

SOLUTIONS

1: Answer : a

Buxa Tiger Reserve

- It is located inside the Buxa National Park.
- It is in the State of West Bengal.
- It is located in the Buxa Hills of the Southern hilly area of Bhutan.
- Its northern boundary runs along the international border with Bhutan.
- Animals Found: Tiger, Civet, Elephant, Gaur (Indian Bison), Indian Boar and Red Jungle Fowl.
- The fragile 'Teri Eco-System' constitutes a part of this reserve.
- The Phipsu wildlife sanctuary of Bhutan is contiguous to the north of Buxa Tiger Reserve.

2: Answer : d

Aurora

- An Aurora is a display of light in the sky predominantly seen in the high latitude regions (Arctic and Antarctic). It is also known as a Polar light.
- Types: There are two types- the aurora borealis and aurora australis – often called the northern lights and southern lights.
- Occurrence: They commonly occur at high northern and southern latitudes, less frequent at mid-latitudes.
- Colour: While usually a milky greenish color, auroras can also show red, blue, violet, pink, and white. These colors appear in a variety of continuously changing shapes.
- Origin: They origin at altitudes of 100 to more than 400 km.

Science behind the occurrence

- Auroras are a spectacular sign that our planet is electrically connected to the Sun. These light shows are provoked by energy from the Sun and fueled by electrically charged particles trapped in Earth's magnetic field.
- The typical aurora is caused by collisions between fast-moving electrons from space with the oxygen and nitrogen in Earth's upper atmosphere.
- The electrons—which come from the Earth's magnetosphere, the region of space controlled by Earth's magnetic field —transfer their energy to the oxygen and nitrogen atoms and molecules, making them "excited".
- As the gases return to their normal state, they emit photons, small bursts of energy in the form of light.
- When a large number of electrons come from the magnetosphere to bombard the atmosphere, the oxygen and nitrogen can emit enough light for the eye to detect, giving us beautiful auroral displays.

Why do auroras come in different colors and shapes?

- The color of the aurora depends on which gas — oxygen or nitrogen — is being excited by the electrons, and on how excited it becomes.
- The color also depends upon how fast the electrons are moving, or how much energy they have at the time of their collisions.
- High energy electrons cause oxygen to emit green light (the most familiar color of the aurora), while low energy electrons cause a red light.
- Nitrogen generally gives off a blue light.
- The blending of these colors can also lead to purples, pinks, and whites.
- The oxygen and nitrogen also emit ultraviolet light, which can be detected by special cameras on satellites.

Effects

- Auroras affect communication lines, radio lines and power lines.
- It should also be noted here that Sun's energy, in the form of solar wind, is behind the whole process.

3: Answer : c

The Madras High Court ruled that the ECI is not authorized to interfere with internal polls of political parties.

Election Commission of India

The Election Commission of India (ECI) is not authorised under any law to interfere with the internal elections of political parties recognised by it or registered with it, or find out whether or not the office-bearers had been elected by following a democratic process, the Madras High Court held.

It dismissed writ petition against the unopposed election of OPS, EPS to top posts.

Section 29A of the 1951 Act requires every political party to get it registered with the ECI.

“There is nothing in Section 29A, too, that requires an enquiry to be conducted by the commission into the fairness and validity of the internal elections held for the posts in a political party”, the Bench added.

Section 29A (9), which requires registered political parties to communicate to the ECI any change in their name, head office, office-bearers, address and so on without any delay.

The judge said even this provision did not confer any corresponding duty on the ECI to look into internal elections of a political party.

4) Answer : a

RBI introduces tough PCA framework for large NBFCs.

Prompt Corrective Action (PCA) Framework

- It is a framework under which banks with weak financial metrics are put under watch by the RBI.
- The RBI introduced the PCA framework in 2022 as a structured early-intervention mechanism for banks that become undercapitalized due to poor asset quality or vulnerable due to loss of profitability.
- It aims to check the problem of Non-Performing Assets (NPAs) in the Indian banking sector.
- The framework was reviewed in 2017 based on the recommendations of the working group of the Financial Stability and Development Council on Resolution Regimes for Financial Institutions in India and the Financial Sector Legislative Reforms Commission.
- PCA is intended to help alert the regulator as well as investors and depositors if a bank is heading for trouble.
- The idea is to head off problems before they attain crisis proportions.
- Essentially PCA helps RBI monitor key performance indicators of banks, and taking corrective measures, to restore the financial health of a bank.
- The PCA framework deems banks as risky if they slip some trigger points - capital to risk weighted assets ratio (CRAR), net NPA, Return on Assets (RoA) and Tier 1 Leverage ratio.
- Certain structured and discretionary actions are initiated in respect of banks hitting such trigger points.
- The PCA framework is applicable only to commercial banks and not to co-operative banks and non-banking financial companies (NBFCs).
- It may be noted that of the 21 state-run banks, 11 are under the PCA framework.

5) Answer : c

Durga Puja inscribed on UNESCO's Intangible Cultural Heritage List

UNESCO Intangible Heritage List

- This coveted list is made up of those intangible heritage elements that help demonstrate diversity of cultural heritage and raise awareness about its importance.
- The list was established in 2008 when the Convention for Safeguarding of the Intangible Cultural Heritage came into effect.
- The list is made up of those intangible heritage elements that help demonstrate diversity of cultural heritage and raise awareness.
- It not only represents the inherited traditions from the past but also contemporary rural and urban practices.
- This list also encompasses living expressions and traditions.
- Intangible cultural heritage means the skills, knowledge, expressions, representations, practices – as well as the artifacts, objects, instruments, and cultural spaces associated with them that various groups, communities and in certain cases individuals recognize as a part of their cultural heritage.
- This list is published by the Intergovernmental Committee for the Safeguarding of Intangible Cultural Heritage.
- Its members are elected by State parties meeting in the United Nations General Assembly.
- It aims at drawing attention to the importance of safeguarding cultural heritage and is a repository of cultural diversity and creative expression.

6) Answer : a

Sixth Schedule

- The Sixth Schedule under Article 244 (2) of the Constitution relates to those areas in the States of Assam, Meghalaya, Tripura and Mizoram which are declared as “tribal areas” and provides for District or Regional Autonomous Councils for such areas.
- Sizeable amount of autonomy has been given to the people belonging to the tribal areas of these four states to govern themselves
- The tribal areas in these four states come under the name of ‘Autonomous Districts,’ but the state still has its executive authority over them

- The power to organise and reorganise the tribal areas as autonomous districts lie with the governor of the state. He can also alter the name, boundary of such tribal areas.
- One autonomous district can have different tribes, which for better administration is divided into autonomous regions by the governor
- There is a district council for each autonomous district:
 - It has 30 members
 - Four are nominated by the governor – They perform their duties during the pleasure of the governor
 - 26 are elected using the adult franchise – Their term of office is five years.
- There is a separate regional council for each autonomous district
- The laws related to the following can be made by the regional and autonomous councils with the assent of the governor:
 - Land
 - Forests
 - Canal water
 - Shifting cultivation
 - Village administration
 - Inheritance of property
 - Marriage and divorce
 - Social customs

7) Answer : a

VIHANGAM

- In a first, in Coal India Ltd. (CIL) under the Ministry of Coal, an innovative Remotely Piloted Aircraft System (RPAS) at Mahanadi Coalfields Ltd (MCL) was inaugurated yesterday.

- Designed by the MCL's Innovation Cell and the Department of E&T, the portal named "Vihangam" for remote monitoring was created by a Mumbai-based start-up of drone manufacturing, robotics and automation.
- This state-of-art initiative will enable the Company to access real-time video through the internet and pave the way for other allied potential use-cases of drones in mines.
- The system enables real-time transmission of aerial video of mining activities from mines to internet platform which can be accessed through VIHANGAM portal by authorized personnel only having ID and password.

8) Answer : c

Domestic Subsidies of WTO

- In WTO terminology, subsidies in general are identified by "boxes" which are given the colours of traffic lights: green (permitted), amber (slow down — i.e. need to be reduced), red (forbidden).
- The Agriculture Agreement has no red box, although domestic support exceeding the reduction commitment levels in the amber box is prohibited; and there is a blue box for subsidies that are tied to programmes that limit production.
- There are also exemptions for developing countries (sometimes called an "S&D box" or "development box").

Amber Box

- All domestic support measures considered to distort production and trade (with some exceptions) fall into the amber box, which is defined in Article 6 of the Agriculture Agreement as all domestic supports except those in the blue and green boxes.
- These include measures to support prices, or subsidies directly related to production quantities.

Blue Box

- This is the "amber box with conditions" — conditions designed to reduce distortion. Any support that would normally be in the amber box, is placed in the blue box if the support also requires farmers to limit production.

- At present there are no limits on spending on blue box subsidies.

Green Box

- Green box subsidies must not distort trade, or at most cause minimal distortion.
- They have to be government-funded (not by charging consumers higher prices) and must not involve price support.

9) Answer : a

Aggregate Measurement of Support

- “Aggregate Measurement of Support” and “AMS” mean the annual level of support, expressed in monetary terms, provided for an agricultural product in favour of the producers of the basic agricultural product or non-product-specific (fertilizer subsidy) support provided in favour of agricultural producers in general.
- Under Article 6.4(b) of the AoA, developing countries such as India are allowed to provide a *de minimis* level of product and non-product domestic subsidy.
- This *de minimis* limit is capped at 10% of the total value of production of the product, in case of a product-specific subsidy; and at 10% of the total value of a country’s agricultural production, in case of non-product subsidy. Subsidies breaching the *de minimis* cap are trade-distorting. Consequently, they have to be accounted for in the AMS.
- The procurement at MSP, after comparing it with the fixed external reference price (ERP) — an average price based on the base years 1986-88 — has to be included in AMS.
- Even if the Government does not procure directly but mandates private parties to acquire at a price determined by the Government, as it happens in the case of sugarcane, the *de minimis* limit of 10% applies.

10) Answer : d

Ramna Kali Temple

- President of India will inaugurate a famous Hindu shrine, Sri Ramna Kali Mandir, that was destroyed by the Pakistani forces during the war (Operation Searchlight) of 1971.

- The Ramna Kali Bari used to be a famous landmark of Dhaka where a Kali temple stood for centuries.
- India supported the renovation and conservation of the historic temple with the help of the Government of Bangladesh. The inauguration comes 50 years after Pakistan was defeated in 1971.

11) Answer : a

Biological Diversity Act, 2002

- The Biological Diversity Act, 2002 was born out of India's attempt to realise the objectives enshrined in the United Nations Convention on Biological Diversity (CBD) 1992 which recognizes the sovereign rights of states to use their own Biological Resources.
- It aims at the conservation of biological resources, managing its sustainable use and enabling fair and equitable sharing benefits arising out of the use and knowledge of biological resources with the local communities.

The Act prohibits the following activities without the prior approval from the National Biodiversity Authority:

- Any person or organisation (either based in India or not) obtaining any biological resource occurring in India for its research or commercial utilisation.
- The transfer of the results of any research relating to any biological resources occurring in, or obtained from, India.
- The claim of any intellectual property rights on any invention based on the research made on the biological resources obtained from India.

Any grievances related to the determination of benefit sharing or order of the National Biodiversity Authority or a State Biodiversity Board under this Act, shall be taken to the National Green Tribunal (NGT).

12) Answer : a

Vedanthangal Bird Sanctuary

- The Vedanthangal Bird Sanctuary is one of the oldest in India, Kanchipuram district – 86 kms from Chennai about 250 years ago the locals noticed that this area comprising several lakes and ponds attracted a large number of birds.

- The area was recognised as a Sanctuary in 1936 and was named a Reserve in 1962 by the Madras Forest Act.
- It was upgraded to a wildlife sanctuary in 1972 by the Wildlife Protection Act. Till date the local community holds low key functions and marriages during the breeding season of the birds marking their exemplary link with the ecosystem.
- A tank having a compact grove of Barringtonia and Acacia nilotica trees Dry evergreen scrub and thorn forests.
- These sanctuaries are famous for their breeding heronry including cormorants, egrets, grey heron, open-billed stork, darter, spoonbill, white Ibis, night herons, grebes, grey pelican etc.
- Many migratory birds like garganey teals, shovellers, pintails, stilts, sandpipers etc. visit the sanctuary in winter.
- A variety of resident birds like coots, moorhen and terns can also be seen. Vedanthangal is the oldest water bird sanctuary in the country.

13) Answer : d

14) Answer : a

Log4j Vulnerability

- A new vulnerability named Log4Shell is being touted as one of the worst cyber security flaws to have been discovered.
- The vulnerability is based on an open-source logging library used in most applications by enterprises and even government agencies.
- The exploits for this vulnerability are already being tested by hackers.
- The vulnerability is dubbed Log4Shell and is officially CVE-2021-44228 (CVE number is the unique number given to each vulnerability discovered across the world).

- The problem impacts Log4j 2 versions which is a very common logging library used by applications across the world.
- Logging lets developers see all the activity of an application.
- Tech companies such as Apple, Microsoft, Google all rely on this open-source library, as do enterprise applications from CISCO, Netapp, CloudFare, Amazon and others.
- The vulnerability is serious because exploiting it could allow hackers to control java-based web servers and launch what are called 'remote code execution' (RCE) attacks.
- In simple words, the vulnerability could allow a hacker to take control of a system.

15) Answer : d

Background: The Vertical Launch Short Range Surface to Air Missile (VL-SRSAM) designed for Indian Naval warships was successfully flight tested.

Vertical Launch Short Range Surface to Air Missile (VL-SRSAM)

- VL-SRSAM has been designed and developed jointly by three facilities of the Defence Research and Development Organisation for deployment of Indian Naval warships.
- The missile has the capability of neutralising various aerial threats at close ranges including sea-skimming targets.
- The tactic of sea skimming is used by various anti-ship missiles and some fighter jets to avoid being detected by the radars onboard warships.
- For this, these assets fly as close as possible to sea surface and thus are difficult to detect and neutralise.