

# **CSTT Launches Multilingual Technical Terms Portal**

#### **Source: TH**

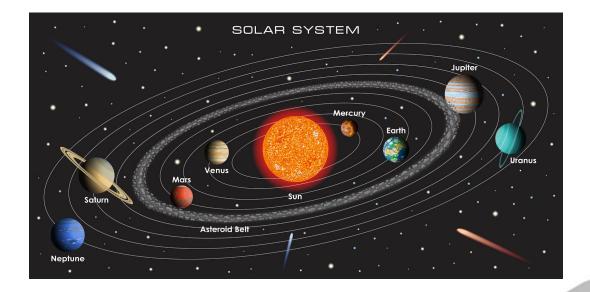
Recently, the <u>Commission for Scientific and Technical Terminology (CSTT)</u>, under the Union Education Ministry, launched a unique website '**shabd.education.gov.in**' to provide access to technical terms in all 22 official Indian languages.

- The portal serves as a **central repository** for scientific and technical terms, offering 322 glossaries with 22,00,000 searchable words, with plans to expand to 450 glossaries.
  - Users can search for terms by language, subject, or dictionary type, and provide feedback on existing terms.
- This initiative aligns with the broader effort to deliver <u>technical education</u> in Indian languages, including fields like medicine and engineering.
- CSTT, established in 1961, focuses on evolving scientific terminology and regularly publishes textbooks, monographs, and journals such as Vigyan Garima Sindhu and Gyan Garima Sindhu.
- Key Initiatives in India to Promote Technical Education are All India Council for Technical Education (AICTE), Prime Minister Research Fellowship (PMRF), Impacting Research Innovation and Technology (IMPRINT), and Scheme for Trans-Disciplinary Research for India's Developing Economy (STRIDE), and Scheme for Transformational and Advanced Research in Sciences (STARS) etc. are implemented in the Ministry of Education for promotion of technical education and research ecosystem in Higher Education Institutes.

Read more: Technical Education Quality Improvement Programme

Saturn's Rings Will Briefly Disappear in 2025

Source: IE

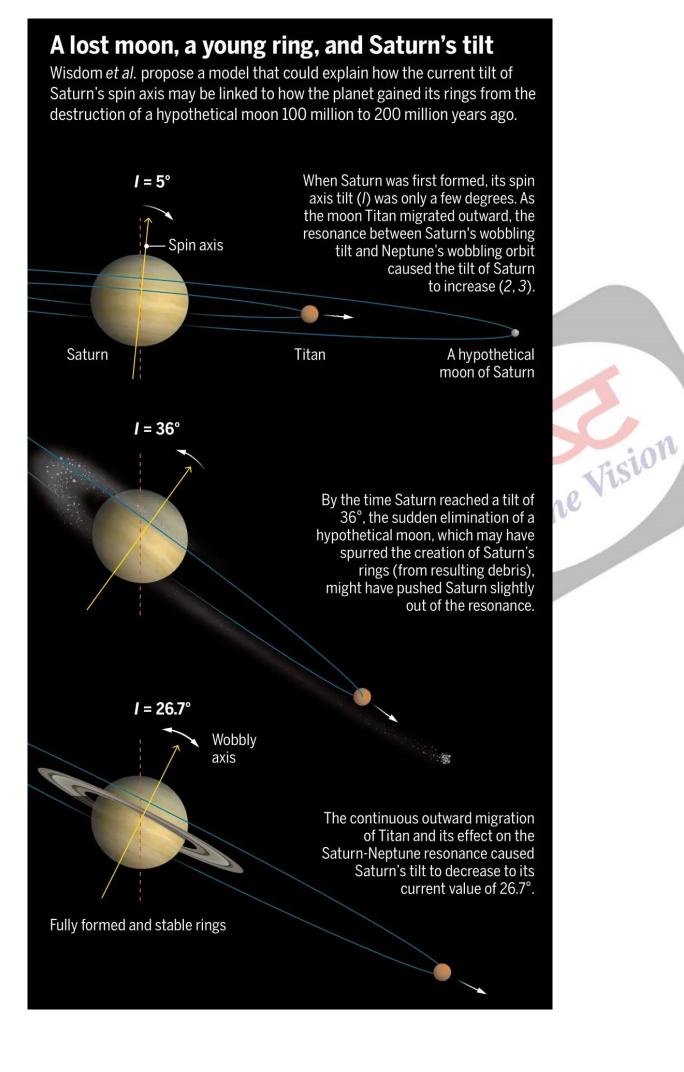


Recently, <u>NASA</u> confirmed that **Saturn's rings will briefly disappear** in March 2025 due to their **alignment with Earth**, making them **appear edge-on** from earth.

- This optical phenomenon occurs every 13 to 15 years, with the last occurrence in 2009.
- Saturn takes about 29.4 Earth years to complete one orbit around the Sun and is tilted at an angle of 26.73 degrees so rings appear to change orientation. In March 2025, only the edges of the rings will be visible, reflecting minimal light.

### Saturn and its Rings

- Saturn is the sixth planet from the Sun and the second largest (after <u>Jupitar</u>) in the solar system.
- It has a ring system, made up of ice and rock, which is the most complex among all planets.
  - Saturn's rings span about 282,000 kilometers in width but are incredibly thin, measuring just 10 to 30 meters thick.
  - The planet has **7 primary rings**. Each ring orbits Saturn at **different speeds**.
  - If laid edge-to-edge, Saturn's ring system could stretch the distance between Earth and the Moon.
- As per NASA, Saturn has the highest number of moons (146) in the solar system. Like Jupiter, Saturn is a gaseous planet primarily composed of hydrogen and helium.
- Missions to Saturn: Pioneer 11, Voyager 1, and Voyager 2, Cassini spacecraft.
- NASA estimates that Saturn's rings will permanently disappear in the coming 300 million years due to "ring rain," a process that drains water from the rings at a rapid rate.



### WB Raises India's GDP Forecast to 7%

#### **Source: TH**

Recently, the World Bank has raised India's growth forecast for FY25 to 7% from 6.6%.

- This aligns with forecasts from the <u>International Monetary Fund (IMF)</u> and <u>Asian</u>
   <u>Development Bank (ADB)</u>.
- The Reserve Bank of India (RBI) has also projected India's GDP to grow at 7.2% in FY25.
- The World Bank expects a gradual rise in private investment and a recovery in consumption, but highlights unemployment as a key challenge to India's economic growth.
- While urban female unemployment has improved to 8.5% in early FY 24-25, urban youth unemployment remains high at 17%.



Read more: World Bank Forecasts India's Economic Growth Rate

### **Exercise Varuna**

### **Source: PIB**

Recently, the **22<sup>nd</sup> edition** of the **India-France** bilateral **naval** <u>exercise VARUNA</u> took place in the <u>Mediterranean Sea</u>.

- INS Tabar, a frontline stealth frigate, ship borne Helicopter and LRMR Aircraft P81 participated from the Indian side, while French side was represented by FS Provence, Submarine Suffren, Aircraft F20; Atlantique2, fighters MB339 and NH90 Dauphin helicopters.
- These joint-exercises are conducted either in the **Indian Ocean** or the **Mediterranean Sea**.
- Operations Conducted: Advanced naval operations, including tactical maneuvers, antisubmarine warfare exercises, flight exercises, air defense exercises, live weapon firings, PHOTO-EX (Photographic Exercise) and steam past.
- Other Indo-French Joint Exercises:
  - Desert Knight-21 and Garuda (Air exercise)
  - Shakti (Army exercise)

#### **Joint Exercises with India:**

Country	Exercise
Australia	Austra Hindba <mark>h</mark>
Bangladesh	Sampriti
China	Hand in Hand
France	Shakti
Indonesia	Garuda Shakti
Kazakhstan	Prabal Dostykk
Kyrgyzstan	Khanjar
Maldives	Ekuverin
Mongolia	Nomadic Elephant
Myanmar	Imbex
Nepal	Surya Kiran
Oman	Al Nagah
Russia	Indra
Seychelles	Lamitiye
Sri Lanka	Mitra Shakti
Thailand	Maitree
UK	Ajeya Warrior
USA	Yudhabhayas
USA	Vajra Prahar

Read More: Major Military Exercises of India

### **Ovarian Cancer Awareness Month**

#### Source: TH

### Why in News?

The American Association for Cancer Research, the world's oldest and largest professional organization dedicated to cancer research, has recognized September as Ovarian Cancer Awareness Month.

• This month is dedicated to **raising awareness** about this deadly gynecological cancer.

#### Note:

 National Cancer Awareness Day is celebrated in India on 7th November every year to raise awareness about cancer and encourage early detection.

### What are the Key Facts Related to Ovarian Cancer?

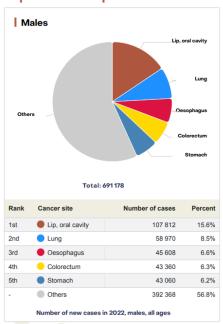
- About:
  - Ovarian cancer is a cancerous tumor that forms in the tissues of an ovary. The
    ovaries are a pair of female reproductive glands that make eggs and female
    hormones.
  - <u>Cancer</u> is a disease in which abnormal cells in the body grow out of control and form a tumor.
- **Epidemiology**: Ovarian cancer contributes to **6.6%** of all women's cancers in India. The disease is particularly problematic due to late diagnosis, which significantly impacts survival rates.
  - In India, ovarian cancer ranks among the top 3 cancers (after breast and cervix cancer) affecting women.
  - In 2022, India reported 47,333 new ovarian cancer cases and 32,978 deaths.
- Symptoms: Common symptoms include bloating, pelvic or abdominal pain, loss of appetite, feeling full quickly, frequent urination, indigestion, constipation, back pain, persistent fatigue, weight loss, and postmenopausal vaginal bleeding.
  - These **symptoms often lead to misdiagnosis** or delayed treatment.
- Type of Ovarian Cancer:
  - Type I: Less common, typically diagnosed early, and has a better prognosis.
  - **Type II:** More aggressive, usually **diagnosed at an advanced stage**, and responsible for the majority of ovarian cancer deaths.
- Survival Rates: The survival rate is heavily dependent on the stage at which the cancer is detected.
  - Research indicates that about **20% of patients with advanced ovarian cancer** who receive optimal treatment can be disease-free at 10 years.
- Screening Challenges: Unlike breast or cervical cancer, there are no effective screening tests for ovarian cancer.
  - The CA125 blood test, while useful for monitoring diagnosed cases, is not recommended for routine screening due to its limited specificity and potential for false positives.
    - The CA 125 test measures a blood protein to diagnose or monitor ovarian, fallopian tube, or primary peritoneal cancer.
- Genetic Factors: Ovarian cancer has a strong hereditary component, with 65-85% of hereditary cases linked to mutations in the BRCA1 and BRCA2 genes.
  - Women with these mutations face significantly higher risks of developing ovarian cancer.

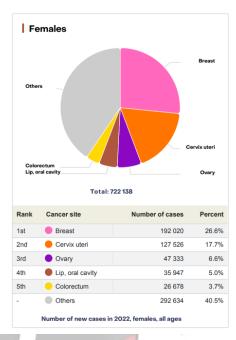
- BRCA1 and BRCA2 genes help repair **DNA** and **regulate cell division**. Mutations in these genes **raise the risk of breast, ovarian, and other cancers**.
- Lifestyle Factors: Certain lifestyle choices, including talcum powder usage and exposure to chemicals in hair products, have been discussed as potential risk factors for ovarian cancer.
  - Additionally, <u>Hormone Replacement Therapy (HRT)</u> has been associated with an increased risk.
  - HRT is commonly used to treat menopausal symptoms like hot flashes and vaginal discomfort.

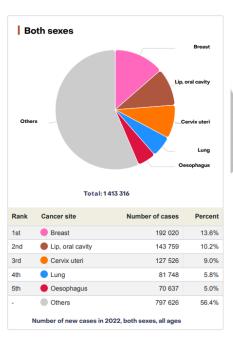
#### Reducing Risk:

- Genetic counseling is crucial for women with a family history or genetic mutation (BRCA1/BRCA2) linked to ovarian or breast cancer, providing tailored guidance on risk management and preventive measures.
- A diet rich in fruits, vegetables, whole grains, and antioxidants may help reduce ovarian cancer risk.
- Maintaining a **healthy weight** through diet and exercise may lower the risk.
- **Regular gynecological check-ups** can help monitor reproductive health and detect potential issues early.

### Top 5 most frequent cancers\*\*







### What are the Government Initiatives Related to Cancer Treatment?

- National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke
- National Cancer Grid
- National Cancer Awareness Day
- HPV Vaccine

Read More: Rising Cancer Concerns.

### **UPSC Civil Services Examination, Previous Year Questions (PYQs)**

#### **Prelims**

- Q. With reference to the treatment of cancerous tumours, a tool called cyberknife has been making the news. In this context, which one of the following statements is not correct? (2010)
- (a) It is a robotic image guided system

- (b) It delivers an extremely precise dose of radiation
- (c) It has the capability of achieving sub-millimetre accuracy
- (d) It can map the spread of tumour in the body

Ans: (d)

# Q. 'RNA interference (RNAi)' technology has gained popularity in the last few years. Why? (2019)

- 1. It is used in developing gene-silencing therapies.
- 2. It can be used in developing therapies for the treatment of cancer.
- 3. It can be used to develop hormone replacement therapies.
- 4. It can be used to produce crop plants that are resistant to viral pathogens.

### Select the correct answer using the code given below.

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

Ans: (a)

# PM Surya Ghar-Muft Bijli Yojana

For Prelims: PM Surya Ghar—Muft Bijli Yojana, Renewable Energy Services Company (RESCO) Model, Utility Led Asset (ULA) Model, Net Metering, Solar Rooftop System, Model Solar Village, Urban Local Bodies, Panchayati Raj Institutions, Duck Curve.

For Mains: Significance of solar power for energy security, Challenges associated with solar power

#### **Source: LM**

### Why in News?

Recently, the **Ministry of New and Renewable Energy** has come up with draft guidelines for the **central financial assistance** and **payment security mechanism** for the **PM Surya Ghar—Muft Bijli Yojana.** 

■ The union cabinet approved the Rs 75,000 crore PM Surya Ghar—Muft Bijli Yojana to benefit 1 crore families in February 2024.

### What are the Key Highlights of the Draft Guidelines?

- Models: The draft guidelines have been issued under the renewable energy services company (RESCO) model and utility led asset (ULA) model of the rooftop solar scheme—'PM Surya Ghar—Muft Bijli Yojana'.
  - Renewable Energy Services Company (RESCO) Model: RESCO develops and owns the rooftop solar system installed on the consumer's rooftop for at least five years.
    - The RESCO also makes all the **operational expenditures** required for the maintenance of the plant, as needed.
    - Customers pay the RESCO for the electricity generated and receive net metering benefits on their electricity bill.
    - The RESCO may enter into an arrangement with a distribution company (discom) for the sale of generated power to the grid under a <u>power purchase</u> agreement.
  - Utility led Asset (ULA) Model: Under it, a state <u>discom</u> owns the rooftop solar systems for the project period of at least of **five years**, after which the ownership is transferred to the household.
- Eligibility for Central Financial Assistance (CFA):
  - Grid-connected rooftop solar systems on residential properties, including roofs, terraces, balconies, and elevated structures.
  - Installations under metering mechanisms such as group <u>net metering</u> and virtual net metering.
  - Exclusions: Households with pre-existing rooftop solar systems are not eligible under the RESCO and ULA models for the PM Surya Ghar scheme.
- Payment Security Mechanism: A Rs 100 crore corpus will be established to ensure payment security, managed by a national program implementation agency.
  - The creation of a payment security corpus ensures **financial stability and security** for the solar projects.

### What is PM Surya Ghar-Muft Bijli Yojana?

- About: It is a central scheme to promote the adoption of solar rooftop systems by providing substantial financial subsidies and ensuring ease of installation.
- Objective: It aims to provide free electricity to one crore households in India, who opt to install roof top solar electricity units.
  - The households will be able to get 300 units of electricity free every month.
- Implementation Agencies: The scheme will be executed at two levels.
  - National Level: Managed by the National Programme Implementation Agency (NPIA).
  - State Level: Managed by State Implementation Agencies (SIAs), which are the Distribution Utilities (DISCOMs) or Power/Energy Departments of the respective states or UTs.
- Role of DISCOMs: As SIAs, DISCOMs are responsible for facilitating various measures to
  promote rooftop solar adoption, including ensuring the availability of net metres, and conducting
  timely inspections and commissioning of installations.
- **Subsidy Structure:** The scheme provides subsidies to reduce the cost of installing solar rooftop systems. The subsidy is capped at a maximum of **3kW capacity.** 
  - **60% subsidy** for solar systems up to 2kW capacity.
  - 40% subsidy for systems between 2kW to 3kW capacity.
- Additional Features of the Scheme:
  - Model Solar Villages: A "Model Solar Village" will be developed in each district to serve as a demonstration project and promote rooftop solar adoption in rural areas.
  - Incentives for Local Bodies: <u>Urban Local Bodies</u> and <u>Panchayati Raj Institutions</u> will receive incentives to **promote rooftop solar installations** in their respective areas.

### What are Expected Benefits of PM Surya Ghar-Muft Bijli Yojana?

- Economic Benefits: Households will benefit from reduced electricity bills and can earn additional income by selling surplus power to Distribution Companies (DISCOMs).
  - A 3 kW system can generate over **300 units of electricity** per month, providing free

electricity as per the scheme's objectives.

- Solar Power Generation: The scheme is expected to add 30 GW of solar capacity through residential rooftop installations, generating 1000 billion units (BUs) of electricity over the system's 25-year lifetime.
- Low Carbon Emission: It will reduce CO2 equivalent emissions by 720 million tonnes, contributing significantly to environmental sustainability.
- **Job Creation:** The scheme is anticipated to create around **17 lakh direct jobs** across various sectors such as manufacturing, logistics, supply chain management, sales, installation, operations, and maintenance (O&M).

### What are the Challenges in Implementation of the Scheme?

- Household Reluctance: A significant challenge is the reluctance of households to adopt rooftop solar systems due to the availability of free electricity provided by several states and union territories.
- Restricted Space Use: Serving the 1-2 kW segment is complicated due to limited terrace space, uneven terrain, shading, low property ownership, and risks like vandalism or theft of solar panels.
- Operational Strain on DISCOMs: The current net metering system is financially burdensome for DISCOMs, which already face substantial losses.
  - DISCOMs become unpaid storage facilities for homeowners who generate energy during the day but draw from the grid at other times especially night.
- Storage Integration: The lack of a mandate for storage systems with rooftop solar installations could lead to grid management issues similar to the "duck curve".
  - The Duck Curve refers to a graphical representation of electricity demand from the grid on days when solar energy production is high and demand in the grid is low.
- Quality Assurance Challenges: Customers often find it difficult to assess the quality of the installed systems, making them vulnerable to substandard service and performance.

### What are the Other Government Initiatives to Harness Solar Energy?

- One Sun, One World, One Grid
- Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA)
- National Smart Grid Mission (NSGM) and Smart Meter National Programme
- International Solar Alliance (ISA)
- National Solar Mission
- Solar Park Scheme
- Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM)

### **Way Forward**

- Ensure Targeted Beneficiary Outreach: Partner with local bodies to develop strategies to reach the economically disadvantaged households that consume less than 200-300 units monthly.
- Community Solar Projects: Encourage the development of Community Solar Projects that
  allows shared solar generation from a central plant, benefiting low-income and rural households
  who cannot install rooftop solar systems.
- Revise Net Metering: Explore options like Time-of-Use (TOU) pricing, where consumers
  are charged based on the time they consume energy, to reduce the grid strain from surplus
  daytime solar generation.
- Mandate Storage Integration: Make storage integration mandatory for all rooftop solar installations to enhance grid stability and optimise the use of surplus solar energy.

#### **Drishti Mains Ouestion:**

Q. Critically examine the challenges and opportunities associated with adopting solar energy production

### **UPSC Civil Services Examination, Previous Year Question (PYQ)**

### **Prelims**

Q. With reference to the Indian Renewable Energy Development Agency Limited (IREDA), which of the following statements is/are correct? (2015)

- 1. It is a Public Limited Government Company.
- 2. It is a Non-Banking Financial Company.

#### Select the correct answer using the code given below:

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

Ans: (c)

#### Mains

Q. "Access to affordable, reliable, sustainable and modern energy is the sine qua non to achieve Sustainable Development Goals (SDGs)". Comment on the progress made in India in this regard. (2018)

# "Effective Consultation" in Judicial Appointments

For Prelims: Collegium System, Chief Justice of India, Supreme Court, High Court.

For Mains: Evolution of the Collegium System and its Criticism, Appointment of Judges in SC

#### **Source: IE**

### Why in News?

Recently, the <u>Supreme Court (SC)</u> in its ruling emphasised the importance of **seniority and effective consultation** in the appointment of High Court judges.

- In a case involving the Himachal Pradesh High Court (HC) collegium, the Supreme Court ruled that
  a 'lack of effective consultation' in judicial appointments falls within the scope of judicial
  review.
- It directed a reconsideration of two judicial officers recommended for elevation, highlighting the importance of procedural adherence.

### What is the Background of Case and Supreme Court Ruling?

#### Background:

- In December 2022, the **Himachal Pradesh HC collegium recommended** two District judges for elevation to HC Judges.
- However, the SC collegium requested reconsideration on this prompting a further review.
- Later, HC collegium recommended two other judicial officers. The initially recommended
  judges challenged this decision in the SC, arguing their seniority was overlooked.

#### Supreme Court' Ruling:

- **Maintainability:** The SC assessed whether it had jurisdiction to review appointment recommendations, referencing the <u>Second and Third Judges Cases</u>.
  - It ruled that its review focused solely on whether "effective consultation" occurred after the SC collegium's resolution, without evaluating the candidates' "merits" or "suitability."
- Proper Procedure: The SC collegium had returned the recommendations to the HC Chief Justice and requested for reconsideration of names.
  - The SC examined whether the HC Chief Justice had "effective consultation" with other judges of the High Court.
  - SC held that despite the resolution being addressed to the Chief Justice of HC, he could not independently make recommendations. Decisions must involve "collective consultation" among the Chief Justice and the two senior-most judges of HC.
- This ruling reinforces the need for adherence to established procedures in judicial appointments and highlights the importance of seniority, ensuring a fair and transparent process in the elevation of judges.

### What is the Procedure for the Appointment of High Court Judges?

- Procedure: The appointment of judges to the High Courts follows a procedure based on the collegium system, which was established through various landmark cases, such as <u>Second</u> <u>Judges Case (1993)</u> and further clarified in the <u>Third Judges Case (1998)</u>.
  - The collegium system empowers the judiciary to recommend appointments and transfers of judges to the Supreme Court and High Courts, with the government having a limited role.
  - After the **Third Judges Case (1998)**, the central government and the SC formalised High Court judge appointments through a **Memorandum of Procedure (MoP)**.

### Appointment of High Court Judges:

- For High Court appointments, the collegium comprises the <u>Chief Justice of India (CJI)</u> and the 2 senior most judges of the Supreme Court.
- This collegium would form an opinion on a person to be recommended for appointment to the High Court, taking into account the views of the Chief Justice of the concerned High Court, senior Judges of the High Court, and Judges of the Supreme Court conversant with the affairs of that High Court.
- Memorandum of Procedure (MoP) for Appointment of High Court Judge:
  - High Court Collegium Recommendation: The Chief Justice of the High Court, in consultation with the 2 senior most judges of that court, recommends names for appointment.
  - State-Level Review: The recommendations are sent to the Chief
     Minister and Governor for their views, though they do not have the power to reject the recommendation.
  - Central Government Process: The Governor forwards the recommendations to

- the **Union Minister of Law and Justice**, who conducts a background check.
- Supreme Court Collegium Review: The recommendations are then sent to the CJI, who consults the Supreme Court collegium. If approved, the names are sent to the President for final approval.
  - The government's **role** is limited to delaying appointments or raising **concerns**, but it cannot overrule the collegium's recommendations.

### What is a Collegium System of Judicial Appointments?

- About: It is the system of appointment and transfer of judges of the Supreme Court and High Courts that has evolved through judgments of the <u>Supreme Court (SC)</u>, and **not by an Act** of <u>Parliament</u> or by a provision of the Constitution.
- Evolution of the System:
  - First Judges Case (1981): It is also known as S.P. Gupta v. Union of India (1981).
    - It stated that the <a href="CJI's">CJI's</a> recommendations on judicial appointments and transfers can be rejected for "cogent (strong and convincing) reasons."
    - The ruling **gave the Executive primacy over the Judiciary** in judicial appointments for the next 12 years.
  - Second Judges Case (1993): SC in Supreme Court Advocates-on-Record
     Association vs Union of India (1993) introduced the Collegium system, holding that "consultation" really meant "concurrence".
    - The ruling made the SC collegium's recommendations binding on the central government and granted the judiciary the authority to appoint and transfer higher judiciary judges.
    - It also added that it was not the CJI's individual opinion, but an institutional opinion formed in consultation with the two senior-most judges in the SC.
  - Third Judges Case (1998): SC on the President's reference (<u>Article 143</u>) expanded the Collegium to a 5-member body, comprising the CJI and 4 of his senior-most colleagues.
    - It also outlined 2 limited grounds for challenging a recommendation.
      - Lack of "effective consultation" with relevant individuals or institutions.
      - The candidate's ineligibility based on the qualifications specified in Articles 217 (High Court) and Article 124 (Supreme Court) of the Constitution.
  - Head of Collegium System:
    - The **SC collegium is headed by the CJI (Chief Justice of India**) and comprises 4 other senior most judges of the court.
    - A **HC collegium is led by its Chief Justice** and 4 other senior most judges of that HC.
      - Names recommended for appointment by a HC collegium reaches the government only after approval by the CJI and the SC collegium.
    - Judges of the higher judiciary are appointed only through the collegium system and the government has a role only after names have been decided by the collegium.

Appointment	Consultation
Appointment of Judge of Supreme Court	4 Senior most Judges of the Supreme Court
Appointment of Judge of High Court	2 Senior most Judges of the Supreme Court
Transfer of Judge of High Court	4 Senior most judges of the Supreme Court along
	with the judges of the two High Courts.

### What are the Demerits of the Collegium System?

- Lack of Transparency: The system is criticised for its opaqueness, with limited public insight into the appointment process.
- Nepotism: There is a concern that personal connections and relationships (Uncle Judge

- **syndrome)** within the judiciary can influence appointments, potentially leading to favoritism.
- **Inefficiency:** The absence of a permanent commission for judicial appointments can lead to delays and inefficiencies in filling vacancies.

#### Conclusion

The ongoing debate surrounding judicial appointments in India underscores the necessity for **reforming** the collegium system to enhance transparency, accountability, and efficiency. Implementing measures such as revising the <u>National Judicial Appointments Commission (NJAC)</u> or adopting comparable reforms could effectively address these concerns and contribute to the overall improvement of the judiciary's operations.

### **UPSC Civil Services Examination, Previous Year Question (PYQ)**

### **Prelims**

- Q. With reference to the Indian judiciary, consider thefollowing statements: (2021)
  - 1. Any retired judge of the Supreme Court of India can be called back to sit and act as a Supreme Court judge by the Chief Justice of India with the prior permission of the President of India.
  - 2. A High Court in India has the power to review its own judgement as the Supreme Court does.

#### Which of the statements given above is/are correct?

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

Ans: (c)

#### <u>Mains</u>

**Q.** Critically examine the Supreme Court's judgement on 'National Judicial Appointments Commission Act, 2014' with reference to appointment of judges of higher judiciary in India. **(2017)** 

PDF Refernece URL: https://www.drishtiias.com/current-affairs-news-analysis-editorials/news-analysis/12-09-2024/print