

Weekly Quiz Answers (7th-13th Aug)

Ans1. A

Explanation:

Palm manuscripts from the 18th Century, titled Gnanamuyarchi, have been discovered in an Armenian monastery in northern Italy.

- It could be a copy of the first Tamil translation of Spiritual Exercise, written by St. Ignatius of Loyola in the 16th century.
- This translation is most likely by Michele Bertoldi, known in Tamil as Gnanaprakasasamy.
- The manuscript was initially misclassified as ‘Indian Papyrus Lamulic Language–XIII Century,’ unaware that they were written in Tamil.
- The monastery authorities think the manuscripts might have been brought to Italy by Armenians in Chennai.

Ans2. D

Explanation:

Asian Elephant (largest living land animal in Asia) Population and Demography Estimates, 2023 was released recently.

- The report was released by Karnataka Minister for Forests Eshwar Khandre, ahead of the World Elephant Day being observed on August 12 to create awareness about the importance of preserving and protecting these animals that are classified as endangered species.

Key Highlights

- The number of elephants in Karnataka has increased by 346, from an estimated 6,049 in 2017 to 6,395 now, which is the highest in the country, according to an interim report.
- Their population range is estimated to be between 5,914 and 6,877.

About Asian Elephant	
Habitat	Indian Subcontinent and Southeast Asia. ✓ The habitat varies from wet tropical evergreen forests to semi-arid coniferous and scrub forests. ✓ However, the largest population of elephants is found in tropical deciduous forests. ✓ Elephants are “mega herbivores” that require vast forests and grasslands with plenty of food and water.
Subspecies	✓ The Sri Lankan ✓ The Indian Elephant ✓ The Sumatran Elephant
Appearance	✓ Smaller than their African counterparts, Asian elephants are easily recognized by their “small” rounded ears. ✓ They often have a hump on their back, a double-domed head with two humps, and a single “finger” on their body for grasping.

Distribution In India	✓ The Asian elephant was once widespread throughout the country, including states such as Punjab and Gujarat. ✓ They currently exist in four fragmented populations in South, North, Central and Northeast India.
IUCN Status	Endangered
Threats	✓ Loss of habitat ✓ Human-animal conflict ✓ Illegal wildlife trade

Ans3. B

Explanation:

Kanjeevaram Sarees

- Traditionally, the Kanjeevaram is a sari that is handwoven in mulberry silk and has pure gold or silver zari that renders it a festive quality.
- It is identified as the most luxurious and classy fabric in Indian traditional clothing. Originating from the village 'Kanchipuram' in Tamil Nadu, Kanjeevaram is considered the queen of silk sarees.
- The temple architecture of south India especially around Kanchipuram has historically served as the design inspiration for the traditional Kanjeevaram motifs.
- One can spot motifs such as the mythical creature called the Yali (an elephant-lion fusion), the Ganda Berunda (a two-headed majestic mythical bird) and the ubiquitous temple border called reku.
- Tracing its long and rich history from the Chola Dynasty, Kanchipuram sarees today are considered as one of the oldest and rich legacies of the Indian textile industry.

Ans4. C

Explanation:

A recent publication by the Zoological Survey of India (ZSI) points out that about 5% of the birds found in the country are endemic and not reported in other parts of the world.

- The publication, 75 Endemic Birds of India, was recently released on the 108th foundation day of the ZSI.

Key Highlights

- India is home to 1,353 bird species, which represents approximately 12.4% of the global bird diversity. Of these, 78 (5%) are endemic to the country.
- Three of the 78 species have not been recorded in the past few decades.
- They are
 - The Manipur bush quail (*Perdicula manipurensis*), listed as "endangered" by the International Union for Conservation of Nature (IUCN) Red List of Threatened Species with its last recorded sighting in 1907.
 - The Himalayan quail (*Ophrysia superciliosa*), listed as "critically endangered" with its last recorded sighting in 1876.
 - The Jerdon's courser (*Rhinoptilus bitorquatus*), listed as "critically endangered" with its last confirmed sighting in 2009.

- The publication highlighted the importance of endemic bird species in the country.
- Since endemic species are restrictive in nature, it is important that their habitats are conserved so that they don't dwindle out.

Ans5. B

Explanation:

Advantages of SMRs

- SMRs are designed with a smaller core damage frequency (the likelihood that an accident will damage the nuclear fuel) and source term (a measure of radioactive contamination) compared to conventional NPPs.
- They also include enhanced seismic isolation for more safety.
- SMR designs are also simpler than those of conventional NPPs and include several passive safety features, resulting in a lower potential for the uncontrolled release of radioactive materials into the environment.
- The amount of spent nuclear fuel stored in an SMR project will also be lower than that in a conventional NPP.
- Studies have found that SMRs can be safely installed and operated at several brownfield sites that may not meet the more stringent zoning requirements for conventional NPPs.
- The power-plant organisation can also undertake community work, as the Nuclear Power Corporation did in Kudankulam, Tamil Nadu, before the first unit was built.

Ans6. A

Explanation:

Ethanol

Ethanol is the active ingredient in alcoholic beverages and is also used in the chemicals and cosmetics industries.

- In the transport sector, the use of ethanol-blended petrol (EBP) significantly reduces harmful emissions, such as carbon monoxide and various hydrocarbons, from vehicles.
- The government launched the EBP programme in 2003 to reduce crude oil imports and curtail greenhouse gas emissions from petrol-based vehicles; it has been fairly successful.
- It started with the modest goal of achieving a blending rate of 5%, but the target set for 2025 is 20%.
- The government also reduced the Goods and Services Tax on ethanol from 18% to 5% in 2021.
- In the same year, of the 394 lakh tonnes of total sugar produced, about 350 lakh tonnes were diverted to produce ethanol, while India achieved a blending rate of 10% months ahead of the target.

Ans7. D

Explanation:

About Flying Fox	
Important facts	✓ The nectar and fruit-eating flying fox (<i>Pteropus giganteus</i>) is generally considered a vermin as they raid orchards. ✓ It is a keystone species causing seed dispersals of many plants in tropical systems.

Wildlife (Protection) Act of 1972 Status	Schedule II list
IUCN Status	Least concern
Appearance	Reddish-brown coat, characteristically long snout as well as large eyes. It also resembles a little fox with wings.
Distribution	It is native to the Indian subcontinent. These bats are endemic to South Central Asia, found from Pakistan and China to the Maldives Islands.
Lifestyle	✓ It is highly social creatures, forming large roosts of several hundred animals. ✓ These bats live in a 'vertical', male-dominated hierarchy system, where higher-ranked individuals occupy higher spots of the tree, while lower-ranked individuals remain on lower spots.
Threat	✓ Being external roosters, the flying fox is exposed to predators and disturbances apart from environmental indicators such as heat and light. • The biggest threat to the flying fox is from humans. Hunting for meat and medicine and probable threats like the felling of roost trees have contributed to the dramatic decrease in the population of the species.

Ans8. C

Explanation:

Asian Elephant Habitat: Indian Subcontinent and Southeast Asia.

- The habitat varies from wet tropical evergreen forests to semi-arid coniferous and scrub forests.
- The largest population of elephants is found in tropical deciduous forests.

Ans9. C

Explanation:

Geographical Conditions for the Growth of Sugar:

- **Temperature:** Between 21-27°C with hot and humid climate.
- **Rainfall:** Around 75-100 cm.
- **Soil Type:** Deep rich loamy soil.

Ans10. B

Explanation:

In the face of increasing cyber and malware attacks on defence as well as critical infrastructure across the country, the Defence Ministry has decided to replace the Microsoft Operating System (OS) in all computers connected to the Internet with a **new OS, Maya, based on open-source Ubuntu developed locally.**

- Maya has the **interface and all functionality like Windows** and users will not feel much difference as they transition to it.
 - Maya OS has been named after the **Sanskrit word Maya which means “illusion.”**
- To begin with, the direction is to install Maya on all computers connected to the Internet in South Block before August 15.

- In addition, an ‘end point detection and protection system’, ‘Chakravyuh’, is also being installed in these systems.
 - Chakravyuh is derived from **the ancient Indian military formation** that was used to trap enemies in a circular maze.
- Currently, Maya is being installed only in Defence Ministry systems and not on computers connected to the networks of the three Services.
- Maya was developed by government development agencies within six months. Maya would prevent malware attacks and other cyberattacks which had seen a steep increase, the official noted.

Ans11. D

Explanation:

The 31st edition of the Malabar multilateral exercise comprising India, Australia, Japan and the U.S. will be held off Sydney from August 11 to 21, as Australia hosts the war games for the first time this year. Australia has also invited India for the Sea Power conference that it is hosting from November 7 to 9.

- The exercise will take place in a large designated area, the East Australian exercise area, spread over a couple of hundred miles off Sydney and will have a harbour and sea phase.
- Exercise Malabar will be followed by AUSINDEX, the India-Australia bilateral naval exercise. In the past, officials have termed Malabar as the most complicated naval exercise that India does.

Malabar Exercise

The exercise started in 1992 along the Malabar Coast as a bilateral exercise between India and the United States. It was expanded in 2007 with the participation of Japan, Singapore and Australia. Japan became a permanent partner in 2015.

- The aim of the exercise is to increase interoperability between the naval forces.
- The exercise is also designed to deepen the partnership for the Indo-Pacific, for shared aspiration, for a free, open and resilient Indo-Pacific.

Ans12. B

Explanation:

Many new cases of TB are attributable to five risk factors says the WHO Global TB report 2022:

Undernourishment

HIV Infection

Alcohol Use
Disorders

Smoking
(Especially Among
Men)

Diabetes

- In TB-endemic countries such as India, undernutrition is the most widely prevalent risk factor, accounting for the “highest population attributable risk for TB in India”.
- It is also responsible for increased TB disease severity, higher mortality and poor treatment outcomes.
- A study in India found that severe undernutrition at diagnosis was associated with a two-fold higher risk of death.
- As per a 2016 paper by NIRT researchers, undernutrition is an important risk factor for progression of latent TB infection to TB disease.

- It increases the risk of drug toxicity, TB relapse and mortality. For each unit reduction in BMI, the risk of TB increases by about 14%.
- Undernourished patients also tend to have poor bioavailability of drugs such as rifampicin, leading to treatment failure and development of multidrug resistance.

Ans13. D

Explanation:

On August 2, Parliament passed the Mines and Minerals (Development and Regulation) Amendment Bill, 2023, in a bid to attract private sector investment in the exploration of critical and deep-seated minerals in the country.

- The Bill puts six minerals, including lithium — used in electric vehicle batteries and other energy storage solutions — into a list of “critical and strategic” minerals.
- The exploration and mining of these six minerals, previously classified as atomic minerals, were restricted to government-owned entities.

Mines and Minerals Bill 2023 & Private Players

- The Bill omits at least six previously mentioned atomic minerals from a list of 12 which cannot be commercially mined.
 - Being on the atomic minerals list, the exploration and mining of these six — lithium, beryllium, niobium, titanium, tantalum and zirconium, was previously reserved for government entities.
- The Act prohibits pitting, trenching, drilling, and sub-surface excavation as part of reconnaissance, which included mapping and surveys. The Bill allows these prohibited activities.
- The Bill also proposes a new type of licence to encourage reconnaissance — level and or prospective stage exploration by the private sector.
 - This exploration licence (EL), for a period of five years (extendable by two years), will be granted by the State government by way of competitive bidding.
 - This licence will be issued for 29 minerals specified in the Seventh Schedule of the amended Act, which would include critical, strategic, and deep-seated minerals.
 - It also specifies the maximum area for exploration; activities in up to 1,000 sq km will be allowed under a single exploration licence.
 - It also states that the licensee will be allowed to retain up to 25% of the originally authorised area after the first three years after submitting a report to the State government stating reasons for retention of the area.
- While most auctions are reserved for State governments in the Act, the Bill also reserves the conduct of auctions for composite licence and mining lease for specified critical and strategic minerals for the central government.

Ans14. C

Explanation:

How Much of India's Critical Minerals are Imported?

The lack of availability of some minerals or the concentration of their extraction or processing in a few geographical locations leads to import dependency, supply chain vulnerabilities, and even disruption of their supplies.

- For instance, China has majority ownership of cobalt mines in the Democratic Republic of Congo, where 70% of the world's cobalt is mined.
- China also has by far the largest amount of reserves of REEs of any country in the world, followed by Vietnam, Brazil and Russia.
- India is 100% import-dependent on countries including China, Russia, Australia, South Africa, and the U.S. for the supply of critical minerals like lithium, cobalt, nickel, niobium, beryllium, and tantalum.
- Also for deep-seated minerals like gold, silver, copper, zinc, lead, nickel, cobalt, platinum group elements (PGEs) and diamonds, which are difficult and expensive to explore and mine as compared to surficial or bulk minerals, India depends largely on imports.
 - For instance, in 2022-23, India imported close to 12 lakh tonnes of copper (and its concentrates) worth over ₹ 27,000 crore as per official figures.

Ans15. D

Explanation:

- The NPY was launched in 2018 by the Ministry of Health and Family Welfare.
- It aims to support every Tuberculosis (TB) Patient by providing a Direct Benefit Transfer (DBT) of Rs 500 per month for nutritional needs.