, venture capitals, government, and academia.
- Under the National e-Governance Plan in Agriculture (NeGPA) program under the Department of Agriculture & Farmer's welfare funding is given to state governments for Digital Agriculture projects using emerging technologies like Artificial Intelligence and Machine Learning (AI/ML), Internet of Things (IoT), Blockchain, etc.
- A program called "Innovation and Agri-Entrepreneurship Development" has been in operation under Rashtriya Krishi Vikas Yojana (RKVY) since 2018-19 to promote innovation and agripreneurship by providing financial support and nurturing the

incubation ecosystem. Start-ups in agriculture and allied sectors are being encouraged to contribute directly and indirectly to enhance the income of farmers by providing opportunities to them and to provide employment to youth. In this connection, five (5) Knowledge Partners (KPs) and Twenty four (24) Agribusiness Incubators (R-ABIs) have been appointed by this Department to advise on the smooth and efficient execution of this program in various states across the country.

4. Start-ups Under this Programme

- Start-ups under the program are taking up projects in various fields of agriculture and allied sectors like Agro-processing, Food Technology & Value Addition, Artificial Intelligence (AI), Internet of Things (IoT), Information & Communication Technology (ICT), Block Chain Technology (BCT), precision farming and Digital agriculture, Blockchain technology, Agri. Logistics, Value & Supply chain management, Online/virtual platform, Agri.Extension, Agri.Inputs, Farm mechanization & innovation, organic farming & products, Natural Resource Management, Renewable Energy, Waste to Wealth, Animal Husbandry, Fisheries, Dairy, Secondary agriculture, etc.
- So far, 1102 start-ups operating in agriculture and allied sectors have been selected and Rs. 66.83 crores has been released in installments. These start-ups were trained for two months at various agribusiness incubation centers i.e KPs & R-ABIs before providing financial assistance.
- The institutes under the Indian Council of Agricultural Research (ICAR) have initiated work on the application of IoT and AI in agriculture.
- Mahalanobis National Crop Forecast Centre (MNCFC) has conducted a few pilot studies under Pradhan Mantri Fasal Bima Yojana using innovative technologies for crop yield estimation through various Government and Private Agencies.
- During 2019-20, pilot studies were conducted envisaging space technologies through 12 agencies in 64 districts of 15 states for 9 crops, while these approaches were validated in Rabi 2019-20 in 15 blocks of 6 states. Further, during 2020-21, the pilot studies were scaled up to 100 districts spread over 9 states of the country, with the help of 7 agencies for paddy crop in Kharif 2020, which continued in Rabi 2020-21 for Rabi, Rice, and wheat Crop.
- Various technologies viz., Satellite, Unmanned Aerial Vehicle (UAVs), Simulation models, IoT devices, and AI/ML techniques were used in the study to derive the yield estimates at the Gram Panchayat level.

GEMINIDS OF METEOR SHOWER

1.Context

This year, the Geminids peaked around December 13-14, when, with a clear sky and away from bright city lights, one can watch scores of meteors streak across the sky

2.Meteors

When meteoroids enter Earth's atmosphere (or that of another planet, like Mars) at high speed and burn up, the fireballs or "shooting stars" are called meteors.

2.1..Meteoroids

They are objects in space that range in size from dust grains to small asteroids. They are like space rocks.

4.Causes Of Meteor Showers

- Meteors are usually fragments of comets. As they enter the Earth's atmosphere at high speed, they burn up, creating a spectacular "shower".
- A meteor shower occurs when the Earth passes through the trail of debris left by a comet or asteroid.
- Meteors are bits of rocks and ice ejected from comets as they move in their orbits about the sun.
- Meteor showers get their names from the constellation in where their radiant is located. Perseids come from Perseus, hence the name Perseids.
- Comets continuously eject material with each passage around the sun; this replenishes the shower meteoroids.
- Approximately 30 meteor showers occur each year that are visible to observers on Earth. Some of these showers have been around longer than 100 years.
- Meteors are sometimes observed with red, yellow, or green trails. The colors are caused by the ionization of molecules - like oxygen which appears to be green.

5.Geminids

These are one of the best and most reliable annual meteor showers. If their peak coincides with the new moon, and if the weather is clear, the Geminids can produce approximately

100-150 meteors per hour for viewing. This year, however, the moon is bright, so only 30-40 meteors per hour will be visible in the Northern Hemisphere.

6. Difference Between Meteors And Geminids

The Geminids are unique because, unlike most meteor showers, they originate not from a comet, but from an asteroid.

7. Causes Of Geminids

- The 3200 Phaethon was discovered on October 11, 1983. It is named after the Greek mythology character Phaethon, son of the Sun God Helios.
- It takes 1.4 years to complete one round of the Sun. As the 3200 Phaethon moves close to the Sun while orbiting it, the rocks on its surface heat up and break off.
- When the Earth passes through the trail of this debris, the Geminids are caused.

8. Why They Are Called Geminids

- The name comes from the constellation Gemini, from whose location in the sky the meteor shower appears to originate.
- According to NASA "The constellation for which a meteor shower is named only serves to aid viewers in determining which shower they are viewing on a given night".
- The constellation is not the source of the meteors and Also, one should not look only to the constellation of Gemini to view the Geminids – they are visible throughout the night.

GS I: Modern Indian history

KAKORI INCIDENT

1. Context

Four revolutionaries of the Indian independence movement were hanged on December 17 (Rajendranath Lahiri) and December 19 (Ashfaqullah Khan, Ram Prasad Bismil, Thakur Roshan Singh) in 1927.

2. Kakori Train Robbery

The hanging of revolutionaries came two years after the Kakori Train Robbery, in which members of the Hindustan Republican Association (HRA) had looted a train transporting money to the British treasury. After the event, the British authorities launched an intense manhunt, leading to the eventual arrest of several members of the HRA.

3. Events Which Led To The Formation Of the Hindustan Republican Association

In 1920, Mahatma Gandhi declared the launch of the Non-Cooperation Movement, a campaign that asked Indians to revoke their support from any activity that "sustained the British government and economy in India."

However, an incident changed the movement's trajectory in 1922. After police firing killed three protesting men in the town of Chauri Chaura in present-day Uttar Pradesh, a mob later set fire to the police station, burning 22 policemen to death.

In his autobiography, Pandit Jawaharlal Nehru said this incident led to the "sudden" end of the Non-cooperation movement, with Gandhi calling it off despite significant internal disagreement within the Indian National Congress (INC).

4. Founding Of The Hindustan Republican Association

The HRA was thus founded by a group of young men who were disillusioned by Gandhi's tactics and what they felt was zealous preaching of "non-violence."

Ram Prasad Bismil and Ashfaqulla Khan, both of whom had a flair for poetry, were among the group's founders. Others included Sachindra Nath Bakshi and trade unionist Jogesh Chandra Chatterjee. Figures such as Chandra Shekhar Azad and Bhagat Singh would also join the HRA.

5. Manifesto Of HRA

- Their manifesto released on January 1, 1925, was titled Krantikari (Revolutionary).
- It proclaimed, "The immediate object of the revolutionary party in the domain of politics is to establish a federal Republic of United States of India by an organized and armed revolution." The manifesto looked at these revolutionaries as "neither terrorists nor anarchists... they do not want terrorism for terrorism's sake although they may at times resort to this method as a very effective means of retaliation."

- Their envisioned republic would be based on universal suffrage and socialist principles, importantly, the “abolition of all systems which make the exploitation of man by man possible.

6. Kakori Train Action incident

- The train robbery at Kakori was the HRA’s first major action, in August 1925.
- On August 9, 1925, as the train was passing the Kakori station, about 15 km from Lucknow, Rajendranath Lahiri, a member of the HRA who was already seated inside, pulled the chain and stopped the train.
- Subsequently, around ten revolutionaries, including Ram Prasad Bismil and Ashfaqullah Khan, entered the train and overpowered the guard.
- They looted the treasury bags (containing approx Rs 4,600) and escaped to Lucknow.
- Due to a misfiring Mauser gun, one passenger (a lawyer named Ahmad Ali) was killed during the robbery, harming the revolutionaries’ intentions to elicit a positive public reaction.
- The British authorities were enraged, undertaking a violent crackdown and soon arresting many members of the HRA.
- Bismil was arrested in October 1925, supposedly after two members of the HRA betrayed him. Ashfaqullah escaped to Nepal and then Daltonganj (in present-day Jharkhand).
- He would be arrested a year later, Out of the forty men arrested by the British, four were handed death sentences, while others received lengthy prison terms.
- The only major leader of HRA at this time who evaded arrest was Chandrasekhar Azad.

7. HRA Afterwards of Kakori Episode

- In 1928, a year after the execution of the Kakori Conspiracy accused, the HRA merged with various other revolutionary groups that had emerged in Punjab, Bihar, and Bengal and became the Hindustan Socialist Republican Association (HSRA).
- Gradually it made its Marxist leanings more explicit, working with the Communist International and speaking of a revolution involving a struggle by the masses to establish “the dictatorship of the proletariat.”
- By the 1930s, the HSRA had lost steam with many of its prominent leaders either dead or in prison. However, over the latter half of the 1920s, the group was key in carrying out various acts of resistance against British rule, participating in protests against the Simon Commission.

8. Why did the Kakori incident elicit such strong reactions?

1. The severity of the British response was somewhat surprising, especially the handing out of capital sentences.
2. One way to view the Kakori incident is to see the symbolic message that it sent to the British Raj.
3. While the sum stolen was paltry, such an act was unprecedented in the Raj where specifically money meant for the British treasury was looted.
4. The British response to Kakori was to set an example for future revolutionaries and restore British authority in the minds of the people.

AMBEDKAR IDEAL DEMOCRACY

1. Context

There have been many studies on Dr. B.R. Ambedkar's conceptualization of democracy, predominantly explained through the lens of social, political, and economic philosophies. Sangharsh Telang and Mayur Kudupale's article, 'Situating Democracy in Ambedkar's Moral Discourse' looks at how Ambedkar situates morality in his discourse of democracy. It also explores the moral foundation that paved the way for Ambedkar's discourse on democracy.

2. About Dr. B.R. Ambedkar

- Dr. Bhimrao Ramji Ambedkar, Popularly known as Babasaheb Ambedkar, was one of the main architects of the Indian Constitution.
- He was a very well-known political leader, philosopher, writer, economist, scholar, and social reformer who dedicated his life to eradicating untouchability and other social inequality in India.
- He was born on 14 April 1891 in Madhya Pradesh in Hindu Mahar Caste. He had to face severe discrimination from every corner of society as the Mahar caste was viewed as "untouchable" by the upper class.

3. Essence of Democracy

- He had complete faith in democracy. While a dictatorship may produce quick results, it can not be a valid form of government. Democracy is superior as it enhances liberty.

He supported the parliamentary form of democracy, which aligns with other national leaders.

- He emphasized 'democracy as a way of life', i.e. democracy not only in the political sphere but also in the personal, social and economic sphere.
- For him, democracy must bring a drastic change in the social conditions of society, otherwise the spilt of political democracy i.e., 'one man and one vote' would be missing. Democratic government can arise only from a democratic society, so as long as caste hurdles exist in Indian society, real democracy can not operate. So he focused on the spirit of fraternity and equality as the basis of democracy to bring out social democracy.
- Along with the social dimension, Ambedkar focused on the economic dimension also. while he was influenced by liberalism and parliamentary democracy, he also found their limitation of them. As per him, parliamentary democracy ignored social and economic inequality. It only focused on liberty while true democracy must bring both liberty and equality.
- Furthermore, Ambedkar gave utmost importance to practicality. For him, concepts and theories needed to be tested as they were supposed to be practiced in society. He used rationality and critical reasoning to analyze any subject matter, because he believed that a subject must first pass the test of rationality, failing which, it must be rejected, altered, or modified.
- Ambedkar used the lens of morality in investigating the caste system, the Hindu social system, the nature of religion, and Indian history. It was difficult to place Ambedkar's framework of democracy within this rigid religious structure and socio-political system, especially since he brought the most marginalized communities into the fold of democracy. Thus, Ambedkar attempts to construct a new structure based on the principles of Buddhism.

4. Types of Morality according to Ambedkar

- Ambedkar divides morality into social morality and constitutional morality.
- He explains that social morality was built through interaction and such interaction was based on the mutual recognition of human beings.
- Yet, under the rigid systems of caste and religion, such interaction was not possible as one did not accept another person as a respectable human being due to their religion or caste background.
- Social was based on equality among human beings and a recognition of respect. Constitutional morality for Ambedkar was a prerequisite to maintaining a system of democracy in a country.

- He believed that only through a negation of hereditary rule, laws that represented all people, with people's representatives, and a state which has the confidence of the people, can democracy be maintained. One single person or political party could not represent the needs or will of all the people.
- Ambedkar realized that the caste system did not go hand in hand with such an understanding of moral democracy. This was because the traditional caste structure was of a hierarchical rule, with no mutual respect among individuals, and complete subjugation of one group by another.

5. Ambedkar's concept of Moral Democracy

- Ambedkar's concept of moral democracy must also be studied through the lenses of particularism (a political theory where one group promote its interests without regard to the interests of larger groups) and universality.
- His analysis of Indian society explains that the caste system is a negative particularistic value in the Hindu religion. The upper castes according to Ambedkar, universalize the negative particularity (their dominance over the other groups) and particularise the negative universal morality (wherein the caste system and the subsequent alienation of certain groups are justified).
- This negative social relation is essentially 'undemocratic'. It is to fight such separation that Ambedkar attempted to bring the democratic processes of Buddhism into the discourse of modern democracy. According to him, Buddhist sanghas were spaces where debates, discussions, and dissent were encouraged.
- Moreover, the practice of 'Voting', which they called 'Salapatraka Grahakas, began in sanghas, lying down moral grounds or principles of social freedom and public reason.
- According to Ambedkar, the roots of democracy lie within the realm of religion, without which associated living was not possible. Thus, instead of removing aspects of religion completely, he attempts to reconstruct a new version of democracy that accepts the democratic aspects of religions like Buddhism.
- In The Buddha and his Dhamma, Ambedkar elaborates how the concepts of Dhamma, which include Prajna or thinking and understanding, sila or good action, and finally Karuna or kindness, emerge as a 'morally transformative' concept that dismantles regressive social relations. An integration of such rules helps in transforming the traditional approach to democracy to create a new form of democracy based on the concepts of morality.
- Ambedkar's Conceptualisation of moral democracy rejects the traditional caste-based religion that hinders social interaction and universalizes negative particularistic values, replacing them with positive particularistic values and moral orders that bind human beings together.

Mains Corner

1. What purpose would simultaneous elections serve?
2. How long are court vacations in India and what are the arguments for and against judges taking breaks? (250 Words)
3. What is a review petition and explain the grounds for seeking the review of a Judgement.
4. What is Consumer Price Index for Agricultural Labourers and Rural Labourers? and Explain how it is measured. (250 Words)
5. NASA's DART mission: Safeguarding Earth, saving humanity. Discuss.

Prelims Corner

1. With reference to the Indian economy, consider the following statements :
 1. Retail inflation is measured by using the Wholesale Price Index (WPI); that is why it is often called WPI-based inflation.
 2. Core inflation is the change in prices of goods and services related to food and energy sectors.
 3. By law, the RBI is required to maintain inflation at a 4 per cent level with a leeway of two percentage points on either side of 4 per cent in any particular month.Which of the above statements are incorrect ?
A) 1 and 2 only B) 2 and 3 only C) 1 and 3 only D) 1,2,3

Answer (A)

Retail inflation is measured by using the Consumer Price Index (CPI); that is why it is often called CPI-based inflation. Essentially it maps the price level that a retail consumer faces as against wholesale inflation, which is measured using the Wholesale Price Index (WPI). Core inflation is the change in prices of goods and services, except for those from the food and energy sectors.

2. Recently seen in news, 'Geminids' are:

- A) Cryptocurrency trading platforms which created an association with financial institutions such as the New York Stock Exchange and Nasdaq.
- B) JAXA's space mission to clarify the origin and evolution of the solar system.
- C) Twitter's new policy revolving around revealing of someone's intimate information.
- D) Meteor showers.

Answer (D)

NASA describes the Geminids as “one of the best and most reliable annual meteor showers”. If their peak coincides with the new moon, and if the weather is clear, the Geminids can produce approximately 100-150 meteors per hour for viewing. This year however, the moon is bright, and so only 30-40 meteors per hour will be visible in the Northern Hemisphere.

3. With reference to review petition, consider the following statements:

- 1. Only parties to a case can seek a review of the judgment on it.
- 2. The Constitution gives, under Article 137, the Supreme Court the power to review any of its judgments or orders.
- 3. When a review takes place, the law allows the court to take fresh stock of the case.

Which of the above statements are correct?

- A) 1 and 2 only
- B) 2 only
- C) 3 only
- D) 1, 2 and 3

Answer (B)

A judgment of the Supreme Court becomes the law of the land, according to the Constitution. It is final because it provides certainty for deciding future cases. However, the Constitution gives, under Article 137, the Supreme Court the power to review any of its judgments or orders.

This departure from the Supreme Court's final authority is entertained under specific, narrow grounds. So, when a review takes place, the law is that it is allowed not to take fresh stock of the case but to correct grave errors that have resulted in the miscarriage of justice.

It is not necessary that only parties to a case can seek a review of the judgment on it. As per the Civil Procedure Code and the Supreme Court Rules, any person aggrieved by a ruling can seek a review. However, the court does not entertain every review petition filed.

4. With reference to nuclear fusion and fission reactions, consider the following statements:

1. A large amount of energy is released in both these processes, but substantially more in fusion than fission.
2. Fusion is a carbon-free source of energy, and has negligible radiation risks.
3. Fusion reactions happen only at very high temperatures, 10 times the temperature that exists at the core of the Sun.

Which of the following statements are correct?

- A) 1 and 2 only B) 2 and 3 only C) 1 and 3 only D) 1, 2 and 3

Answer (D)

A large amount of energy is released in both these processes, but substantially more in fusion than fission. For example, the fusion of two nuclei of a heavier isotope of hydrogen, called tritium, produces at least four times as much energy as the fission of a uranium atom which is the normal process of generating electricity in a nuclear reactor. Besides greater energy yield, fusion is also a carbon-free source of energy, and has negligible radiation risks. But fusion reactions happen only at very high temperatures, 10 times the temperature that exists at the core of the Sun, and creating such an extreme environment in a laboratory requires huge amounts of energy.

5. Which of the following statements is not true with respect to New Pension Scheme (NPS)?
 - A) The shift to NPS was undertaken due to concerns over the coverage, sustainability, and scalability of the old pension framework.
 - B) PFRDA is the regulator for NPS.
 - C) Only government employees are eligible under NPS.
 - D) The NPS proposed by the Project OASIS report became the basis for pension reforms.

Answer (C)

Resident as well as non-resident Indians in the age group of 18-60 years (as on the date of submission of NPS application) can invest.

Over the last eight years, the NPS has built a robust subscriber base, and its assets under management have increased. As on October 31, 2022, the Central government had 23,32,774 subscribers, and states had 58,99,162 subscribers. The corporate sector had 15,92,134 subscribers, and the unorganized sector 25,45,771. There were 41,77,978 subscribers under



the NPS Swavalamban scheme. The total assets under management of all these subscribers stood at Rs 7,94,870 crore as on October 31, 2022.



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