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# **CURRENT AFFAIRS**

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**GS 2 : Polity, Governance, International Relations**

**1. Only NRI quota seats for OCI cardholders**

- **Overseas Citizens of India (OCI) citizens are of Indian origin but they are foreign passport holders and are not citizens of India.** India does not allow dual citizenship but provides certain benefits under Section 7B(I) of the **Citizenship Act, 1955** to the OCIs.
- The guidelines issued by the Ministry of Home Affairs regarding benefits to OCI cardholders, notes that OCIs are not entitled to undertake any “missionary, mountaineering, journalism and tabligh activities” without prior permission of the Government of India. The OCI cardholder shall be **required to obtain a “special permission or a special permit” from the competent authority or the Foreigners Regional Registration Officer (FRRO)** or the Indian Mission for such purposes.
- The Ministry of Home Affairs (MHA) has reiterated through a recent gazette notification that Overseas Citizens of India (OCI) cardholders can lay claim to only NRI (Non Resident Indian) quota seats in educational institutions based on all-India entrance tests.

**2. JNCASR team develops potential drug candidate for Alzheimer’s**

**Context:**

- Researchers from Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru, have developed a small **molecule that helps disrupt and reduce formation of amyloid plaques in the brains of mice with Alzheimer’s Disease.**

**Alzheimer:**

- Alzheimer’s Disease is a **progressive and irreversible disorder of the brain**, which affects memory and thinking skills. Usually, in people, the symptoms start manifesting when they are in their sixties, though the onset is much earlier.

- The World Alzheimer Report 2015 notes that in 2015, over 46 million people worldwide were living with dementia. The report estimated that this number would increase to **more than 131.5 million by 2050**.
- One main feature of the disease is the deposition of amyloid plaques and neurofibrillary tangles in the brain.

#### Research study:

- Amyloid precursor proteins which play a critical role in the formation of the amyloid plaques were targeted by the researchers.
- The candidate molecules TGR60-65 were screened through **in vitro and cellular assays** and were found to check the growth of amyloid plaques and also dissolve preformed ones.
- The data from these experiments revealed superior activity of **TGR63 molecule** and this molecule was taken up for further animal studies in mice, which also proved the effectiveness of TGR63 molecule in treating Alzheimer's Disease in mice. The team observed that the molecule TGR63 **reduced amyloid plaques in mice brains and reversed cognitive decline**
- The group is planning to take this molecule TGR63, which is a **potential drug candidate for Alzheimer's Disease**, forward for clinical studies.

### 3. Slowing currents

- The **Gulf Stream**, together with its northern extension the **North Atlantic Drift**, is a **warm and swift Atlantic ocean current that originates in the Gulf of Mexico** and stretches to the tip of Florida, and follows the eastern coastlines of the United States and Newfoundland before crossing the Atlantic Ocean as the North Atlantic Current.
- The Gulf Stream system **conveys warm surface water from equator to the north and the deeper cold, low-salinity water down south**. It works like a giant conveyor belt.
- A recent study has revealed the slowing of the Gulf Stream system. It notes that never before in a 1,000 year period as the Gulf Stream system been as slow as it is in the last decade.
- **Increased rainfall and melting of the Greenland Ice sheet may have likely contributed to the observed slowing down of the Gulf Stream.**

### 4. Clustering educational institutes and research centres

#### Context:

- The **National Education Policy 2020 (NEP)** and the provisions regarding the promotion of Research and Development in India.

#### **Off-campus doctoral programmes:**

- Though the on campus doctoral students continue to be the mainstay of research in universities, an increasing number of universities also conduct off-campus doctoral programmes in research laboratories.
  - Example: The **Indian Institute of Science's External Registration programme** enables employees working in laboratories or industries to register for a doctoral programme under the supervision of its faculty and carry out a major part of research at their workplace.
- The external registration programme is being adopted by more and more higher education Institutes.

#### **NEP proposal:**

- The **NEP envisions** establishing large multidisciplinary universities to promote research and provides the option of setting up **clusters of higher education institutes**.
  - Cluster-based universities would increase faculty strength, both in terms of numbers and diversity of disciplines.

#### **Cluster-based universities:**

- The article proposes making workplaces pursuing knowledge-based work a part of a cluster-based university.

#### **Examples in India:**

- **Homi Bhabha National Institute (HBNI), Mumbai**, established in 2005, by the Department of Atomic Energy, is a cluster-based university.
- Academy of Scientific and Innovative Research established in 2011.

#### **International examples:**

- **Jet Propulsion Laboratory (JPL), California, U.S.**, is a research and development centre managed by California Institute of Technology (Caltech).
- **SOKENDAI (the Graduate University for Advanced Studies) of Japan** brings together several research institutions and museums.
- **The Paris-Saclay University** shares laboratories with several research organisations, including CEA (Atomic Energy and Alternate Energies Commission), INSERM (French Institute of Health and Medical Research) and others.

### Significance of cluster based universities:

- The topics of research taken up in cluster based universities are always of relevance to the workplace and are **based on the more relevant real life problems**.
- Cluster based universities offer the benefit from **synergies between the educational institutes and industrial entities**. It enables conducting academic research on focussed areas.
- Cluster based universities enable pursuit of academic research and post-academic research in the same university, and results in **faster deployment of results of research**.
- The cluster-based universities have been ranked among the top universities in the world.

### Conclusion:

- Clustering is a promising model to achieve a critical mass in a university to invigorate research.
- India needs to earnestly **pursue the model of cluster based universities**. Institutions for clustering in a university must be selected based on relevant aspects like, institutes pursuing similar objectives, institutes managed by a Department or a Ministry etc.
- **Industry associations must be encouraged to establish research centres based on the cluster system.**

### 5. EVMs made a shaky start in a Kerala constituency in 1982

- The use of electronic voting machines (EVMs) was first implemented in some booths of the Paravur Assembly constituency in Ernakulam in the **1982 polling**. This was the **first instance of the use of EVMs in India**.
- However, the use of the EVMs was challenged by the defeated candidate in the Kerala High Court, arguing that the **Representation of the People Act, 1951 and the Conduct of Elections Rules, 1961** did not empower the Election Commission to use EVMs. The High Court refused his plea.
- In 1992, Parliament inserted Section 61A in the Representation of the People Act, 1951 and Conduct of Elections Rules, 1961 validating the use of the EVM and paving way for their use in elections.
- The EC started using EVMs widely only since 1998.
- The new generation of EVMs has **Voter Verified Paper Audit Trail (VVPAT)**, which prints a small slip of paper that carries the name, symbol and the serial number of the candidate.
  - The top court has issued directives for using VVPAT to ensure accuracy and fairness in the EVM practice in 2013.

## 6. Celestial parking lot

- A comet-like object that travelled long distances towards the Sun has found a temporary parking space among **'Trojan asteroids'**. Such objects, called **Centaurs**, are icy bodies found between Neptune and Jupiter and warm up and become active as they near the Sun, looking more like a comet.
  - **Clusters of Trojan asteroids appear behind and ahead of Jupiter in its orbit.** As astronomers continued discovering asteroids hiding in **Jupiter's Lagrange points**, they continued naming them after heroes of the Trojan War and began referring to them as "Trojan asteroids."

## GS 3 : Economy, Science and Technology, Environment

### 7. 'Red Echo' over India

#### Context:

- Reports of **State-sponsored Chinese hacker groups targeting Indian power grid utilities.**

#### Background:

- United States-based cybersecurity firm Recorded Future had reported that a group linked to the Chinese government, which it called **'Red Echo'**, had targeted 10 vital nodes in India's **power distribution system and two seaports.**
- It has raised the possibility that the massive **power outage in Mumbai in October 2020** could have been the result of an attack by this Chinese state-sponsored group.

#### Details:

- The Maharashtra Power Minister Nitin Raut has announced that a State Cyber Cell probe found 14 Trojan horses in the servers of the Maharashtra State Electricity Transmission Company, with the potential to disrupt power distribution.

#### Modus operandi:

- RedEcho was using the **AXIOMATICASYMPTOTE server infrastructure** to carry out its intrusions into the networks of Indian organisations,

- AXIOMATICASYMPTOTE servers act as command-and-control centres for a malware known as ShadowPad.
- **ShadowPad is a backdoor Trojan malware**, which means it opens a secret path from its target system to its command-and-control servers. Information can be extracted or more malicious code delivered via this path. ShadowPad is built to target supply-chain infrastructure in sectors like transportation, telecommunication, energy and more.
- **Trojanised softwares**, or softwares that have dangers hidden in them are the primary mode of delivery for ShadowPad.

### Targets:

- Suspected targets include: Power System Operation Corporation Limited, NTPC Limited, NTPC Kudgi STPP, Western Regional Load Despatch Centre, Southern Regional Load Despatch Centre, North Eastern Regional Load Despatch Centre, Eastern Regional Load Despatch Centre, Telangana State Load Despatch Centre, Delhi State Load Despatch Centre, DTL Tikri Kalan (Mundka), Delhi Transco Ltd (substation), V. O. Chidambaranar Port and Mumbai Port Trust.
- All the twelve targeted entities have been **classified as critical infrastructure by the National Critical Information Infrastructure Protection Centre (NCIIPC)**.

### The Chinese link:

- RedEcho group was Chinese state-sponsored.
- RedEcho has an overlapping modus operandi with several **other known Chinese groups such as APT41, Winnti group and Barium**.
  - Many security firms have noted with high confidence that 'APT41' carries out Chinese state-sponsored espionage activity in addition to financially motivated activity potentially outside of state control.

### Concerns:

- RedEcho's intrusions were part of a **sustained strategic and targeted campaign against Indian organisations**.
- Though the kind of infrastructure sought to be accessed by Red Echo, such as Regional Load Despatch Centres, has minimal espionage possibilities, they pose significant concerns over **potential pre-positioning of network access to support Chinese strategic objectives**.
- Prepositioning in cyber warfare means to have malware assets in crucial places that can be called on when an actual attack is launched.

## 8. Three-member expert panel takes stock of turtle conservation

### Context:

- Three-member expert panel on conservation of endangered olive ridley sea turtles constituted by the Orissa High Court.

### Background:

### Mass nesting:

- The olive ridley turtles turn up in millions for mass nesting along the Odisha coast every year. This phenomenon is referred to as '**arribada**'.
- **Gahirmatha beach** in Kendrapara district is acclaimed as the world's largest-known nesting ground of these endangered marine species. Apart from Gahirmatha, these aquatic animals turn up at **Rushikulya river mouth and Devi river mouth** for mass nesting.

### Reports of high mortality:

- A recent report on an online environment magazine had stated that around 800 olive ridley turtles had died since January due to negligence of the States Forest and Fisheries department.

### Details:

- The court taking suo motu cognisance of the report constituted the expert panel and asked it to submit a report on the conservation of sea turtles in Gahirmatha marine sanctuary.
- The three-member panel made a field trip to the Gahirmatha marine sanctuary and assessed the conservation measures taken for the olive ridley sea turtles.

## 9. Spectrum sale, price test and the road ahead for 5G

### Context:

- India's first auction of telecommunications spectrum in five years.

### Telecom spectrum:

- Telecom spectrum stands for the portion of the electromagnetic wave range that is suitable for communication purposes.



- The different spectrum bands differ in terms of the **frequency** of these waves.
  - Frequency is a measure of the number of times the waves repeat themselves in a second. It is expressed in **terms of hertz**. Hence hertz is a measure of the number of cycles per second, and 1 megahertz stands for 1 million hertz.

### Characteristics of spectrum bands:

- Spectrum bands have different characteristics, and this makes them suitable for different purposes.
  - In general, **low-frequency transmissions can travel greater distances** before losing their integrity, and they can pass through dense objects more easily. However, **less data can be transmitted** over these radio waves.
  - **Higher-frequency transmissions carry more data, but are poorer at penetrating obstacles.**
- The 700 MHz band, as also 1,800 MHz, 2,100 MHz, and 2,300 MHz bands, are seen playing an important role in the 5G rollout.
  - In telecommunications, 5G is the fifth generation technology standard for broadband cellular networks, that promises to provide faster speeds lower latency.

## 10. Govt. open to evaluate, explore cryptocurrencies, says Thakur

### Context:

- High-level **inter-ministerial committee on digital currencies** submits report

### Background:

### Cryptocurrency:

- A cryptocurrency is a digital asset designed to work as a medium of exchange wherein individual coin ownership records are stored in a ledger existing in a form of computerized database using strong cryptography to secure transaction records, to control the creation of additional coins, and to verify the transfer of coin ownership.
- Cryptocurrencies typically use **decentralized control** as opposed to centralized digital currency and central banking systems. The cryptocurrency works through distributed ledger technology, based on the **blockchain technology**.
- Bitcoin is the first decentralized cryptocurrency.

### India's stand on Cryptocurrency:

- The **RBI had virtually banned cryptocurrency trading in 2018.**
  - The apex bank had certain major concerns over the impact cryptocurrencies may have on the financial stability in the economy.
- The Supreme Court had asked the Centre in 2019 to frame policies for crypto, and in 2020, struck down the curbs imposed by the RBI.

#### Details:

- A high-level inter-ministerial committee (IMC) was constituted under the chairmanship of the economic affairs secretary on digital currencies and it has submitted its report.
- The Finance Minister Nirmala Sitharaman has said that the government is still formulating its opinion on cryptocurrencies and will take a calibrated position.
- The Union Minister Anurag Thakur has said the government is open to evaluate and explore new technologies, including cryptocurrencies, for improving governance.

## THE INDIAN EXPRESS

## GS 2 : Polity, Governance, International Relations

### 1. India-EU

#### India's Export Potential to EU

- India has an untapped export potential of \$39.9 billion in the EU and Western Europe.
- The top products with export potential include apparel, gems and jewellery, chemicals, machinery, automobile, pharmaceuticals and plastic. India benefits from tariff preferences under the EU's Generalized System of Preferences (GSP) for several of these products.
- India is among the major beneficiaries of the EU's GSP, with exports under the GSP valued at nearly \$19.4 billion in 2019, accounting for nearly 37% of India's merchandise exports to the EU.

#### Concerns

- There are several products where India has export potential in the EU, but these have “graduated” or are at the brink of “graduation” under EU GSP.
- Product graduation applies when average imports of a product from a beneficiary country exceed 17.5% of EU-GSP imports of the same product from all beneficiary countries over three years.
- India’s exports of products such as textiles, inorganic and organic chemicals, gems and jewellery, iron, steel and their articles, base metals and automotives are already out of the ambit of EU-GSP benefits.
- There is also a likelihood of losing EU-GSP benefits in other categories such as apparel, rubber, electronic items, sports goods and toys due to product graduation.
- India’s competitors in apparel exports such as Bangladesh would continue to receive tariff benefits in the EU under Everything but Arms Initiative.
- Another competitor, Vietnam, concluded a free trade agreement (FTA) with the EU in 2019.
- India’s negotiation for a Broad-based Trade and Investment Agreement is yet to materialise due to lack of concurrence in areas like automotives and dairy and marine products.

### **Way Ahead**

- In light of the declining preferential access and the plausible erosion of competitiveness in the EU market, there is clearly a need to deepen trade and investment ties with the region.
- A thorough assessment of the benefits from FTA for domestic producers is warranted, with due consideration to the impact on sensitive sectors, and possibility of inclusion of safeguards such as sunset clause on concessions for some items.
- There should also be provisions for aspects such as investment and non-tariff measures (NTMs).
- India also needs to negotiate on investment-related aspects with the EU to enhance bilateral investments and foster stronger value chains, especially in technology-intensive sectors in which the EU has a comparative advantage.

### **Conclusion**

- Post-Brexit EU finds itself in the midst of a growing need for recalibrating ties with its partner countries.
- Forging stronger ties with the region through a mutually beneficial agreement could help strengthen Indian manufacturing and revitalise the flailing exports.

## 2. El Salvador becomes first central American country to be declared malaria-free:

### Context:

El Salvador has become **the first country in central America and the third in all Americas** to get the malaria-free certificate from the World Health Organization (WHO) in recent years.

- Malaria elimination certificate is awarded to a country when the chain of indigenous transmission of the disease has been disrupted nationwide for at least three consecutive years.
- The only other countries in the WHO Regions of Americas to have eliminated malaria in recent years are Paraguay (2018) and Argentina (2019).

### High Burden to High Impact (HBHI) initiative:

- Initiated by WHO in 11 high malaria burden countries, including India.
- In India, Implementation has been started in four states i.e. West Bengal and Jharkhand, Chhattisgarh and Madhya Pradesh.

### About Malaria:

**Caused by a parasite** that commonly infects a certain type of mosquito which feeds on humans.

**Spread:** Female Anopheles mosquitoes deposit parasite sporozoites into the skin of a human host.

**Four kinds of malaria** parasites infect humans:

Plasmodium falciparum, P. vivax, P. ovale, and P. malariae. In addition, P. knowlesi, a type of malaria that naturally infects macaques in Southeast Asia, also infects humans, causing malaria that is transmitted from animal to human ("zoonotic" malaria).

### Durgama Anchalare Malaria Nirakaran (DAMaN) initiative:

- Among states, **Odisha's Durgama Anchalare Malaria Nirakaran (DAMaN) initiative** is significant.
- The initiative aims to deliver services to the most inaccessible and hardest hit people of the State. The initiative has in-built innovative strategies to combat asymptomatic malaria.

- The programme is **jointly implemented by** Indian Council of Medical Research-National Institute of Malaria Research (ICMR-NIMR), National Vector Borne Disease Control Programme (NVBDCP), Odisha and Medicines for Malaria Venture (MMV).

## **GS 3 :Economy, Science and Technology,Environment**

### **3. Privatization**

At independence, India adopted a mixed economy model. In this context, the Public Sector Enterprises (PSEs) were established on a socialistic pattern of development.

However, due to the poor performance of several PSEs and the consequent huge fiscal deficits, the issue of privatisation has come to the forefront.

In India, privatisation is sought to be achieved through two measures:

- The disinvestment of the government's equity in public sector undertakings (selling off PSUs to Private Sector)
- The opening up of hitherto closed areas to private participation.

#### **Merits of Privatizations & Disinvestment**

- Improves the efficiency of PSUs
- Attracts Foreign Investment
- Improve financial discipline of PSUs
- Facilitate modernization of PSUs
- Reduces fiscal burden on govt in maintaining PSU
- Signals to the market that govt is promoting free-market principle

#### **Criticism**

##### **Social Justice**

- Privatisation policy betrays social justice.
- PSUs have historically played an active role in developing backward regions.
- Importantly, through reservations, PSUs have ensured high-quality jobs for Dalits, Adivasis and Other Backward Classes.
- Once PSUs are privatised or disinvested to below 50% government ownership, reservations for these historically marginalised sections will become history.

- Disregard to how PSU employees will cope with the lay-offs that will inevitably follow.

## **Banks**

- India's experience with Yes Bank and other private sector banks hardly suggests that privatisation will eliminate greed and corruption in banking.
- It was the resilience of nationalised banks that helped save us from the worst effects of the global recession in 2008-09.
- Public sector banks have also been central to expanding financial inclusion to the unbanked in India over the last five decades
- Rural branches that serve a public purpose more than generating profits will possibly be shut down by the corporates.

## **Conclusion**

Government should make sure that its welfare agenda is not ignored while tweaking its privatization policies.

## **4. FSSAI guidelines on GMO Crops:**

### **Context:**

FSSAI issued an order on February 8 setting the permissible limit for **genetically modified organisms (GMO)** in imported food crops at 1%.

- However, trade organisations have said that this threshold is unacceptably high.
- It amounts to an advocacy for zero presence of GMO in food and some other consumables.

### **GMO regulation in India:**

The task of regulating GMO levels in imported consumables was initially with **the Genetic Engineering Appraisal Committee (GEAC)** under the Union environment ministry.

- Its role in this was diluted with the enactment of **the Food Safety and Standards Act, 2006** and FSSAI was asked to take over approvals of imported goods.

## What are Genetically Modified Organism (Transgenic Organism)?

In GMO, genetic material (DNA) is altered or artificially introduced using genetic engineering techniques.

Genetic modification involves the mutation, insertion, or deletion of genes.

- Inserted genes usually come from a different organism (e.g. In Bt cotton, Bt genes from bacterium *Bacillus thuringiensis* are induced).

Genetic modification is done to induce a desirable new trait which does not occur naturally in the species.

### GM techniques are used in:

1. Biological and medical research,
2. Production of pharmaceutical drugs,
3. Experimental medicine (e.g. gene therapy),
4. Agriculture (e.g. golden rice, Bt cotton etc.),
5. Genetically modified bacteria to produce the protein insulin,
6. To produce biofuels from some GM bacteria, etc.

## 5. FSI Report on forest fires:

### Context:

The Forest Survey of India (FSI) has released a report on forest fires in the country.

### Key findings:

1. At least 5,291 forest fires were recorded in Odisha between February 22 and March 1, 2021 – the highest in the country for the same period.
2. Collection of mahua flowers and kendu leaves, practice of shifting cultivation and grazing in forest areas are some of the reasons for forest fires in Odisha.
3. Telangana recorded the second-highest fires in the country at 1,527 during the same period, followed by Madhya Pradesh (1,507) and Andhra Pradesh (1,292), according to FSI data.

### Concerns:

- Forest fires have become an issue of global concern. In many countries, wildfires are burning larger areas, and fire seasons are growing longer due to global warming.
- Globally, forest fires release billions of tons of CO<sub>2</sub> into the atmosphere, while hundreds of thousands of people are believed to die due to illnesses caused by exposure to smoke from forest fires and other landscape fires.

### **Causes of Forest Fire:**

Forest fires are caused by Natural causes as well as Man-made or anthropogenic causes.

1. Natural causes such as lightning which set trees on fire. High atmospheric temperatures and low humidity offer favourable circumstance for a fire to start.
2. Man-made causes like flame, cigarette, electric spark or any source of ignition will also cause forest fires.
3. Traditionally Indian forests have been affected by fires. The problem has been aggravated with rising human and cattle population and the increase in demand for grazing, shifting cultivation and Forest products by individuals and communities.
4. High temperature, wind speed and direction, level of moisture in soil and atmosphere and duration of dry spells can intensify the forest fires.

### **India's Initiative to Tackle Forest Fire:**

**National Action Plan on Forest Fires (NAPFF):** It was launched in 2018 to minimise forest fires by informing, enabling and empowering forest fringe communities and incentivising them to work with the State Forest Departments.

**The Forest Fire Prevention and Management Scheme (FPM)** is the only centrally funded program specifically dedicated to assist the states in dealing with forest fires.

## **6. CSIR Floriculture Mission**

### **In news**

- Recently, CSIR Floriculture Mission has been approved.
- It will be implemented in 21 States/UTs.



### Key takeaways

- Available knowledge base in CSIR Institutes will be utilized and leveraged to help Indian farmers and industry re-position itself to meet the import requirements.
- Floriculture, or flower farming, is a discipline of horticulture concerned with the cultivation of flowering and ornamental plants for gardens and for floristry.
- **Implemented by:** CSIR in collaboration with Indian Council of Agricultural Research (ICAR)-Directorate of Floriculture; KVIC; APEDA, TRIFED; Fragrance and Flavour Development Centre (FFDC), Kannauj, Ministry of MSME and Universities.
- Despite the fact that India has diverse agro-climatic and edaphic conditions, and rich plant diversity, it shares only 0.6% of global floriculture market.
- At least 1200 million USD worth of floriculture products are being imported by India

### Prelims Practice Questions

#### 1. Which of the following countries is/are not a part of OPEC?

1. Oman
2. Bahrain
3. Kuwait
4. Iran
5. Kazakhstan

#### Choose the correct option:

- a. 1, 2 and 5 only
- b. 2 and 3 only
- c. 2 and 5 only
- d. 1 and 4 only

**Answer: a**

#### Explanation:

- Islamic Republic of Iran, Iraq, Kuwait, Saudi Arabia and Venezuela are the founding members of OPEC.

- The Organization of the Petroleum Exporting Countries (OPEC) and its allies as a grouping are known as OPEC+.
- OPEC+ comprises Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan.

**2. With reference to the Asola Bhatti Wildlife Sanctuary, consider the following statements:**

1. It is located at the border of Delhi and Haryana.
2. The sanctuary is a part of Aravalli ranges.

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**

- **Asola-Bhatti Wildlife Sanctuary** covering 32.71 sq km area lies on the Southern **Delhi Ridge of Aravalli hill range**, one of the oldest mountain systems of the world, on Delhi-Haryana border. **Hence, statement 1 and 2 are correct.**

**3. Consider the following statements:**

1. Pench Tiger Reserve (PTR) is located in the southern reaches of the Satpura hills.
2. The area of PTR lies in both Madhya Pradesh and Maharashtra.

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**

- The **Pench Tiger Reserve (PTR)** is located in Nagpur District of Maharashtra and named after the pristine Pench River.
  - The Pench river flows right through the middle of the park.
  - It descends from north to south, thereby dividing the reserve into equal eastern and western parts.
- PTR is the joint pride of both Madhya Pradesh and Maharashtra.
  - The Reserve is located in the **southern reaches of the Satpura hills** in the Seoni and **Chhindwara districts in Madhya Pradesh**, and continues in **Nagpur district in Maharashtra** as a separate Sanctuary. **Hence, statement 1 and 2 are correct.**
- It was declared a National Park by the Government of Maharashtra in 1975 and the identity of a tiger reserve was granted to it in the year 1998-1999.
  - However, PTR Madhya Pradesh was granted the same status in 1992-1993. It is one of the major Protected Areas of Satpura-Maikal ranges of the Central Highlands.

**4. With reference to the QS World University Rankings by Subject 2021, consider the following statements:**

1. The number of Indian universities/institutes in the top 100 subject rankings has increased.
2. No private institution from India has entered in the global top-100.

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**

- 25 programmes offered by higher education institutions in India ranked among the top 100 in the world in their respective subject categories, according to the latest edition (11<sup>th</sup>) of the **QS World University Rankings by Subject**.
- The 2021 QS's global university performance comparison offered independent data on the performance of 253 programs at 52 Indian higher education institutions, across 51 academic disciplines.

- The number of Indian universities/institutes **in the top 100 subject rankings** has increased from 8 to 12 this year. **Hence, statement 1 is correct.**
  - 12 Indian institutions that have made it to the top 100 of the world - IIT Bombay, IIT Delhi, IIT Madras, IIT Kharagpur, IISC Bangalore, IIT Guwahati, IIM Bangalore, IIM Ahmedabad, JNU, Anna University, University of Delhi and OP Jindal University.
  - IIT-Bombay has cornered more top 100 positions than any other Indian institution.
- The government-run Institutions of Eminence (IoE) remains significantly better-represented in the rankings than the private ones.
  - OP Jindal Global University has entered the global top-100 for law (76<sup>th</sup>). This is the only top-100 result achieved by a private IoE. **Hence, statement 2 is not correct.**

**5. Consider the following statements with respect to Simlipal National Park:**

1. It is located in Maharashtra.
2. It is a part of the UNESCO World Network of Biosphere Reserves.
3. Simlipal derives its name from a silk cotton tree.

**Which of the given statement/s is/are correct?**

- a. 1 and 2 only
- b. 2 and 3 only
- c. 2 only
- d. 1, 2 and 3

**Answer: b**

**Explanation:**

- Simlipal, which derives its name from 'Simul' (silk cotton) tree, is a national park and a tiger reserve.
- It is situated in the northern part of Odisha's Mayurbhanj district.
- Simlipal and the adjoining areas, comprising 5,569 sq km, was declared a biosphere reserve by the Government of India in 1994, and lies in the eastern end of the Eastern Ghats.
- UNESCO added the national park to its list of biosphere reserves in 2009.
- It is a part of the UNESCO World Network of Biosphere Reserves.

**6. Consider the following statements with respect to Red Sanders:**

1. The tree is endemic to South India.
2. It is used in Ayurveda and Siddha medicine.
3. It is classified as endangered in IUCN Red List.

**Which of the given statement/s is/are correct?**

- a. 1 and 2 only
- b. 2 and 3 only
- c. 2 only
- d. 1, 2 and 3

**Answer: a**

**Explanation:**

- *Pterocarpus santalinus* or Red Sanders is a tree endemic to South India.
- They are found in the Tropical Dry Deciduous forest of the Palakonda and Seshachalam hill ranges of Andhra Pradesh and also found in Tamil Nadu and Karnataka.
- It is used for various purposes such as immunity medicine; it is used in Ayurveda and Siddha medicine.
- While red sanders was classified as endangered in 1997, IUCN reclassified red sanders (*Pterocarpus santalinus*) as 'near threatened' from the earlier 'endangered' in 2018.

### **Mains Practice Questions**

**1Q. Indigenous people are one of the most vulnerable sections facing climate change, however, they can act as change agents, towards mitigating and adapting to climate change. Discuss. (250 words)**

#### **Approach**

- Briefly defining Indigenous people, highlight their vulnerability/problems face due to Climate Change.
- Highlight how they can act as change agent in mitigation as well as adaptation efforts with example.
- In conclusion, highlight some challenges for becoming a change agent and some measures to overcome them.

**2Q. Putting the citizen first is the guiding principle of good governance. Discuss. (250 words)**

#### **Approach**

- Give a brief introduction about Good Governance.
- Discuss how “Citizen first” is the guiding principle of good governance.
- Give a conclusion.

