UPSC Mentorship
A Unit of Mentorship India

DAILY CURRENT AFFAIRS

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GS I

1. Why is Julian Assange flying to the remote Pacific island of Saipan?

Source: The Indian Express
Prelims:
Mains:
Context: Julian Assange is en route to a courtroom on the Pacific island of Saipan where he is expected to plead guilty to a single criminal charge in a plea deal that will see him walk free and return home to Australia.
Saipan Island:

- It is located in the **Western Pacific Ocean.**
- It is the capital of the **Northern Mariana Islands** (NMI), a US commonwealth in the western Pacific which beginsroughly 70 km (44 miles) north of Guam and stretches across 14 islands.
- It was a colony of **Spain, Germany and then Japan**, the **United States took control** of the island in World War-II.
- Like territories such as Guam or Puerto Rico, the Northern Mariana Islands are part of the US **without the full status of a state.**
- In 1975 residents of this island voted to join the United States as a territory. The territory has a permanent delegate in the US House of Representative, although they cannot vote.
- **Highest point:** Mount Tapochau
- **Economy:** Tourism is the mainstay of the economy and it is popular with Korean and Chinese tourists.
- It is the only part of the United States that **Chinese citizens can enter without a visa**.

2. Devotees throng to Guwahati to offer prayers in Maa Kamakhya temple amid ongoing Ambubachi Mela

Source: The Mint
Prelims:
Mains:

Context: Devotees from across the nation are flocking to the Kamakhya temple in Assam's Guwahati for the commencement of the annual Ambubachi Mela.

Ambubachi Mela:

- It is an annual Hindu fair held at the historic **Kamakhya Temple.**
- It is celebrated **during the monsoon season** that happens to fall during the Assamese month Ahaar, around the middle of June.
- It is the celebration of the **yearly menstruation course** of goddess **Maa Kamakhya.**

Key facts about Kamakhya temple

- It is **situated on Nilachal Hill** and adjoining the **southern bank of the Brahmaputra** River in Guwahati, Assam.
- It is one of the most revered centres of **Tantric practices.**
- It is regarded as one of the oldest of the **51 Shakti Peethas** in India.

Temple Architecture:

- It had been modeled out of a combination of two different styles namely, the traditional **nagara or North Indian** and **Saracenic or Mughal style of architecture.**
- This combination has been named the **Nilachala Style of Architecture**.
- It consists of five chambers**, garbhagriha** or sanctuary, **antarala** or vestibule, **Jagan Mohan** or principal chamber, **bhogmandir** or ritual chamber and **natmandir** or opera hall for performing traditional dance and music associated with sukti temples.
- It is interesting to note that the superstructure of each of the above chambers exhibits **different architectural features.**
- While the main temple contains a modified **Saracenic dome**, the antarala carries a two-roofed design, the bhogmandir (**also called pancharatna**) with five domes similar in appearance to the main temple and the natmandir having a shell-roof with apsidal end similar to some of the impermanent namghars or prayer halls found in Assam.

GS III

3.3,350 pigs killed by African Swine Fever disease Mizoram Aizwal animal husbandry veterinary

Source: The Hindu,
Prelims:
Mains:
Context: The death toll of pigs following the outbreak of the African Swine Fever (ASF) disease in Mizoram since February has crossed 3,350, officials said recently.

African Swine Fever (ASF):

- ASF is a **highly contagious viral disease of domestic and wild pigs**, whose **mortality** rate **can reach 100%.**
- The ASF virus is a large, enveloped, double-stranded DNA virus that is the sole member of the genus Asfivirus within the family Asfarviridae.
- **Symptoms**: The clinical symptoms can look very much like those of **classical swine fever**: fever, weak pigs, **lack of appetite**, inflamed eye mucous membranes, **red skin**, (bloody) **diarrhea, and vomiting**.

ASF can be **spread through:**

- Direct contact with infected animals
- Indirect contact through the ingestion of products from infected animals, contact with contaminated clothing, vehicles, or equipment
- Bites by infectious soft ticks (where present)

- The **ASF virus** is able to **survive for long periods in pork and pork meat products**.
- It is **endemic to sub-Saharan Africa but** has spread to many other regions of the world, including Asia and Europe.
- **In India,** it was first **confirmed in Arunachal Pradesh and Assam in** February-March **2020**.
- It is not a danger to human health. Meat or other products from pigs do not pose any food safety risks for humans. However it has devastating effects on pig populations and the farming economy.
- There is **no cure or precaution** available for the infection, and there is **no approved vaccine**.So, the only way to stop it from spreading is by culling the animals**.**

4. Rare Indian Painted Frog spotted at Telangana tiger reserve

Source: The Times of India
Prelims:
Mains:
Context: A rare Indian Painted Frog was recently sighted at Telangana's Kawal Tiger Reserve, marking a significant find outside its usual habitats.
Indian Painted Frog:

- It is a species of **narrow-mouthed frog** that is part of the Microhylidae family.
- Scientific Name: Uperodon taprobanicus
- **Distribution**: It is found in **Sri Lanka**, Bangladesh, **southern and eastern India**, and **Nepal** up to an altitude of about 1300 meters.

- It is **most common in Sri Lanka**. In India, it is found in the states of West Bengal, Odisha, Assam, Karnataka, Kerala, Telangana, Tamil Nadu, and Andhra Pradesh and is **most common in the southern areas of the Western and Eastern Ghats**.
- **Features**:
  - It can grow to an adult length of up to 75 millimeters (7.5 cm) from snout to vent with **females being slightly larger** than males.
  - This species is notable for its striking appearance, characterized by its **smooth, rounded body** and **distinctive coloration,** which often includes **shades of brown,** with **patches of** brighter colors such as **orange or yellow.**
- **Conservation Status:**
  - **IUCN Red List: Least Concern**

Key Facts about Kawal Tiger Reserve:

- It is located in the northeastern part of **Telangana**(Old Adilabad district)**,** with the **Godavari** River **on one side** and the **Maharashtra border on the other.**
- It forms part of the **Deccan peninsula-central highlands**.
- **Rivers**: The reserve is the catchment for the rivers **Godavari and Kadam**, which flow towards the south of the sanctuary.
- **Corridor**: It has connectivity to the **Tadoba-Andhari Tiger Reserve of Maharashtra in** the north and to the **Indravati Tiger Reserve of Chhattisgarh** towards its north-eastern side.
- **Habitat**: It has diverse habitats comprising dense forests, grasslands, open areas, rivers, streams, and water bodies.
- **Vegetation**: **Southern Tropical Dry Deciduous Forest**
- **Flora**:
  - **Teak is** found extensively, along with Bamboo.
  - As many as 673 plant species have been recorded, and the important ones are Anogeissus latifolia, Mitragyna parviflora, Terminalia crenulata, Terminalia arjuna, Boswellia serrata, etc.
- **Fauna**:
  - It has a faunal diversity which is **typical of the Deccan Plateau.**
  - The major wild animals include nilgai, chousinga, chinkara, black buck, sambar, spotted deer, wild dog, wolf, jackal, fox, tiger, leopard, and jungle cat.

5. ALMA telescope sheds light on planet formation around binary stars

Source: The WION

Prelims:

Mains:

Context:

Recently, using the powerful Atacama Large Millimeter/submillimeter Array (ALMA) telescope, astronomers have gained new insights into how planets form around binary star systems, where two stars orbit a common center of mass.

ALMA Telescope:

- It is a state-of-the-art telescope that **studies celestial objects** at **millimetre and submillimetre wavelengths.**
- It is a radio telescope comprising 66 antennas located in **the Atacama Desert of northern Chile.**
- They can **penetrate through dust clouds** and help astronomers examine dim and distant galaxies and stars out there.
- It also has extraordinary sensitivity, which allows it to detect even extremely faint radio signals.
- The telescope consists of 66 high-precision antennas, spread over a distance of up to 16 km.
- It is **operated under** a partnership between the United States and **16 countries** in Europe, Canada, Japan, South Korea, Taiwan and Chile.
- The radio telescope was designed, planned and constructed by the US's National Radio Astronomy Observatory (NRAO), the National Astronomical Observatory of Japan (NAOJ), and the European Southern Observatory (ESO).

What is Binary star system?

- It is a system of two gravitationally bound stars that **orbit a common center** of mass called a barycenter.
- Stars in a binary system do not necessarily have the same mass, size, or brightness.
- The larger star of a binary couple is called the primary star, while the smaller one is known as the secondary star or the companion star.

6. Defence Ministry signs 350th contract under iDEX for miniaturised satellite

Source: The Hindu

Prelims:

Mains:

Context: Recently, the 350th contract under the Innovations for Defence Excellence (iDEX) was signed with SpacePixxel Technologies Pvt Ltd for miniaturised satellite.

Innovations for Defence Excellence (iDEX):

- It is the flagship initiative of the **Union Ministry of Defence.**
- It aims to achieve **self-reliance** and foster **innovation and technology** development in **Defence and Aerospace by** engaging Industries including **MSMEs, start-ups**, individual innovators, R&D institutes, and academia.
- It has partnered with **leading incubators in** the country to provide handholding, technical support, and guidance to the winners of iDEX challenges.

Funding:

- iDEX will be funded and managed by a '**Defence Innovation Organization** (DIO)' which has been formed as a '**not for profit company as** per Section 8 of the Companies Act 2013 by the two founder members, i.e. **Defence Public Sector Undertakings (DPSUs) - HAL & BEL.**
- It functions as the executive arm of DIO, carrying out all the required activities, while DIO will provide high-level policy guidance to iDEX.
- Under iDEX, financial support is provided to Start-ups/MSMEs/individual innovators and Partner Incubators through DIO.
- It has launched 11 editions of the Defence India Start-up Challenge and recently unveiled **the Acing Development of Innovative Technologies with iDEX (ADITI) scheme** to promote innovations in critical and strategic defense technologies.
- It was the recipient of the Prime Minister Award for Public Policy in the Innovation Category in 2021 and is currently engaged with over 400 start-ups and MSMEs.

7.Indian Army launches skin bank for burn victims: All you need to know

Source: The Hindu
Prelims:
Mains:
Context: The Indian Army has recently launched a skin bank facility.

Indian Army's Skin Bank:

- It was launched to help treat severe skin burn injuries and other skin-related conditions **for service personnel and their families.**
- The **first-of-its-kind facility established in the Armed Forces Medical Services is** staffed with trained medical professionals, including plastic surgeons, tissue engineers, and specialized technicians.
- It will serve as a centralized hub for the collection, processing, storage, and distribution of skin grafts, providing a "critical resource" for military medical centers across the country.

What is a Skin Bank?

- A skin bank is a **facility where the skin is taken** from an eligible donor, and **processed, and stored** under appropriate temperature **for up to five years.**
- **Skin from** a **deceased person** can be **donated within six hours** after death.
- **Anyone can donate skin, irrespective of sex and blood group**. The donor's **minimum age** should be **18 years.**
- The skin of persons suffering from AIDS, Hepatitis B & C, Sexually Transmitted Diseases, Skin Cancer, Active skin Disease and Septicemia are considered unfit for donation.
- This **donated skin is** then **collected and processed** over five to six weeks **and frozen** until it's needed.
- The skin is generally **preserved in 85% glycerol solution**. It is **stored between 4-5 degrees Celsius for up to 5 years.**
- **When a burn victim requires skin** for their injuries, a surgical procedure called **skin grafting is conducted.**

What is Skin Grafting?

- It is a simple process when a piece of **healthy skin is transplanted to a different area of the body** where the skin is damaged or missing.
- There are **two main types** of skin grafts: **autograft** (**skin is taken from** another part of the patient's **own body**) and **allograft** (skin is taken **from a donor**, often sourced from a skin bank).
- **Any skin can be used on anybody**, and **within two to three weeks post-grafting**, the **doctors can determine whether the patient is accepting it** or not.

Editorial, Ideas, and Opinions

8. Tenth spectrum auction for radiowaves

Source: The Hindu
Context:

An auction for spectrum worth ₹96,238 crore started on June 25, 2024. Companies like Airtel and Reliance Jio are expected to bid for airwaves to enhance their 5G services.

This is the 10th spectrum auction since the process for the sale of radiowaves started through an online bidding process in 2010. The last spectrum auction was held in August 2022, which, for the first time, included radio waves for 5G services.

Airwaves/Spectrum

- Airwaves are radio frequencies within the electromagnetic spectrum that can carry information wirelessly for a range of services including telecommunications.
- The government manages and allocates airwaves to companies or sectors for their use.
- The government auctions a fixed amount of spectrum within specified band/s to be utilized by operators for providing communication services to consumers.

Types of spectrum band

- Spectrum can be divided into bands ranging from low frequency to high frequency, which determines their usage and is useful in allocation.
- **Low band spectrum**
  - Less than 1 GHz (600 MHz,700 MHz, 800 MHz, 900 MHz)
  - Offers blanket coverage suitable to serve thousands of customers over long distances with fewer towers.
  - Ideal for wide and in-building coverage.
  - When bundled with high-spectrum bands, it can be used for commercial mobile and broadcasting services.
- **The mid-band spectrum**
  - Ranges from 1 GHz to 6 GHz (1800 MHz, 2100 MHz, and 2300 MHz).
  - Provides coverage as well as the capacity to carry more data while traveling significant distances.
- **The high band spectrum**
  - Ranges from 24 GHz to 40 GHz and are also known as the millimetre wave spectrum.
  - Ideal for speedy networks over short ranges.
  - However, this range is subject to interference from dense objects.

What spectrum do telecom companies require?

- According to the GSM Association, for telecom purposes, spectrum in the 400 MHz to 4 GHz range is the most optimum.

- Operators can provide 2G, 3G, 4G, and 5G services using one frequency band if they have enough spectrum.
- For mobile technology in India:
  - 2G services use the 900 MHz and 1800 MHz bands,
  - 3G uses 900 MHz and 2100 MHz,
  - 4G uses 850 MHz, 1800 MHz, 2300 MHz, and 2500 MHz, and
  - 5G uses 3.5MHz and 700 MHz bands.
- The 900 MHz band as a superior commercial ecosystem with better-developed technology standards.
  - It is also suitable for offering GSM-based voice calls as well as 4G broadband services.
- After 900 MHz, the band suitable for GSM is 1800 MHz, which is also the core band used globally for LTE (long-term evolution), a 4G mobile communications standard.
- 5G spectrum bands can be clubbed into low, mid and high spectrum buckets.

Spectrum Allocation – only through auction

- Spectrum considered to be a scarce natural resource was ordered by the top Court to be allocated through the fair and impartial process of auction.
- **Case originated in 2008**
  - The alleged 2G spectrum allocation scam is said to have originated in 2008 when the then government sold 122 2G licences on a first-come-first-serve (FCFS) basis to specific telecom operators.
  - In its charge sheet filed in April 2011, the CBI alleged that there was a loss of ₹ 30,984 crore to the exchequer as a result of discrepancies in the allocation process.
- **Matter reaches SC**
  - Petitions were filed in the top Court alleging a ₹70,000 crore scam in the grant of telecom licenses in 2008.
  - In February 2012, a division Bench of the SC cancelled the licenses while cautioning that an FCFS basis for the allocation of scarce natural resources can be prone to misuse.
- **Competitive auctions for allocating natural resources**
  - In its judgement, the apex court **advocated for competitive auctions as the only route to allocate spectrum**.
  - It further emphasised that the burden lies on the state to ensure that the non-discriminatory method of auction is adopted by giving wide publicity so that all eligible persons can participate in the process.
- **2012 presidential reference on 2G verdict**
  - In 2012, the then President Pratibha Patil sought the Supreme Court's opinion on several questions arising from the 2012 SC judgment regarding the allocation of 2G spectrum licenses.
    - Under Article 143 of the Constitution of India, the President is empowered to refer to the Supreme Court any matter of law or fact.
  - The Supreme Court emphasized that the decision to use auctions or other methods should be based on a case-by-case assessment of the resource in question, considering public interest and policy objectives .
- **Centre sought a clarification of the 2G spectrum scam verdict**
  - In April 2024, the Union government has moved an application for a certain class of spectrum to be allocated through administrative processes instead of competitive auctions.
    - An administrative allocation would mean that the government will have the final say in deciding the procedure for selecting operators.

○ However, the apex Court of India refused to entertain the Centre's plea to allow the administrative allocation of spectrum.

Tenth spectrum auction for radiowaves

- The Department of Telecommunications (DoT) has initiated the spectrum Auction.
- The Ministry of Communications announced that the following spectrum bands will go up for bidding in the upcoming auction - 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300 MHz and 26 GHz.
  ○ The 3300 Mhz band and 26 Mhz band are seen as suitable bands for 5G services.
- Total quantum of spectrum being auctioned is 10,522.35 MHz in various bands valuing ₹96,238.45 crores at reserve prices.

In Brief

9. Scholars, historians on a mission to illuminate Srikakulam's forgotten heritage

Source: The Hindu

Context:

Srikakulam:
- It is a district place located in the state of **Andhra Pradesh**.
- It is home to numerous prominent **Buddhist sites, Neolithic-era caves**, and some of the oldest temples in the State.

History
- It was once part of the **Kalinga Dynasty**. Later it came under the rule of the **Gajapati Kingdom** during the medieval period, followed by the Eastern **Chalukyas of Vengi**. The area was a part of the Kakatiya and Vijayanagara empires as well.

Buddhist sites (Dantapuri and Salihundam)
- Salihundam has four **stupas, relic caskets, sculptures of Buddhist deities** Mareechi and Tara.
- All the remnants were believed to be built between 2nd century BC and 12th century AD.
- It is believed that Buddhism spread to Sumatra and other far-eastern countries from here.
- **Jainism sites :** Tangamayyakonda and Rottavalasa villages.

Famous temples of Srikakulam
- **Arasavalli:** The Sri Suryanarayana Swamy Temple, **dedicated to the sun god,** located in Arasavalli, is one of the two temples of its kind, the other being the most popular and magnificent Konark Sun Temple in Odisha.
  ○ **Srimukhalingam:** This temple, built in the **Kalinga architectural style**, is located by the **Vamsadhara River** and is dedicated to lord Srimukha Lingeswara.

10. Chinese Lunar Mission

Source: The Hindu

Context:

- China's Chang'e 6 Lunar Mission is part of the China National Space Administration's (CNSA) ambitious lunar exploration program.
- It is a follow-up mission to Chang'e 5, which successfully returned lunar samples to Earth in 2020.
- **Objectives:**
  - **Sample Return Mission**:
    - The primary objective of Chang'e 6 was to collect lunar samples and return them to Earth.
  - **Technological Demonstration**: The mission aims to demonstrate and improve technologies for lunar landing, sampling, and returning to Earth, which are critical for future lunar exploration missions.
- **Mission Details:**
  - **Landing Site**:
    - Chang'e 6 was expected to target the lunar far side for its landing, specifically the **South Pole-Aitken Basin**, one of the largest and oldest impact basins on the Moon.
    - This site is scientifically significant due to its unique geological features.
  - **Spacecraft Components**:
    - The mission consists of an orbiter, a lander, an ascent vehicle, and a return capsule.
    - The orbiter remained in lunar orbit, while the lander will touch down on the Moon's surface to collect samples.
  - **Sample Collection**:
    - The lander used a robotic arm and a drill to collect samples from the lunar surface and subsurface.

11. Jal Shakti Ministry conceives 'new project' to fix water deficit in flagship Jal Jeevan Mission

Source: The Hindu

Context:

- JJM is envisioned to **provide safe and adequate drinking water through individual Functional Household Tap Connections** (FHTCs) **by 2024 to all households in rural India**.
- JJM will be based on a **community approach** to water and will include extensive Information, Education and communication as key components of the mission.
- The Mission was **launched on August 15, 2019.**
- **Nodal Ministry: Ministry of Jal Shakti.**

Components:

- **Development of** in-village **piped water supply infrastructure** to provide tap water connections to every rural household.

- **Bottom-up planning**: **Community engagement** in planning, implementation and Operation and Maintenance (O&M)
- **Women empowerment**: **Involvement of women** in planning, decision-making, implementation, monitoring, and O&M
- **Focus on future generations**: Provision of **tap water supply to schools, tribal hostels, and anganwad**i (daycare) centers
- **Skill development and employment generation**: Local people are skilled for building and maintaining water supply structures
- **Greywater management**: Reuse and recycle waste water for source sustenance
- **Source sustainability**: Promote **groundwater recharge** and water conservation
- **Water Quality**: Ensure safe drinking water to **reduce water-borne ailments**

- The Mission will **converge with otherCentral and State Government Schemes** to achieve its objectives of sustainable water supply management across the country.
- **Funding Pattern**: The fund sharing pattern is in the **proportion o**f:
  - **50:50 between Centre and States**
  - **90:10 for Himalayan** and **North-Eastern States.**
  - In case of UTs, 100% of the funding is provided by the Central government

Daily Quiz

Q1. The South Pole-Aitken basin is significant for lunar exploration because of which one of the following reasons?

    A. It is the largest crater on the near side of the Moon
    B. It potentially contains water ice in permanently shadowed craters
    C. It is the youngest impact basin on the Moon
    D. It is esaily accessible to earth Based Telescope

Ans: Option A is Correct
Explanation:
Context: China's Chang'e-6 on Tuesday became the first spacecraft to bring back samples from the far side of the Moon - the part that the Earth never gets to see. The lander descended on the Moon's surface on June 1 and spent two days collecting rocks and soil from one of the oldest and largest of lunar crate1s-the 2,500 km-wide South Pole Aitken (SPA) basin - using a robotic arm and drill.

Q2. Consider the following statements regarding the post of 'Deputy Speaker'

    1. Article 93 of the Constitution says that the House of the People (Lok Sabha) shall choose two members of the House to be, respectively, Speaker and Deputy Speaker.
    2. Deputy Speaker and Speaker are elected in the same session of Lok Sabha.
    3. He/She can resign from office after writing to the President of India.

How many of the above statements are correct?
    A. Only one
    B. Only two
    C. All three
    D. None

Ans. Option A is correct
Explanation:

Context: There is intense negotiation going on between treasury bench and opposition for the post of Deputy Speaker.
Statement 1 is correct Article 93 of the Constitution says that the House of the People (Lok Sabha) shall choose two members of the House to be, respectively, Speaker and Deputy Speaker.
Statement 2 is not correct. The Deputy Speaker is elected the election of Speaker, and the date is fixed by the speaker, which is not necessary to be in the same session of Lok Sabha.
Statement 3 is not correct He/She can resign from office after writing to the Speaker of Lok Sabha

Q3. Which of the following is not a key characteristic of disaster-resilient infrastructure?
    A. Robustness to withstand extreme events and significant damage
    B. Redundancy in critical systems to ensure continued functionality
    C. Rapid construction to mmIm1zem1t1al costs
    D. Adaptability to changing environmental conditions over time Correct Answer

Ans: Option C is correct
Explanation:
Context: India needs to build disaster resilience in its critical infrastructure More about: characteristics of typical induce:

Robustness: The ability to withstand severe conditions without significant damage. Redundancy: Having backup systems to ensure continued functionality if primary systems fail. Adaptability: The capacity to modify or adjust to changing environmental conditions over time. Rapid construction to minimize initial costs is not a characteristic of disaster-resilient infrastructure. In fact, resilient infrastructure often requires more time and resources in the planning and construction phases to ensure long-term durability and adaptability

Q4. Recently, 'Operation Azm-i-lsrehkam'was in the news. Which one of the followings best describe it?

A. It was a covert military operation by the Pakistani Military against India during the Kargil War.
B. It Is the name of the latest military operation by the Pakistani military to eradicate extremism and terrorism
C. It is the name of name of the austerity measure being taken by Pakistan to raise its tax revenue.
D. It is the name for the mission mode project by Pakistan to save its national!y important monuments

Ans. Option B is correct
Explanation:
Context Amidst criticism over a newly announced counter-terrorism operation (Operation Azm-Hstehkam) without consulting parliament, the Pakistan government has said that it would not be an akinetic large-scale military campaign, nor would it entail the mass displacement of the people.
What is Operation Azm.e-lstehkam?

Operation Azm-e-steam aims to eradicate extremism and terrorism decisively and comprehensively.
It coordinates and aligns efforts across multiple fronts to address the threats, while intensifying efforts to curb terrorist activities through regional cooperation within the political and diplomatic spheres.
The operation will bolster the armed forces' renewed and vigorous efforts with full support from all law enforcement agencies. Effective legislation will be enacted to close legal loopholes that hinder the prosecution of terrorism cases, ensuring exemplary punishments for offenders This campaign will be complemented by socio-economic measures aimed at addressing the genuine concerns of the populace and creating an environment that discourages extremist tendencies

Q5. Consider the following waterbodies
1. Lake Victoria
2. Lake Turkana
3. Lake Nakuru
4. Lake Elementaita

How many of the above-mentioned waterbodies are found in 'Kenya'?

A. Only one
B. Only two
C. Only three
D. All four

Ans. Option D is correct
Explanation:
Context: Police opened fire on demonstrators trying to storm Kenta's legislature on Tuesday, with at least five protesters killed, dozens wounded, and sections of the parliament building set ablaze as lawmakers inside passed legislation to raise taxes.

Kenya is home to numerous lakes. many of which are part of the Great Rift Valley system.

1. Lake Victoria (partially in Kenya)
   - Africa's largest lake, shared with Uganda and Tanzania
2. Lake Turkana
   - Wor1d's largest desert lake and largest alkaline lake
3. Lake Nakuru
   - Famous for its flamingos and diverse wildlife
4. Lake Naivasha
5. Lake Elementaita
   - (Alkaline Lake, part of the Kenya Lake System UNESCO World Heritage Site

Q6. Consider the following statements concerning the convolutional neural network (CNN)
1. It is a type of artificial neural network (ANN).
2. CNNs are only used for processing text data.
3. CNNs require labeled data for training.

How many of the above statements are correct?
A. Only one
B. Only two
C. All three
D. None

Ans. Option A is correct
Explanation:
Statement 1 is correct. A deep convolutional neural network (CNN) is a type of artificial neural network (ANN) designed specifically for processing structured grid-like data, such as images.
Statements 2 & 3 are incorrect. CNNs are particularly effective for tasks such as image classification, object detection, segmentation, and other tasks involving spatial relationships in data CNNs are often trained using supervised learning where labeled data is used to optimize the network"s parameters, They can also be trained in an unsupervised or semi-supervised manner.
Unsupervised techniques like autoencoders or generative adversarial networks (GANs) can utilize CNN architectures without requiring labeled data.

Q7. Which of the following primarily describes the mechanism by which potassium cyanide causes death?
A. Inhibiting the production of red blood cells in bone marrow
B. Preventing the binding of oxygen to hemoglobin
C. Increasing the acidity of blood
D. stimulating excessive production of carbon dioxide

Option B is correct
Explanation:

Potassium cyanide causes death primarily by binding irreversibly to hemoglobin, preventing it from effectively carrying oxygen to tissues.
This disrupts cellular respiration and leads to severe oxygen deprivation in organs and tissues throughout the body Symptoms such as dizziness. headaches and cyanosis (bluish skin) occur due to a lack of oxygen
If untreated, cyanide poisoning progresses to unconsciousness and death. Immediate medical intervention, typically with antidotes like hydroxocobalamin or sodium thiosulfate, is crucial to counteract the effects of cyanide poisoning and restore oxygen transport.

Q8. What does a K-shaped economic recovery refer to?

   A. A recovery where all sectors of the economy experience simultaneous growth.

   B. Aneconomicrebound where some segments recover rapidly while others continue to decline

   C. A situation where economic growth occurs in a perfectly equal distribution across all income groups.

   D. A recovery is characterized by a gradual improvement across all industries over an extended period.

Ans. Option B is correct
Explanation:

A K-shaped recovery describes a scenario where certain parts of the economy or specific segments experience rapid recovery and growth upward arm of the K'), while other sectors or groups continue to struggle or decline ('downward arm of the K'). This uneven recovery pattern highlights disparities and challenges in achieving broad based economic improvement.

Q9.Which of the following accurately distinguishes external debt from internal debt?

   A. External debt includes loans borrowed by government agencies, while internal debt includes loans borrowed by private corporations.

   B. External refers to loans borrowed 1nforeigncurrency, whereas internal debt refers to loans borrowed from domestic currency

   C. External debt is incurred by the central government. while internal debt is incurred by local governments within a country.

   D. External debt is subject to international financial regulations, while internal debt is governed solely by domestic fiscal policies.

Ans. Option B is correct
Explanation:

External debt involves loans and financial obligations that a country owes to foreign entities, typically denominated in foreign currencies such as dollars or euros.
This debt is acquired from international creditors outside the country. In contrast, internal debt encompasses loans and financial obligations borrowed domestically within the country denominated in the local currency (e.g., national currency like rupees or yen).
This distinction is crucial as it affects currency risk exposure and the country's ability to manage its debt obligations based on international and domestic economic conditions.

Q10. Which of the following is NOT an objective of the Remission of Duties, Taxes on Export Products (RoDTEP) scheme?

   A. To access the availability of easy refunds of various taxes to exporters

   B. To help exporters meet international standards and improve the quality of exports

   C. RoDTEP focuses on increasing taxes on exports to government revenue

   D. To make it more exhaustive by adding taxes that were previously excluded, such as education cess, and state taxes on power, oil, and water.

Ans. Option A is correct
Explanation:

The scheme Remission of Duties on Extort and Taxes was introduced on 1st Jan 2021, which is applicable to export products of countries.

With the introduction of the RoOTEP scheme, it is expected that the taxes on export products will be reduced and a major boost will be provided to the Indian export sector.

The main objective of this scheme is to give a boost to the export sector, which was poor in volume. other key objectives are as follows

To access the availability of easy refunds of various taxes lo exporters

To reduce the cascading effect in taxes, i.e., tax on tax, by providing an automatic refund route to help exporters meet international standards and improve the quality of exports

Another objective was to make it more exhaustive by adding taxes that were previously excluded, such as education cess, and stale taxes on power, oil, and water.

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