



Daily Current Affairs Prelims Quiz 04-10-2023 (Online Prelims Test)

1) Consider the following statements with respect to the Attosecond Pulses

1. Attosecond is a brief unit of time that helps capture fundamental forces such as electrons.
2. An attosecond is one-billionth of a nanosecond.
3. The pulses of light cannot be captured at Attosecond.

How many of the statements given above are correct?

- a. Only one
- b. Only two
- c. All Three
- d. None of the above

Answer : b

Attosecond Pulses

Recently 3 scientists received Nobel Prize award, 2023 in the field of Physics for their "experimental methods that generate attosecond pulses for the study of electron dynamics in matter."

- The laureates were awarded the Prize for experiments that have allowed scientists to produce ultra-short pulses of light, with which they can finally 'see' directly into the super-fast world of electrons.
- Attosecond physics gives us the opportunity to understand mechanisms that are governed by electrons.
- The movement of an atom in a molecule can be studied with the very shortest pulses produced by a laser.
- These movements and changes in the atoms occur on the order of femtoseconds that is a millionth of a billionth of a second.
- However, electrons are lighter and interact faster, in the attosecond realm.
- An attosecond is one-billionth of a nanosecond.
- By fine-tuning the setup used to produce the overtones, scientists realised that **it should be possible to create intense pulses of light each a few attoseconds long.**
- Overtones are all pitches higher than the lowest pitch within an individual sound.
- Attosecond pulses allow scientists to capture 'images' of activities that happen in incredibly short time spans.
- For medical diagnostics, attosecond pulses can be used to check for the presence of certain molecules based on their fleeting signatures.

2) Consider the following statements with respect to the Scheduled Tribe (ST) Communities in India

1. Article 244 of the constitution deals with the Scheduled Tribe (ST) in India.
2. Articles 244 provides for Fifth Schedule provisions to Scheduled Areas in Assam, Meghalaya, Tripura, and Mizoram.

3. The Fifth Schedule confers powers exclusively on the President to declare any area to be a Scheduled Area.

How many of the statements given above are correct?

- a. Only one
- b. Only two
- c. All Three
- d. None of the above

Answer : b

Scheduled Tribe (ST) Communities in India

- India's 705 Scheduled Tribe (ST) communities make up around 8.6% of the country's population and live in **26 States and 6 Union Territories**.
- Article 244 deals with the administration of Scheduled and Tribal Areas, which is the single most important constitutional provision for STs.
- Articles 244(1) provides for the application of Fifth Schedule provisions to Scheduled Areas notified in any State other than Assam, Meghalaya, Tripura, and Mizoram.
- The Sixth Schedule applies to these states as per Article 244(2).
- **Scheduled Areas cover 11.3% of India's land area, and have been notified in 10 States.**
- The 10 states includes: Andhra Pradesh, Telangana, Odisha, Jharkhand, Chhattisgarh, Madhya Pradesh, Rajasthan, Gujarat, Maharashtra, and Himachal Pradesh.
- However, despite persistent demands by Adivasi organisations, villages have been left out in the 10 States with Scheduled Areas and in other States with ST population.
- **As a result, 59% of India's STs remain outside the purview of Article 244.**
- They are denied rights under the laws applicable to Scheduled Areas, that includes:
 - The Right to Fair Compensation and Transparency in Land Acquisition,
 - Rehabilitation and Resettlement Act 2013 and
 - The Biological Diversity Act 2002.
- The Fifth Schedule confers powers exclusively on the President to declare any area to be a Scheduled Area.
- States with Scheduled Areas need to constitute a Tribal Advisory Council with up to 20 ST members.
- They will advise the Governor on matters referred to them regarding ST welfare. The Governor will then submit a report every year to the President regarding the administration of Scheduled Areas.

3) Badis limaakumi, sometimes seen in the news is related to which of the following statement?

- a. Tribes indigenous to South American continent.
- b. An indigenous military system developed by India.
- c. A fish with characters similar to the chameleon.
- d. Newly discovered mRNA vaccines against COVID-19.

Answer : c

Badis Limaakumi

Scientists have recently discovered a new fish species 'Badis limaakumi' from the Milak River, Nagaland that can change its colour like a chameleon

- Badis limaakumi is a new species of badid fish from Nagaland, Northeast India.

- It belongs to the family of Badidae, a small freshwater fish found in streams with slow or moderate water flow.
- *Badis limaakumi* belongs to the *Badis assamensis* SG which is characterised by a distinct, dark opercular blotch.
- The new fish species differs from other members of the *Badis badis* SG.
- ***Fish from the Badis family are also known as chameleon fish for their ability to change colour.***
- This helps them blend with the surroundings when under stress.



4) Consider the following statements with respect to the Critical Minerals and Clean Energy Summit

1. The summit is an initiative of the International Energy Agency.
2. The summit prohibits the use of critical minerals as fuels.

Which of the above statement(s) is/are correct?

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

Answer : a

Critical Minerals and Clean Energy Summit

Recently Critical Minerals and Clean Energy Summit conducted by the International Energy Agency that was concluded with 6 key actions for secure, sustainable and responsible supply chains

- [Critical Minerals](#) and Clean Energy Summit is the first ever summit conducted by the International Energy Agency.
- The Critical Minerals and Clean Energy Summit delivered 6 key actions for secure, sustainable and responsible supply chains that includes:
 1. Accelerate progress towards diversified minerals supplies.
 2. Unlock the power of technology and recycling.
 3. Promote transparency in markets.
 4. Enhance the availability of reliable information.
 5. Create incentives for sustainable and responsible practices.
 6. Foster international collaboration.
- The IEA will hold a Ministerial Meeting in February 2024, coinciding with the 50th anniversary of the Agency's founding.

- The 2024 Ministerial will provide a key opportunity for countries to assess what critical minerals mean for the changing landscape of international cooperation on energy security and climate change.

5) Consider the following statements with respect to UMMEED

1. It is a set of guidelines released by the Union Ministry of Health and Family Welfare.
2. The initiative aims to prevent suicide among both school and college students.

Which of the above statement(s) is/are correct?

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

Answer : d

UMMEED

A set of guidelines was recently released by the Union Ministry of Education (MoE) to prevent suicide among students.

- UMMEED – Understand, **M**otivate, **M**anage, Empathise, Empower, **D**evelop.
- **The guidelines aim to serve as directions to schools** for enhancing sensitivity, understanding and providing support in case of reported self-harm.
- The Union Ministry of Education released the draft guidelines for schools to prevent suicide among students, prescribing in its plan of action.
- The plan of action includes:
 1. The setting up of wellness teams;
 2. Conduct orientation for teachers and family members and
 3. Immediate response to students exhibiting warning signs of self-harm.
- A school wellness team (SWT) may be formed under the leadership of the school principal, where each member is oriented in handling crisis situations.
- The guidelines recommend an orientation a year for teachers and family members, to help build awareness around student suicides.
- These orientations will be conducted by the schools for the capacity-building of various stakeholders.