



1. Consider the following statements about the National Company Law Tribunal (NCLT)

- 1) It is a constitutional body.
- 2) It is incorporated for dealing with corporate disputes that are of civil nature arising under the Companies Act.

Which of the statements given above is/are correct?

- A) 1 only
- B) 2 only
- C) Both 1 and 2
- D) Neither 1 nor 2

Answer: B

Explanation:

- **Statement 1 is incorrect and statement 2 is correct:** NCLT is a **quasi-judicial authority** incorporated for dealing with **corporate disputes that are of civil nature** arising under the Companies Act.
- NCLT was constituted by the Central Government in **2016**.
- It focuses on laws concerning the **insolvency and winding up of companies**.
- The composition of the National Company Law Tribunal includes a president and the necessary judicial and technical members.

2. Consider the following statements about the Prohibition of Child Marriage Act 2006

- 1) The Act applies to all India citizens irrespective of religion and beyond India.
- 2) As per the act, the age of marriage for both boys and girls is 18.
- 3) The Act makes child marriage voidable.

How many of the statements given above are correct?



- A) Only one
- B) Only two
- C) All three
- D) None

Answer: B

Explanation:

- The Indian Government enacted the Prohibition of Child Marriage Act of 2006 to **ensure that child marriage is eradicated from within the society.**
- This Act is armed with enabling provisions to prohibit child marriages and provide relief to victims and enhance punishment for those who abet, promote or solemnize such marriages.
- **Statement 1 is correct:** The Act applies to **all India citizens irrespective of religion and beyond India.**

Objectives of the Act

- The primary objective of the Act is to **prohibit solemnization of child marriage.**
- **Statement 2 is incorrect:** As per the act, the **age of marriage for boys is 21, and for girls, it is 18,** and any marriage of people below this age will be considered as a **child marriage** which is illegal, an offence and is punishable under the law.
- **Statement 3 is correct:** The Act makes **child marriage voidable.**
- The Act also allows for **maintenance and residence for the girl** till her remarriage from the male contracting party or his parents.

Prevention

- **Child Marriage Prohibition Officers (CMPO)** are to be appointed in every state to prohibit child marriages, ensure the protection of the victims as well as prosecution of the offenders.
- The Act provides **punishment for those who permit and promote child marriages.**



Protection

- The law provides for all **support and aid including medical aid, legal aid, counseling and rehabilitation support to children** once they are rescued.
- It gives **legal status to all children** born from child marriages and makes provisions for their **custody and maintenance**. It provides for the **residence and maintenance of the female contracting party**.

Prosecution of Offenders

- The law provides for **punishment for a male above 18 years of age marrying a child**.

Child Marriage to be Voidable

- Every child marriage **shall be voidable**, at the option of the contracting party who was a child at the time of the marriage.
- The annulment of child marriage can be **sought within two years** after the child who was a party to the marriage had attained **majority**.
- **Only the children** in the marriage themselves can file a **petition for voidability or annulment** of marriage. And if the petitioner is a **minor**, the petition can be filed through a **guardian or the next best friend** of the married child (who must be an adult of 18 years or more), along with the Child Marriage Prohibition Officer (CMPO).

3. With reference to the Leader of Opposition in Lok Sabha, consider the following statements

- 1) The post received statutory recognition under the Representation of People Act, 1951.
- 2) According to the constitution, the leader of the largest party in Opposition should be recognised as the Leader of Opposition.

Which of the statements given above is/are correct?

- A) 1 only
- B) 2 only
- C) Both 1 and 2



D) Neither 1 nor 2

Answer: D

Explanation:

- The Leader of the Opposition (LoP) is the **Leader of the largest opposition party.**
- The post was **not recognised till 1969** when **Ram Subhag Singh** became the first recognised LoP of the Lok Sabha.
- **Statement 1 is incorrect:** The post received **statutory recognition** through the **Salary and Allowances of Leaders of Opposition in Parliament Act, 1977.**
- The Act extends to **LoPs in the Lok Sabha and the Rajya Sabha** the **same official status, allowances and perks that are admissible to Cabinet Ministers.**
- The Act defines the term '**Leader of the Opposition**' as that member of the Lok Sabha or the Rajya Sabha who, for the time being, is the **Leader of that House of the party in Opposition to the government having the greatest numerical strength and recognised**, as such, by the **chairman of the Rajya Sabha or the speaker of the Lok Sabha.**

Who gets the Leader of Opposition post in Lok Sabha?

- **Statement 2 is incorrect:** The practice has been to recognise the leader of the largest party in Opposition as the LoP provided that party has a **strength that is enough to constitute the quorum for a sitting of the House, or one-tenth of the total membership of the House** — at present that comes to 55 members.
- However, **no such 10 percent rule** for the appointment of the Leader of Opposition is **mentioned in the Leaders of Opposition in Parliament Act.**

How important is the Leader of the Opposition?

- The Leader of the Opposition in the Lok Sabha is said to be the **"shadow Prime Minister with a shadow Cabinet"**.



- The Leader of the Opposition will take over the administration if the ruling government resigns or is defeated on the floor of the House.

4. Which of the following best describes a black hole?

- A) A star that has exhausted its nuclear fuel
- B) A region in space where the gravitational pull is so strong that not even light can escape
- C) A dark spot on the surface of a star
- D) A region in space with no gravitational field

Answer: B

Explanation:

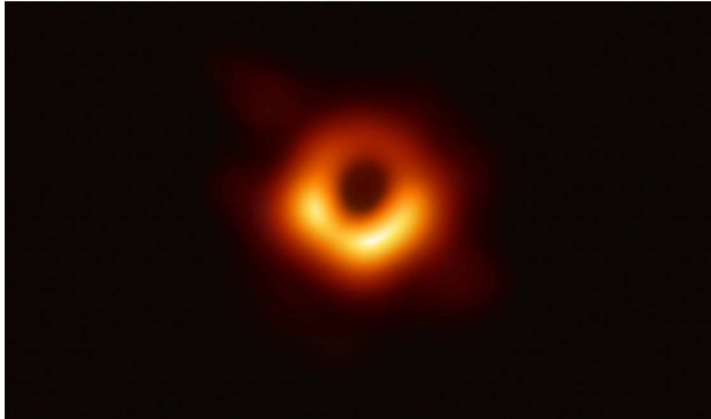
- Black Holes are **huge concentrations of matter packed into very tiny spaces.**
- A black hole is **so dense that gravity** just beneath its surface- the **event horizon**, is **strong** enough that nothing, **not even light can escape.**
- The event horizon is a boundary that contains all the matter that makes up the black hole.

Finding Black Holes

- Black holes **don't emit or reflect light**, making them effectively **invisible to telescopes.**
- Scientists primarily **detect and study** them **based on how they affect their surroundings:**
- Black holes can be **surrounded by rings of gas and dust, called accretion disks**, that emit light across many wavelengths, including X-rays. These disks are crucial for investigating black holes.
- A supermassive black hole's **intense gravity can cause stars to orbit around it in a particular way.** Astronomers tracked the orbits of several stars near the centre of the Milky Way to prove it houses a supermassive black hole, a discovery that won the 2020 Nobel Prize.
- When very **massive objects accelerate through space**, they create **ripples** called **gravitational waves.** Scientists can detect some of these by the ripples' effect on detectors.



- Massive objects like black holes can **bend and distort light from more distant objects**. This effect, called **gravitational lensing**, can be **used to find isolated black holes that are otherwise invisible**.
- The first image of a black hole was captured in 2019 by the Event Horizon Telescope (EHT) collaboration.



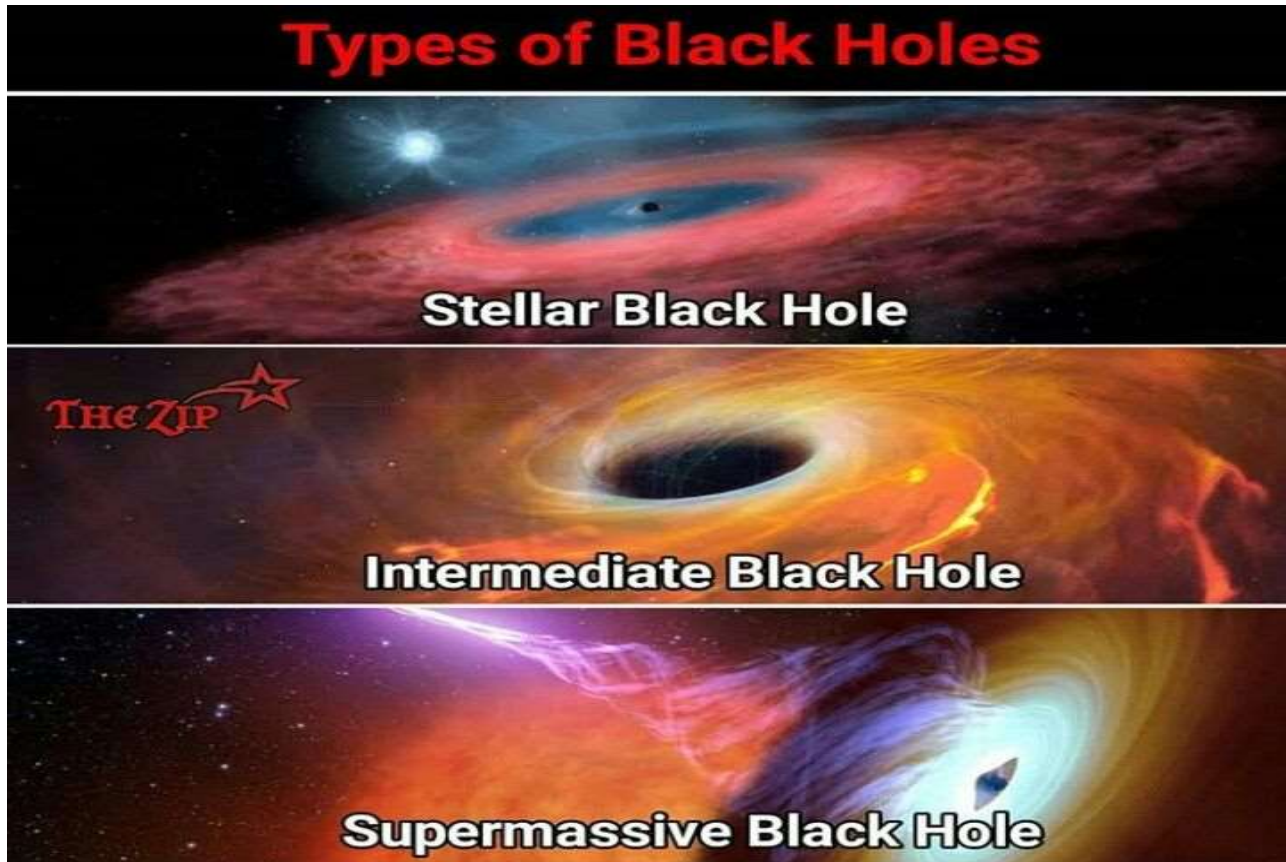
Types of Black Holes

Astronomers generally divide black holes into **three categories according to their mass**:

- **Stellar-mass black holes:**
 - Stellar-mass black holes are born when extremely massive stars collapse and typically **weigh between five and 10 times the mass of the Sun**.
 - Stellar-mass black holes can continue to gain mass through collisions with stars and other black holes.
- **Supermassive black holes:**
 - Supermassive black holes are classified as **having masses more than 100,000 times that of our sun**.
 - They can be **found at the center of most galaxies**, including the Milky Way.
- **Intermediate-mass black holes:**
 - Black holes can be super-big or super-small. The missing link is an intermediate-mass black hole, weighing roughly **100 to 1,000 times our Sun's mass**.



- Few such black holes have been found in other galaxies.



5. Which of the following bodies of water does Sudan have a coastline on?

- A) Atlantic Ocean
- B) Red Sea
- C) Indian Ocean
- D) Mediterranean Sea

Answer: B

Explanation:



- Sudan has a coastline along the Red Sea.
- The Republic of the Sudan is **located between Egypt and Eritrea** in northeastern Africa, bordering the **Red Sea in the northeast**.
- It borders **Libya** in the northwest, **Chad** in the west, the **Central African Republic** in the southwest, **South Sudan** in the south, and **Ethiopia** in the southeast.



6. Consider the following statements about the Minimum Support Price (MSP)

- 1) It is a form of market intervention by the Government to insure agricultural producers against any sharp fall in farm prices.
- 2) It is announced at the beginning of the sowing season by the Cabinet Committee on Economic Affairs (CCEA).

Which of the statements given above is/are correct?

- A) 1 only



- B) 2 only
- C) Both 1 and 2
- D) Neither 1 nor 2

Answer:C

Explanation:

Both the statements are correct.

- Minimum Support Price (MSP) is a form of **market intervention** by the Government to **insure agricultural producers against any sharp fall in farm prices.**
- MSP is the price at which the government procures certain crops from farmers to ensure support price to farmers and affordable prices to the consumer.
- The minimum support prices are announced by the Government at the **beginning of the sowing season** for certain crops on the basis of the recommendations of the **Commission for Agricultural Costs and Prices (CACP).**

About CACP

- The Commission for Agricultural Costs & Prices is an attached office of the **Ministry of Agriculture and Farmers Welfare.** It came into existence in 1965.
- It is **mandated to recommend MSPs** to incentivize the cultivators to adopt modern technology and raise productivity and overall grain production in line with the emerging demand patterns in the country.

How many crops does the minimum support price cover?

- As of now, CACP recommends MSPs of **23 commodities**, which comprise **7 cereals** (paddy, wheat, maize, sorghum, pearl millet, barley and ragi), **5 pulses** (gram, tur, moong, urad, lentil), **7 oilseeds** (groundnut, rapeseed-mustard, soyabean, seasmum, sunflower, safflower, niger seed), and **4 commercial crops** (copra, sugarcane, cotton and raw jute).



- CACP submits its recommendations to the government. The **Cabinet Committee on Economic Affairs (CCEA)** chaired by the **Prime Minister** takes a **final decision** on the level of MSPs and other recommendations made by CACP.

Why in News?

- The Union Cabinet has approved MSP hikes for all kharif season crops, in alignment with the government's policy of keeping MSPs **at least 1.5 times above the cost of production**, aiming at reasonably fair remuneration for the farmers.

How is the production cost arrived at?

- As per CACP, there are three definitions of production cost which includes **A2, A2+FL and C2**.
- A2 covers **all paid-out expenses**, including cash and in kind. It includes costs on seeds, chemicals, hired labour, irrigation, fertilisers and fuel.
- A2+FL covers **actual paid cost and also unpaid family labour**.
- C2 cost method is more comprehensive and makes the calculation by including a wider range of inputs. It includes **actual paid out costs, imputed value of family labour, interest on the value of owned capital assets, rent paid for leased-in land and the rental value of owned land**.
- CACP considers **both A2+FL and C2 costs** while recommending MSP.
- It should be noted that there is currently **no statutory backing** for these prices, **nor any law mandating their enforcement**.

The **agricultural crop year** in India is from **July to June**. The Indian cropping season is classified into **two main seasons** - (i) **Kharif** and (ii) **Rabi** based on the monsoon.

The **kharif cropping** season is from **July–October** during the **south-west monsoon** and the **Rabi cropping** season is from **October-March (winter)**.



The kharif crops include rice, maize, sorghum, pearl millet/bajra, finger millet/ragi (cereals), arhar (pulses), soyabean, groundnut (oilseeds), cotton etc. The rabi crops include wheat, barley, oats (cereals), chickpea/gram (pulses), linseed, mustard (oilseeds) etc.

7. Consider the following statements about the Goods & Services Tax (GST) Council.

1. It is a statutory body to make recommendations to the Union and the States on important issues related to GST.
2. It is chaired by the Prime Minister of India.
3. Every decision of the Council is taken by a majority of not less than three-fourths of the weighted votes of the members present and voting.

Which of the statements given above is/are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 3 only

Answer: D

Explanation:

- **Statement 1 is incorrect:** Goods & Services Tax Council is a **constitutional body** under Article 279A of the amended Constitution, for making recommendations to the Union and State Government on issues related to Goods and Service Tax.
- The Council was introduced by the **Constitution (One Hundred and First Amendment) Act, 2016.**



- **Statement 2 is incorrect:** The GST Council is chaired by the **Union Finance Minister** and other members are the Union State Minister of Revenue or Finance and Ministers in-charge of Finance or Taxation of all the States.

Mandate of GST Council

- The Goods and Services Tax Council shall make recommendations to the Union and the States on—
 - the **taxes, cesses and surcharges** levied by the Union, the States and the local bodies which may be subsumed in the goods and services tax;
 - the goods and services that may be **subjected to, or exempted** from the goods and services tax;
 - the **threshold limit of turnover** below which goods and services may be exempted from goods and services tax;
 - the **rates including floor rates with bands** of goods and services tax;
 - the date on which the goods and services tax be levied on **petroleum crude, high speed diesel, motor spirit (commonly known as petrol), natural gas and aviation turbine fuel.**
- **Quorum:** **One-half** of the total number of Members of the Goods and Services Tax Council shall constitute the quorum at its meetings.
- **Voting share:** Every decision of the Goods and Services Tax Council shall be taken at a meeting, by a majority of **not less than three-fourths** of the weighted votes of the members present and voting, in accordance with the following principles, namely: —
 - the vote of the **Central Government** shall have a weightage of **one-third** of the total votes cast, and
 - the votes of all the **State Governments** taken together shall have a weightage of **two-thirds** of the total votes cast, in that meeting. **Hence, statement 3 is correct.**
- No act or proceedings of the Goods and Services Tax Council shall be invalid merely by reason of—
 - any vacancy in, or any defect in, the constitution of the Council; or



- any defect in the appointment of a person as a Member of the Council; or
- any procedural irregularity of the Council not affecting the merits of the case.
- **Dispute adjudication:** The Goods and Services Tax Council shall establish a mechanism to adjudicate any dispute
- between the Government of India and one or more States; or
- between the Government of India and any State or States on one side and one or more other States on the other side; or
- between two or more States, arising out of the recommendations of the Council or implementation thereof.

8. With reference to India's Foreign Exchange Reserve, consider the following.

1. Foreign currency assets
2. Gold Stock of RBI
3. Special Drawing Rights holdings
4. Reserve tranche

Which of the above are components of India's Foreign Exchange Reserve?

- A. 1 only
- B. 1 and 2 only
- C. 1, 2 and 3 only
- D. 1, 2, 3 and 4

Answer: D

Explanation:

- Foreign Exchange Reserve indicates the reserves held by RBI in the form foreign currency assets, gold, SDR and reserve tranche. Components of foreign exchange reserve:



1. **Foreign Currency Assets**- Currencies of foreign countries are held in foreign exchange reserves. Apart from currency it also includes foreign currency deposit held by RBI with foreign central banks and the Bank for International Settlements (BIS).
2. **Gold Stock of RBI**- The RBI has gold stock as a backup to issue currency and to meet unexpected Balance of Payments (BOP) problems. (*BOP problem occurs when a nation is unable to pay for essential imports or service its external debt repayments*)
3. **SDR Holdings**- Special Drawing Rights (also called "*paper gold*") is a reserve created by the **International Monetary Fund (IMF)** to help countries that have BOP problems. The member countries have to contribute to this account in proportion to their IMF quota. The SDR basket consists of **five** major currencies of the world - the US dollar, Euro, British Pound, Chinese Renminbi and Yen (Japan).
4. **Reserve Tranche**-The reserve tranche is a portion of the required quota of currency that each IMF member country must provide to the IMF. It can be accessed by the member country at any time for its own purposes without a service fee.

9. The primary purpose of the Inter-Services Organisations (Command, Control and Discipline) Act, 2023 is

- A) To promote coordination between civilian and military authorities
- B) To provide a legal framework for joint operations among the Army, Navy, and Air Force
- C) To establish new ranks and pay scales for the armed forces
- D) To restructure the Ministry of Defence

Answer: B

Explanation:



- The Government of India has notified the Inter-Services Organisations (Command, Control and Discipline) Act which was passed in the Parliament in 2023.

Key Provisions of the Act

- The Act **empowers commanders-in-chief and officers-in-command of Inter-Services Organisations (ISOs) with disciplinary and administrative powers** that will govern the personnel serving in or attached to such organizations.

*The Act defines ISO as a body of troops consisting of **personnel belonging to at least two of the three services: the army, the navy, and the air force.***

*Till now, armed forces personnel of all three services are **governed in accordance** with the provisions contained in their **respective service acts** -- Army Act 1950, Navy Act 1957 and Air Force Act 1950.*

This existing legal framework had its limitations when it came to tri-services matters as officers of one service lacked the authority to exercise disciplinary and administrative powers over personnel belonging to another service.

- The Inter-Services Organisations Act will empower the Heads of ISOs and will **promote maintenance of discipline in inter-services establishments** by eliminating the need to revert personnel for disciplinary proceedings to their parent units.
- The Act will also pave the way for **expeditious disposal of cases, avoid multiple proceedings** and will be a step towards **greater integration and jointness** among the armed forces personnel.
- It should be noted that **service personnel** -- whether army, navy or air force -- who serve in an ISO will **continue to be governed by their respective Service Acts.**
- The Act only empowers ISO heads to exercise the disciplinary and administrative powers that relate to the service they belong to.



10. CPEC is a part of which larger initiative of China?

- A) Shanghai Cooperation Organisation (SCO)
- B) Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)
- C) Belt and Road Initiative (BRI)
- D) South Asian Association for Regional Cooperation (SAARC)

Answer: C

Explanation:

What is the CPEC project?

- China-Pakistan Economic Corridor (CPEC) refers to a clutch of major infrastructure works currently under way in Pakistan, intended to **link Kashgar in China's Xinjiang province to Gwadar deep sea port** close to Pakistan's border with Iran.
- Several other road, rail and power projects are associated with the corridor, and the project seeks to expand and upgrade infrastructure across the length and breadth of Pakistan, and to widen and deepen economic ties with China.
- CPEC is **part of the larger Belt and Road Initiative**.
- *China's Belt and Road Initiative aims to strengthen Beijing's economic leadership through a vast program of infrastructure building throughout China's neighbouring regions. It was launched in 2013.*
- *The plan was two-pronged: the overland **Silk Road Economic Belt** and the **Maritime Silk Road**. The project initially aimed to strengthen connectivity with Southeast Asia but later expanded to South and Central Asia, Africa, Europe, and Latin America.*
- CPEC was launched in 2015 and it now envisages investment of over USD 70 billion in different projects of development in Pakistan.



Significance

- The goal of CPEC is both to **transform Pakistan's economy**—by modernizing its road, rail, air, and energy transportation systems—and to **connect the deep-sea Pakistani ports of Gwadar and Karachi to China's Xinjiang province and beyond by overland routes**.
- This would reduce the time and cost of transporting goods and energy such as natural gas to China by **circumventing the Straits of Malacca and the South China Sea**.
- The CPEC project is also **strategically important for China**. Currently, eighty percent of China's oil has to pass through the **Strait of Malacca**, a narrow stretch of water between the Indonesian island of Sumatra and the Malay Peninsula.



- In the event of a conflict, the Malacca Strait could easily be blocked by a rival nation, cutting off China from crucial energy resources. CPEC allows China to circumvent the Strait of Malacca and reduce its **dependency on the strait**.

India's position on CPEC

- India has been opposing the project as it **passes through Gilgit-Baltistan in Pakistan-occupied Kashmir (PoK)**, which New Delhi considers its own territory.
- India claims that the CPEC project encroaches on sovereignty and territorial integrity of the country.

Why in News?

- Pakistan and China have affirmed consensus on the upgradation of the China-Pakistan Economic Corridor (CPEC) and advancing high-quality development of the multi-billion dollar project in the second phase.
- The CPEC, which connects Gwadar Port in Pakistan's Balochistan with China's Xinjiang province, is the flagship project of China's ambitious **Belt and Road Initiative (BRI)**.
- The BRI is seen as an attempt by China to **further its influence abroad with infrastructure projects** funded by Chinese investments across the world.

11. The International Solar Alliance (ISA)'s "Towards 1000" strategy aims to achieve which of the following

- 1) Installation of 1000 GW of solar energy capacity.
- 2) Mobilizing \$1000 billion of investments in solar energy.
- 3) Providing energy access to 1000 million people using clean energy.

Select the correct answer using the codes given below

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



D) 1,2 and 3

Answer: D

Explanation:

- The International Solar Alliance (ISA) was conceived as a **joint effort by India and France** to mobilize efforts against climate change through deployment of **solar energy solutions**.
- It was conceptualized on the sidelines of the **21st Conference of Parties (COP21)** to the United Nations Framework Convention on Climate Change (**UNFCCC**) held in **Paris** in **2015**.
- The **Paris Declaration** that established the ISA states that the alliance is an action-oriented, member-driven, collaborative platform for **increased deployment of solar energy technologies** as a means for bringing energy access, ensuring energy security, and driving energy transition in its member countries.
- The ISA is headquartered in **Gurugram, Haryana**.

Membership

- ISA was conceived as a **coalition of solar-resource-rich countries** (which lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn) to address their special energy needs.
- The first general assembly of the ISA, held in 2018, adopted the amendment to its framework agreement to **expand the scope of membership to all member states of the United Nations**.
- At present, 116 countries are signatories to the ISA Framework Agreement, of which 94 countries have submitted the necessary instruments of ratification to become full members of the ISA.

Objectives

- The ISA is guided by its **'Towards 1000' strategy** which aims to **mobilize USD 1,000 billion of investments** in solar energy solutions by 2030, while **delivering energy access to 1,000 million people** using clean energy solutions and resulting in **installation of 1,000 GW** of solar energy



capacity. This would help mitigate global solar emissions to the tune of 1,000 million tonnes of CO2 every year. Hence all the statements are correct.

12. Which of the following statements is correct regarding the Right to Information Act, 2005?

- A. The Act's definition of "public authorities" does not include Non-Government organizations.
- B. The first request for information goes to the State Information Commission or the Central Information Commission.
- C. If information sought concerns the life or liberty of a person, it shall be supplied within 48 hours.
- D. The act sets a uniform application fee of Rs. 10 throughout the country.

Answer: C

Explanation:

- Under the Right to Information Act, 2005, **Public Authorities** are required to make disclosures on various aspects of their structure and functioning.
- This includes: (i) disclosure on their organisation, functions, and structure, (ii) powers and duties of its officers and employees, and (iii) financial information.
- The intent of such **suo moto disclosures** is that the public should need minimum recourse through the Act to obtain such information. If such information is not made available, citizens have the **right to request** it from the Authorities.
- This may include information in the **form of documents, files, or electronic records** under the control of the Public Authority. The intent behind the enactment of the Act is to **promote transparency and accountability** in the working of Public Authorities.

Who is included in the ambit of 'Public Authorities'?

- The RTI Act defines "public authorities" in **Section 2(h)**.



- A “public authority” means **any authority or body or institution of self- government established or constituted**
 - by or under the Constitution;
 - by any other law made by Parliament;
 - by any other law made by State Legislature;
 - by notification issued or order made by the appropriate Government, and includes any –
 - body owned, controlled or substantially financed;
 - Non-Government organizations substantially financed, directly or indirectly by funds provided by the appropriate Government. **Hence, statement A is incorrect.**

Section 8 of the RTI

- This provides for **exemption from disclosure of information** that are more valid in reasons
 - Which would affect the sovereignty and integrity of India, the security, strategic, scientific or economic interests of the State;
 - Which has been expressly forbidden to be published by any court of law or tribunal;
 - Which would cause a breach of privilege of Parliament or the State Legislature;
 - Information including commercial confidence, trade secrets or intellectual property;
 - Information received in confidence from foreign government;
 - Information which would endanger the life or physical safety of any person; etc.

How is the right to information enforced under the Act?

- The Act has established a **three tier structure** for enforcing the right to information guaranteed under the Act.
- **Statement B is incorrect:** The first request for information goes to the **Central/State Assistant Public Information Officer** and **Central/State Public Information Officer**, designated by the Public Authorities.



- **Statement C is correct:** These Officers are required to provide information to an RTI applicant **within 30 days** of the request. If information sought **concerns the life or liberty of a person**, it shall be supplied within **48 hours**.
- Appeals from their decisions go to an **Appellate Authority**.
- Appeals against the order of the Appellate Authority go to the **State Information Commission or the Central Information Commission**. These Information Commissions consist of a **Chief Information Commissioner, and up to 10 Information Commissioners**.

Section 4(2) of the RTI

- It mandates that different authorities and government departments should **voluntarily disclose (suo motu) much information to the public at regular intervals through various means**, including the internet, so that the public have minimum resort to the use of this Act to obtain information.

Fee

- **Statement D is incorrect:** There is an **application fee that varies for the Centre and for States**.
- For **public authorities under the Central Government**, this is **Rs. 10**.

13. Consider the following statements.

1. Sowa-Rigpa is an ancient Indian medical system conceived and propounded by Lord Buddha in India.
2. It has been propagated and transmitted through teacher-student-lineage prevalent in the Western ghats region of India.
3. Sowa-Rigpa is acknowledged as a traditional medical system by the governments of India, Bhutan, Mongolia and Tibet.

Which of the statements given above is/ are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only



D. 1, 2 and 3

Answer: B

Explanation:

- **Statement 1 is correct:** Sowa-Rigpa is an ancient Indian medical system conceived and propounded by Lord Buddha in India and later was enriched in the entire Trans-Himalayan region.
- **Statement 2 is incorrect:** Sowa-Rigpa originated in India 2500 years ago and was introduced in the TransHimalayan region around the 8th Century CE. Since then, it has been propagated and transmitted through teacher-student-lineage (including family lineage) prevalent in the secular and monastic contexts of the Trans Himalayan region of India.
- Sowa-Rigpa is a traditional medical system of Ladakh, Sikkim, Darjeeling and Kalingpong (West Bengal); Lahaul-Spiti, Kinnour, Dharamsala regions of Himachal Pradesh; Mon-Tawang and west Kameng regions of Arunachal Pradesh; and Tibetan settlements in various parts of India. Sowa-Rigpa is also traditionally practiced in Bhutan, Mongolia, Tibet, China, Nepal and some parts of Central Asia.
- **Statement 3 is correct:** Today, Sowa-Rigpa is acknowledged as a traditional medical system by the governments of India, Bhutan, Mongolia and Tibet.
- Sowa-Rigpa has been recognized and promoted by the Government of India as a traditional medical system.

14. Which of the following is NOT a goal of the iDEX framework?

- A) To support start-ups and MSMEs in the defense sector
- B) To foster collaboration between defense sector and academia
- C) To enhance the import of defense technologies



D) To promote self-reliance in defense technology

Answer: C

Explanation:

- Innovations for Defence Excellence (iDEX) framework was launched in 2018 by the Government with the aim to **foster innovation and technology development in Defence and Aerospace Sector** by engaging Industries including MSMEs, start-ups, individual innovators, R&D institutes and academia to **promote self-reliance**.
- The underlying objective is to **make the country self-reliant and self-sufficient in matters of Defence**.
- Fundamentally, iDEX fosters the **culture of technology co-creation and co-innovation** within the Defence and Aerospace sectors.

Implementing Agency

- **Defence Innovation Organization (DIO)**, a **special purpose vehicle** under the aegis of the **Department of Defence Production, Ministry of Defence**, implements the iDEX framework.
- DIO has been formed as a **'not for profit' company** as per Section 8 of the Companies Act 2013 by Hindustan Aeronautics Limited (HAL) and Bharat Electronics Limited (BEL), both Defence Public Sector Undertakings.
- DIO acts as a bridge between the requirements of the Armed Forces and the solution providers.

Why in News?

- Innovations for Defence Excellence (iDEX), the flagship initiative of the Ministry of Defence, signed the landmark 350th contract in New Delhi.



15. Panama shares its borders with which of the following countries?

- A) Costa Rica and Colombia
- B) Nicaragua and Colombia
- C) Honduras and Costa Rica
- D) Ecuador and Costa Rica

Answer: A

Explanation:

- Panama is a country in Central America that lies on the narrow isthmus connecting North and South America.
- It shares its northern border with **Costa Rica and its southeastern border with Colombia.**
- This strategic geographical position also makes it the site of the Panama Canal, which connects the Atlantic and Pacific Oceans, playing a crucial role in international maritime trade.



16. Which of the following are potential challenges associated with Direct Seeding of Rice (DSR)?

1. Weed management
2. Uniform seed distribution
3. Higher water requirement compared to transplanting



4. Increases Greenhouse gas emissions

Select the correct answer using the codes given below

- A) 1 and 2 only
- B) 2 and 3 only
- C) 1, 2, and 4 only
- D) 1, 2, 3, and 4

Answer: A

Explanation:

- Direct seeding is a crop establishment system wherein **rice seeds are sown directly into the field**, as **opposed to the traditional method** of growing seedlings in a nursery, then transplanting into flooded fields.

Traditional Method

In the traditional method **paddy farmers prepare nurseries** where seeds are first sown. **After 25-35 days, the young seedlings are uprooted and replanted, in the flooded main field.**

While this method is labor and water-intensive, it is known to maximize yields and maintain better crop health.

- **Types of DSR:**
 - **Dry Seeding:** Seeds are sown directly into dry soil, followed by irrigation or pre-monsoon rains.
 - **Wet Seeding:** Pre-germinated seeds are drilled into puddled (wet) soil.

Procedure of DSR

- Paddy seeds are **directly sown**, roughly 20-30 days prior to when they would have been transplanted.



- The **field is irrigated and laser leveled** (leveling ground or an object utilizing a laser beam) prior to the seeding process which is carried out using a seed drill.
- The seeds are then **treated by soaking in a fungicide solution** for eight hours, then dried for half a day before sowing. Treatment of seeds is crucial.
- The first round of irrigation is carried out 21 days after sowing, followed by 14-17 more rounds at 7-10 day intervals, depending on soil type and the quality of the monsoon. The final irrigation takes place 10 days before harvest.

Benefits of DSR

Direct seeded rice is seen to be one of the most efficient, sustainable, and economically-viable rice production systems. It offers the following benefits:

- **Reduces water consumption:**
 - The traditional method requires 3,600 to 4,125 litres of water to grow every kilogram of rice. It also requires 25-27 rounds of irrigation in all. DSR reduces the water consumption in cultivation by 15% to 20%. Hence **statement 3 is incorrect**.
- **Reduces labor** by eliminating seedling uprooting and transplanting
- **Reduces cultivation time, energy, and cost** of cultivation.
- **Lowers Greenhouse gas emissions. Hence statement 4 is incorrect.**
- Mechanized DSR provides **employment opportunities** for youth.
- **Increases total income of farmers** by reducing the cost of cultivation.

Factors for the successful implementation of DSR

Soil suitability is crucial for the successful implementation of DSR. There are two factors here.

- **Soil Texture:** DSR is **best suitable for heavy or medium-to-heavy-textured soils**. Farmers should **avoid DSR in light-textured soils**. Heavy-textured soils contain more clay and less sand, whereas light-textured soils have less clay and more sand. Light-textured soils do not retain water well.
- **Iron content of the soil:** Soil with severe iron deficiency, and weed problems must not be cultivated using this technique. **Lack of iron content can severely impact yields** and lead to major



financial losses for farmers. Sometimes, farmers might even have to transplant the crop anyway, after a month or so, **leading to DSR losing its labour-saving benefits.**

Current constraints

- Higher seed rates. Hence **statement 2 is correct.**
- Seeds being exposed to birds and pests
- Weed management. Hence **statement 1 is correct.**
- Higher risk of lodging (plants that lean excessively or fall over)
- Risk of poor or non-uniform crop establishment

17. The term ‘common but differentiated responsibilities’ is related to

- a) UNFCCC
- b) British Exit from EU
- c) BRICS
- d) ASEAN

Answer: A

Explanation:

- Common but Differentiated Responsibilities and Respective Capabilities (CBDR–RC) is a principle within the **United Nations Framework Convention on Climate Change (UNFCCC)** that acknowledges the different capabilities and differing responsibilities of individual countries in addressing **climate change.**

About UNFCCC

- The UNFCCC was **signed in 1992** at the **United Nations Conference on Environment and Development** (also known as **Rio Earth Summit**)



- It constitutes the **foundational climate agreement** that has provided the platform for most subsequent international climate agreements.
- The agreement is to **stabilize greenhouse gas concentrations** at a level that would prevent dangerous anthropogenic (human-induced) interference with the climate system.
- The UNFCCC entered into force in 1994.
- The **198 countries (including India)** that have **ratified the Convention** are called **Parties to the Convention**.
- **Conference of Parties** is the **main decision-making body of the UNFCCC**. It includes representatives of all the **'Parties'**, i.e. countries that have agreed to participate in and be bound by the UNFCCC.
- The **UNFCCC COP takes place every year**, and is an opportunity to negotiate new measures, and review Parties' progress against the overall goal of the UNFCCC to limit climate change.

18. Consider the following statements about the speaker of Lok Sabha

- 1) The Speaker is elected by the members of the Lok Sabha and holds office until the dissolution of the House.
- 2) The Speaker, like any other member of the House, can face disqualification.
- 3) The salary of the Speaker is drawn from the Consolidated Fund of India.

How many of the above statements are correct?

- A) Only one
- B) Only two
- C) All three
- D) None

Answer:C

Explanation:



- The Speaker is the **presiding officer of the Lok Sabha** and is responsible for maintaining order and decorum during the proceedings of the House.
- The Speaker has a **key role in parliamentary democracy**.
- There are **no specific qualifications** for becoming Speaker, which means any member is entitled to be considered.

- **Statement 3 is correct:** The **salary** of the Speaker is drawn from the **Consolidated Fund of India**.

How is the speaker elected?

- **Statement 1 is correct:** The Speaker is elected by the members of the Lok Sabha and holds office until the dissolution of the House. The Speaker is **elected by a simple majority in the House**.
- The Constitution of India provides for the offices of the Speaker and Deputy Speaker.
- After a new house is constituted electing the Speaker is one of the first acts that is done.
- After a pro tem or temporary Speaker administers the oath to new members, the Speaker is chosen to be the Presiding Officer of the House.
- **Article 93(1)** of the Indian Constitution states that the **House of the People**, also known as the Lok Sabha, **shall elect a Speaker and a Deputy Speaker from among its members**.

Term

- The **term of the speaker ends with the dissolution of the House**, unless the Speaker resigns or is removed from office before that.
- The Speaker can be removed from office by a resolution passed by an absolute majority of the members of the House.
- A **motion of no-confidence** can be moved **against the Speaker** with notice of 14 days as per **Article 94** of the Constitution.
- **Statement 2 is correct:** The Speaker, like any other member of the House, **can face disqualification**.

Powers of the Speaker



- **Conducting the House:**

- The Speaker decides how the house has to be conducted.
- The **conduct of government business is decided by the Speaker in consultation with the Leader of the House.**
- Prior permission of the Speaker is required for members to ask a question, or to discuss any matter
- There are Rules and Procedure for the functioning of the House, but the Speaker has **vast powers in ensuring these Rules are followed**, and in choosing procedures.
- This makes the **impartiality of the Speaker a crucial check and balance** for the Opposition to have its say in the House.

- **Interpretation of the Constitution:**

- The speaker is the final interpreter of the provisions of the Constitution and the Rules of Procedure and COnduct of Business in the Lok Sabha

- **Questions and Records:**

- The Speaker **decides the admissibility of a question raised by a member**, as well as how the proceedings of the House are published.
- The Speaker has the power to expunge (remove completely) in full or in part, remarks that he/she may consider to be unparliamentary.

- **Casting Vote:**

- According to Article 100 of the Constitution, which talks about voting in the Houses, the Chairman of Rajya Sabha or Speaker of Lok Sabha, or any person acting as such, **shall not vote in the first instance**, but shall have an **exercise a casting vote in the case of any equality of votes.**

- **Money Bill:**

- The Speaker **decides whether a bill is a Money Bill or not** and the Speaker's decision is final on this question.

- **Disqualification of members**



- The **Tenth Schedule** or the anti-defection law, introduced to the Constitution through the Fifty-Second (Amendment) Act, 1985, **gives the Speaker of the House the power to disqualify legislators who 'defect' from a party.**
- In the landmark case *Kihoto Hollohan versus Zachillhu* in 1992, the Supreme Court upheld the power vested in the Speaker and said that only the final order of the Speaker will be subject to judicial review.
- In 2020, the Supreme Court had ruled that Speakers of Assemblies and Lok Sabha must decide disqualification pleas within three months except in extraordinary circumstances.

19. Besides its culinary uses, capsaicin also has potential applications in which of the following?

- 1) Pain relief medications
- 2) Food preservatives

Select the correct answer using the codes given below

- A) 1 only
- B) 2 only
- C) Both 1 and 2
- D) Neither 1 nor 2

Answer:C

Explanation:

- Capsaicin is the **chemical which makes chilli peppers spicy.**
- Capsaicin is most **abundantly found in the placenta** (white membrane to which seeds are attached) of some **chilli peppers.**
- ***Chilli peppers are the fruits of plants of the genus Capsicum which were introduced to the rest of the world from South and Central America by Christopher Columbus.***



What happens when humans consume Capsaicin?

- The chemical **binds to TRPV1 receptors** in humans' **nose, mouth, skin, and insides**.
- *These receptors help in **detecting heat** (and pain), and are most commonly **activated by a rise in temperature**.*
- But **capsaicin tricks the TRPV1 receptors into reacting**, even though there is no actual temperature rise.
- The **brain believes that the body is on fire** and **causes the painful and burning sensation** associated with **consuming chilis**.
- The **body then tries to cool down by:**
 - **Sweating**
 - **Red face:** It is caused because capillaries just below the skin dilate, as blood rushes to the surface of the body, where it can radiate heat away more easily.
 - The **runny nose or teary eyes** (if capsaicin happens to come in contact), **gut cramps and diarrhoea** are also the **body's attempt at expelling** the heat-causing element.

Uses of Capsaicin

Both the statements are correct.

- Capsaicin has been widely used as a **flavouring and preservative agent** in food formulations
- **Medical Field:**
 - **Topically applied capsaicin** is useful in **alleviating pain (analgesic)** associated with diabetic neuropathy and chronic musculoskeletal pain.
 - It is used to increase the bladder capacity and **reduce incontinence in patients with bladder hyperactivity**.
 - It exhibits good **antioxidant** activity in the food matrix and **antimicrobial activity** against foodborne pathogens and viruses.

Harmful effects

- **High concentrations** of capsaicin are harmful to humans. It can cause



- Heartburn, gastrointestinal pain, and diarrhoea.
- Long-term ingestion of high levels of capsaicin may lead to several chronic gastrointestinal disorders.

Why in News?

- Food safety authorities in Denmark have recalled three types of South Korean spicy instant noodles over possible risks of acute poisoning as the capsaicin content in the noodles is so high that it can pose a health hazard especially to children.

20. The India-Myanmar border runs through which Indian states?

- A) Assam, Manipur, Mizoram, and Nagaland
- B) Assam, Meghalaya, Manipur, and Mizoram
- C) Assam, Mizoram, Nagaland, and Arunachal Pradesh
- D) Arunachal Pradesh, Manipur, Mizoram, and Nagaland

Answer: D

Explanation:





21. Consider the following statements about Diphtheria

- 1) It is a disease caused by a bacterium.
- 2) It is a non-contagious disease.
- 3) It is a vaccine preventable disease.

How many of the statements given above are correct?

- A) Only one
- B) Only two
- C) All three
- D) None

Answer:B

Explanation:

- **Statement 1 is correct:** Diphtheria is a disease caused by a **bacterium** that affects the upper respiratory tract and less often the skin. It also produces a toxin that damages the heart and the nerves.
- **Statement 2 is incorrect:** It is a **contagious disease** that can spread from person to person when an infected person coughs or sneezes. Some people may not develop disease manifestations but can still transmit the bacteria to others.
- Common symptoms include fever, sore throat and swelling of the neck glands.
- **Statement 3 is correct:** Diphtheria is a **vaccine preventable disease**, but multiple doses and booster doses are needed to produce and sustain immunity.



22. Consider the following statements about Aditya-L1 mission

- 1) It is the first interplanetary mission of India.
- 2) The spacecraft was placed in a halo orbit around the first Lagrange point, L1.
- 3) It carries seven payloads to observe the chromosphere and the corona of the sun.

How many of the statements given above is/are correct?

- A) Only one
- B) Only two
- C) All three
- D) None

Answer: B

Explanation:

Why in the News?

- ISRO has successfully launched the country's **first space mission to study the sun, Aditya-L1.**
- The **Polar Satellite Launch Vehicle (PSLV)**, in its 59th flight with the Aditya-L1 onboard, took off from the Satish Dhawan Space Centre in Sriharikota.
- The Aditya L1 spacecraft will stay in Earth's orbit for sixteen days. After four months of journey, the satellite will be placed on the **L1 point** in the halo orbit around the Sun. It was successfully parked at L1 point in January 2024. Hence **statement 2 is correct.**
- Aditya-L1 has a mission life of **five years.**
- **Statement 1 is incorrect:** Mars Orbiter Mission (MOM) is India's first interplanetary mission to planet Mars. (not Aditya-L1)

What are the science objectives of Aditya-L1?

- The Aditya-L1 will **observe the Sun from a close distance**, and try to **obtain information about its atmosphere and magnetic field.** It is equipped with **seven payloads.**



- The main objective of the mission is to get a **deeper understanding of the star closest to us, and how its radiation, heat, flow of particles, and magnetic fields affects us.**
- The payloads on the mission will study **chromosphere and corona**. They will also study **coronal mass ejection (CME)**. The magnetic field of the corona and the drivers of the space weather will also be studied. Hence **statement 3 is correct.**
- Importantly, it might provide clues to scientists about a **long-standing mystery**: why the corona of the Sun is a million degrees C hot, when the temperature on the surface of the Sun is just about 5,700 degree C.
- It will also help scientists understand the reasons behind acceleration of particles on the Sun, which leads to **solar winds.**

Why study the Sun from space?

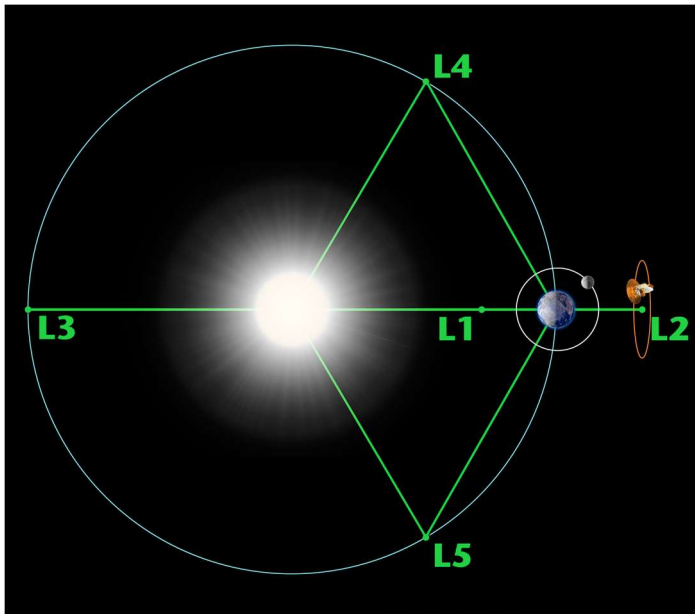
- The Sun is the **nearest star** to us and therefore can be studied in much greater detail than others. Studying the Sun can also help us **understand more about other stars.**
- While the Sun supports all life on Earth, it also has **various explosive phenomena**. These can damage our satellites and communication systems. Studying the Sun may help in providing early warnings for such events.
- The various thermal and magnetic phenomena on the Sun are of extreme nature. Thus, the Sun provides a good natural laboratory to understand them, which cannot be directly studied in the lab.
- It is important to study the Sun from space because the Earth's atmosphere and the magnetic field act as **protective shields** that block out harmful radiations, such as UV light. This means studying the Sun from the Earth can't provide a complete picture.

Value addition

Lagrange points



- Lagrange points are positions in space where **objects sent there tend to stay put**. At Lagrange points, the **gravitational pull of two large masses** (like the Sun and the Earth) **precisely equals the centripetal force required for a small object to move with them**.
- These points in space can be used by spacecraft to reduce fuel consumption needed to remain in position.
- There are **five such points** in the **Sun-Earth system** and they are denoted as **L1, L2, L3, L4 and L5**.



- Of the five Lagrange points, **three are unstable and two are stable**.
- The **unstable Lagrange points** - labeled **L1, L2 and L3** - lie along the line connecting the two large masses.
- The **stable Lagrange points** - labeled **L4 and L5** - form the apex of two equilateral triangles that have the large masses at their vertices. L4 leads the orbit of earth and L5 follows.

Significance of every lagrange points

- 1) **L1 point** of the Earth-Sun system affords an **uninterrupted view of the sun**.



- 2) **L2 point is ideal for astronomy** because a spacecraft is close enough to readily communicate with Earth, can keep Sun, Earth and Moon behind the spacecraft for solar power and (with appropriate shielding) provides a clear view of deep space for our telescopes.
- a) The L1 and L2 points are unstable on a time scale of approximately 23 days, which requires satellites orbiting these positions to undergo **regular course and attitude corrections**.
- 3) **L4 and L5 points** are home to **stable orbits**. Objects found orbiting at the L4 and L5 points are often called **Trojans**.
- 4) Significance of the L3 point is still **unknown** because it stands behind the sun.

23. Consider the following statements with respect to the National Investigation Agency (NIA)

- 1) The National Investigation Agency (NIA) was constituted as a statutory body.
- 2) The officers of NIA don't have the power to investigate offenses committed outside India.

Which of the statements given above is/are correct?

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

Answer: A

Explanation:

National Investigation Agency

- The National Investigation Agency (NIA) is a **central agency** established by the Indian Government to **combat terror** in India.
- NIA was constituted under the NIA Act, 2008. Thus, it is called a "**Statutory Body(Any body created by law or an act of Parliament)**". Hence statement 1 is correct.



- It was **established after the 2008 Mumbai terror** attacks as a central agency to combat terrorism
National Investigation Agency (Amendment) Act,2019

- It amended the National Investigation Agency(NIA) Act,2008

The Amendment act provides for

- A national-level agency to investigate and prosecute offences listed in a schedule (scheduled offences).
- Allows for **creation of Special Courts** for the trial of scheduled offences.

Jurisdiction of the NIA

- The officers of the NIA have the same powers as other police officers in relation to investigation of Scheduled offences, across India.
- In addition, officers of the NIA will have the **power to investigate scheduled offences committed outside India**, subject to international treaties and domestic laws of other countries. **Hence statement 2 is incorrect.**
- The central government may direct the NIA to investigate such cases, as if the offence has been committed in India.
- The Special Court in New Delhi will have jurisdiction over these cases.

Scheduled Offences

- The schedule to the Act **specifies a list of offences** which are to be investigated and prosecuted by the agency. These include offences under Acts such as the
 - Atomic Energy Act, 1962,
 - the Unlawful Activities Prevention Act, 1967.

The Act will allow the NIA to investigate additional offences such as

- **human trafficking**
- offences related to **counterfeit currency** or bank notes
- manufacture or sale of prohibited arms,
- cyber-terrorism,



- offences under the Explosive Substances Act, 1908.

24. Consider the following statements about Lok Adalat

- 1) An award passed by a Lok Adalat is deemed to be a decree of a civil court.
- 2) No appeal lies against the award passed by Lok Adalat.

Which of the statements given above is/are correct?

- A) 1 only
- B) 2 only
- C) Both 1 and 2
- D) Neither 1 nor 2

Answer: C

Explanation:

- Lok Adalat (people's courts) is a body established by the government to settle disputes through **conciliation and compromise**.
- Lok Adalat is an **alternative method of dispute resolution**. It is a forum where **disputes or cases pending in the court of law or at the pre-litigation stage** are settled amicably.
- Lok Adalats have been given **statutory status** under the **Legal Services Authorities Act, 1987**.
- **Both the statements are correct:** Under the Act, the **award made by the Lok Adalats is deemed to be a decree of a civil court** and is **final and binding** on all parties and **no appeal lies against such an award** before any court of law.
- If the parties are not satisfied with the award of the Lok Adalat, though there is **no provision for an appeal against such an award**, they are **free to initiate litigation** by approaching the court of appropriate jurisdiction by filing a case by following the required procedure, in exercise of their right to litigate.



No judicial role

- The persons deciding the cases in the Lok Adalats are called the **Members of the Lok Adalats**, they have the **role of statutory conciliators** only and **do not have any judicial role**; therefore they can **only persuade** the parties to come to a conclusion for settling the dispute outside the court in the Lok Adalat and shall not pressurize or coerce any of the parties to compromise or settle cases or matters either directly or indirectly.
- The Lok Adalat **shall not decide the matter so referred at its own instance**, instead the same would be decided on the basis of the **compromise or settlement** between the parties.
- The members shall assist the parties in an independent and impartial manner in their attempt to reach amicable settlement of their dispute.

Nature of Cases to be Referred to Lok Adalat

- Any case pending before any court.
- Any dispute which has not been brought before any court and is likely to be filed before the court.
- Provided that any matter relating to an **offence not compoundable** under the law **shall not be settled in Lok Adalat**.

Composition of Lok Adalats

- The Lok Adalat is **presided over by a sitting or retired judicial officer** as the **chairman**, with **two other members**, usually a lawyer and a social worker.
- The **National Legal Services Authority (NALSA)** along with other Legal Services Institutions (such as State Legal Services Authority, District Legal Services Authority, Taluk Legal Services Committee) conducts Lok Adalats at different levels.
- *NALSA is a statutory body constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society and to organize Lok Adalats for amicable settlement of disputes.*



25. "One number-One color-One description" is associated with which of the following?

- A) IUCN red data book
- B) CITES
- C) National Air Quality Index
- D) None of the above

Answer: C

Explanation:

National Air Quality Index (AQI) transforms complex air quality data of eight pollutants into a single number (index value), nomenclature and color. In simple terms it is '**One Number- One Colour-One Description**' for the common man to judge the air quality within his vicinity. The formulation of the index was an initiative under Swachh Bharat Mission

There are **six AQI categories**, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe. The AQI will consider **eight pollutants** .

Particulate Matter (size less than 10 μm) or (PM_{10}),

Particulate Matter (size less than 2.5 μm) or ($\text{PM}_{2.5}$),

Nitrogen Dioxide (NO_2),

Sulfur Dioxide (SO_2),

Carbon Monoxide (CO),

Ozone (O_3),

Ammonia (NH_3), and

Lead (Pb)



AQI CATEGORY, POLLUTANTS AND HEALTH BREAKPOINTS

AQI Category (Range)	PM ₁₀ (24hr)	PM _{2.5} (24hr)	NO ₂ (24hr)	O ₃ (8hr)	CO (8hr)	SO ₂ (24hr)	NH ₃ (24hr)	Pb (24hr)
Good (0–50)	0–50	0–30	0–40	0–50	0–1.0	0–40	0–200	0–0.5
Satisfactory (51–100)	51–100	31–60	41–80	51–100	1.1–2.0	41–80	201–400	0.5–1.0
Moderately polluted (101–200)	101–250	61–90	81–180	101–168	2.1–10	81–380	401–800	1.1–2.0
Poor (201–300)	251–350	91–120	181–280	169–208	10–17	381–800	801–1200	2.1–3.0
Very poor (301–400)	351–430	121–250	281–400	209–748	17–34	801–1600	1200–1800	3.1–3.5
Severe (401–500)	430+	250+	400+	748+	34+	1600+	1800+	3.5+

26. Consider the following statements about the Satnami sect:

1. The Satnami sect was founded by Birbhan in the 17th century.
2. This sect is a wing of the Ravidassia community.

Which of the above statements is/are correct?

- A) 1 only
- B) 2 only
- C) Both 1 and 2
- D) Neither 1 nor 2

Answer: C

Explanation:



- The Satnami community was **founded in 1657 (17th century) by Bir Bhan of Narnaul district** (present day Haryana). Hence **statement 1 is correct**.
- **Udhodas, a disciple of Saint Ravidas**, was the **first priest or spiritual guru** of the society.
- **Statement 2 is correct:** The Satnami community is also referred to as the Satnami sect or the Sadhan sect. This sect is a wing of the Ravidassia community.
- The community **comprises farmers, artisans and people from backward castes**.
- The sect emphasizes on **three principles**
 - adorn the attire of a Satnami devotee,
 - earn money through proper means and
 - do not tolerate any injustice or oppression in any form.

27. The Kavli Prize is awarded in which of the following fields?

1. Astrophysics
2. Nanoscience
3. Neuroscience
4. Medicine

Select the correct answer using the codes given below:

- A) 1 and 2 only
- B) 1, 2, and 3 only
- C) 2, 3, and 4 only
- D) 1, 2, 3, and 4

Answer: B

Explanation:



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WEEKLY MCQs
24/06/2024 to 29/06/2024

Page 46 of 49

- The Kavli Prize is awarded **in honour of Norwegian-American** businessman and philanthropist **Fred Kavli (1927-2013)**.



MAINS

- The Kavli Prize is awarded by US-based **Kavli Foundation** in partnership with the **Norwegian Academy of Science and Letters**, and the **Norwegian Ministry of Education and Research**.
- The Kavli Prizes are awarded in **three areas**:
 - **Astrophysics** (the largest)
 - **Nanoscience** (the smallest)
 - **Neuroscience** (the most complex)



The Kavli Prize was designed to be like the Nobel in the fields of astrophysics, neuroscience, and nanoscience.

The **Nobel Prize** is only awarded for **achievements** made during the **preceding year**.

But the **Kavli Prize** does **not operate under such a restriction**.

28. Adi Shankaracharya is known for consolidating which philosophical doctrine?

- A) Advaita
- B) Dvaita
- C) Vishishtadvaita
- D) Buddhism

Answer: A

Explanation;

- Adi Shankara was one of the great Indian philosophers and social reformers who was born in **Kalady village** on the bank of the River Periyar in Kerala in the eighth century.
- He was an **advocate of Advaita** or the **doctrine of the oneness of the individual soul and the Supreme God** which is the Ultimate Reality.
- He met his **guru, Swami Govindapada Acharya** in a hermitage on the banks of the River Narmada. Under Govindapada Acharya's guidance, **he mastered Yoga, Vedanta** and other systems and became a knower of the Brahman. Shankara travelled all over India and met the leaders of different schools of thought.
- He tried to **revive Hinduism in India** while Buddhism was gaining popularity.
- Adi Shankaracharya was known to reconcile various sects of Vaishnavism, Shaivism, and Saktism with the introduction of the **Pancayatana** form of worship. It is the simultaneous worship of five



deities of Ganesha, Surya, Vishnu, Shiva and Devi, arguing that all deities were different forms of the one Brahman.

- Adi Shankara disappeared at the age of 32 in the year 820 C.E. In his short life, he majorly contributed towards **shaping of Hindu culture and spirituality**

29. The ten degree channel separates which of the following groups of islands?

- A) Andaman Islands and Nicobar Islands
- B) Lakshadweep Islands and Maldives
- C) Great Nicobar Island and Sumatra
- D) Sri Lanka and Maldives

Answer: A

Explanation:

- The Andaman and Nicobar Islands are a **cluster of 836 islands** located in the Bay of Bengal.
- These islands are split into two groups namely,
 - the **Andaman Islands** to the north and
 - the **Nicobar Islands** to the south
- **Andaman and Nicobar Islands are separated** by the 150-km wide **Ten Degree Channel**.

30. In which one of the following places is the Shompen tribe found?

- A) Nilgiri Hills
- B) Nicobar Islands
- C) Spiti Valley
- D) Lakshadweep Islands



Answer: B

Explanation:

- The Shompen are one of the least studied **Particularly Vulnerable Tribal Groups (PVTGs)** in India.
- This very little known tribal community resides in the **dense tropical Rain forest of Great Nicobar Island of Andaman and Nicobar group of Islands.**
- The Shompen habitat is also an important biological hotspot and there are two National Parks and one Biosphere Reserve namely **Campbell Bay National Park, Galathea National Park and Great Nicobar Biosphere Reserve.**
- Though according to Census (2011), the estimated population of Shompen is 229, the exact population of Shompen is unknown till today.
- They are **semi-nomadic hunter-gatherers** and their main sources of livelihood are hunting, gathering, fishing and little bit horticultural activities in a rudimentary form.