Daily Current Affairs Prelims Quiz 26-08-2024 & 25-08-2024 (Online Prelims Test)

1) With reference to India & Australia, consider the following statements

1. India-Australia Agri Tech Forum (IAATF) is a newly constituted forum by India in New Delhi.
2. Both India and Australia are members of Indo Pacific Economic Forum for Prosperity and Trilateral Supply Chain Resilience Initiative.
3. The first negotiations for a Comprehensive Economic Cooperation Agreement (CECA) were first launched in May 2011.

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

India-Australia Relationship

10th Round of India-Australia CECA Negotiations was recently held at in Sydney in the areas of Goods, Services, Digital Trade, Government Procurement, Rules of Origin and Agri tech.

- The India-Australia bilateral relationship is underpinned by shared values of a pluralistic, Westminster-style democracies, Commonwealth traditions, expanding economic engagement and increasing high level interaction.
- Australia and India upgraded bilateral relationship from 'Strategic Partnership' in 2009 to Comprehensive Strategic Partnership (CSP).
- ***Both the India & Australia are part of the 14 country Indo Pacific Economic Forum for Prosperity (IPEF) and Trilateral Supply Chain Resilience Initiative (SCRI)***.
- Indo Pacific Economic Forum for Prosperity (IPEF) aims to contribute to cooperation, stability and prosperity in the region.
- To know more about IPEF click here .
- The Supply Chain Resilience Initiative (SCRI) was launched in April 2021 is a trilateral initiative of ***Australia-Japan-India***.
- It aims to ensure global supply chains remain resilient to future "black swan" events, such as pandemics and geopolitical tensions.
- **Australia-India Comprehensive Economic Cooperation Agreement (CECA):**
- ***Australia and India first launched negotiations for a Comprehensive Economic Cooperation Agreement in May 2011***.
- ***India is Australia's 6th largest trading partner*** with two-way trade in goods and services valued at USD 46.5 billion in 2022.
- The 10th Round of India-Australia CECA Negotiations was recently held at Sydney in the areas of Goods, Services, Digital Trade, Government Procurement, Rules of Origin and Agri tech.

- **India-Australia Agri Tech Forum (IAATF)**:
- India-Australia Agri Tech Forum (IAATF) is a newly ***constituted forum by Australia***, in New Delhi.
- The forum includes Indian agricultural stakeholders namely industry, research institutions and Government.
- It aids to build on mutually beneficial relationship by exploring opportunities for focused activity around technology transfer and knowledge sharing in agriculture and horticulture sectors.

2) Consider the following statements with respect to Whistler Wave

1. It is an electromagnetic wave that originate during lightning discharges.
2. They propagate only through the ionosphere.

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

a. 1 only

b. 2 only

c. Both 1 and 2

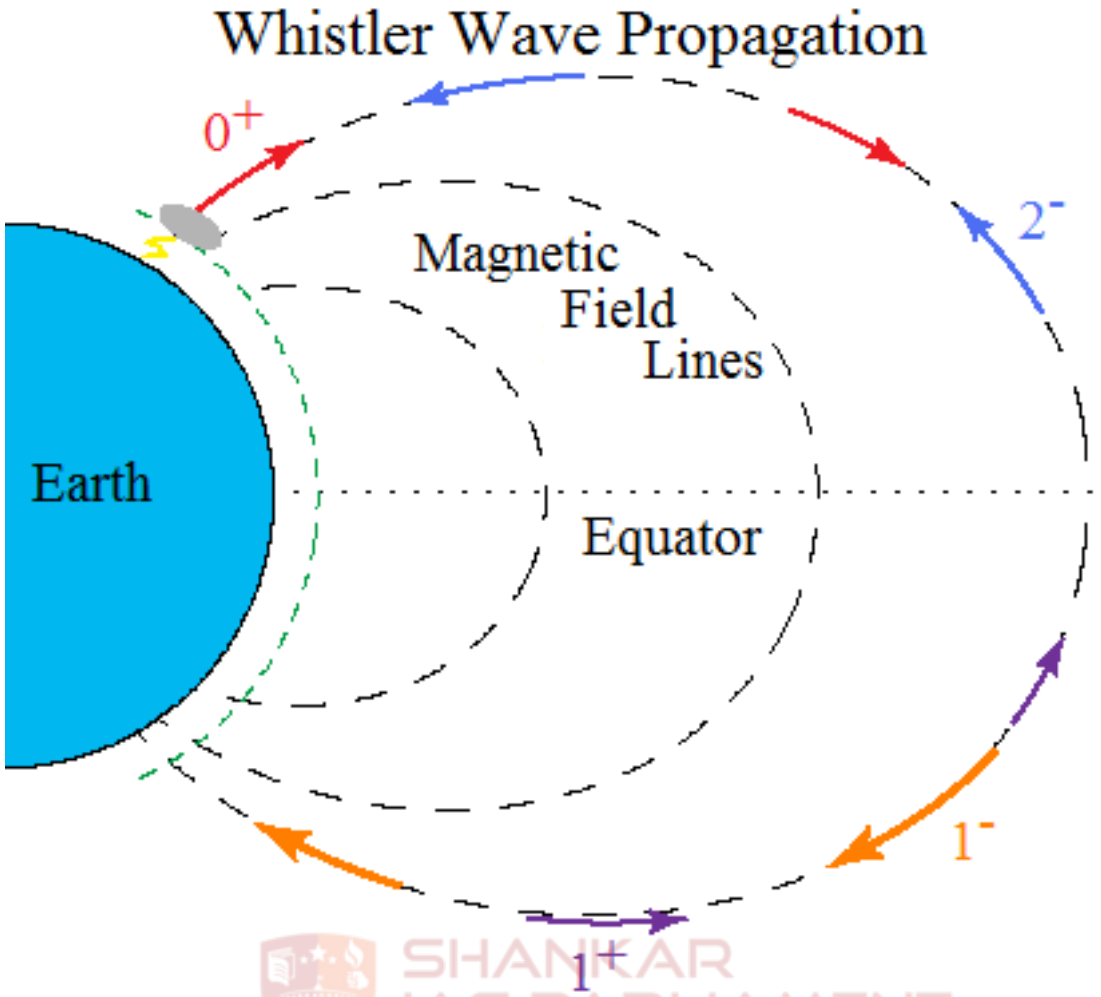
d. Neither 1 nor 2

Answer : a

Whistler Wave

Scientists have recently reported discovering a new type of whistler wave produced by a previously unknown wave generation mechanism.

- Whistler Wave are produced when lightning strikes emit electromagnetic energy across a range of frequencies.
- **Propagation path** – Some of this energy can be guided by the Earth's magnetic field lines up into the ***ionosphere and magnetosphere***, traveling between the northern and southern hemispheres.
- **Frequency characteristics** – Whistlers typically have frequencies *within the human audible range (20-20,000 Hz)*.
- Higher frequency components travel faster than lower frequency ones.
- **Sound** – When received and converted to audio, they produce a distinctive descending tone or whistle, hence the name "whistler".
- **Dispersion** – The descending tone is due to dispersion - lower frequency waves travel more slowly and arrive later, creating the characteristic falling pitch.
- **Significance** – Whistlers are used to study the properties of the magnetosphere, including electron density and the structure of the plasma pause.
- **New discovery** – Recent research has identified a new type of whistler wave that can be generated when lightning energy is reflected from the ionosphere into the magnetosphere at low latitudes, contrary to previous understanding.
- **Impact on magnetosphere** – This new mechanism may significantly increase estimates of how much lightning energy enters the magnetosphere, potentially affecting models of radiation belt dynamics.



3) Consider the following statements with respect to Vaccine-derived Polio

1. It is a rare condition that occurs when the attenuated strain of poliovirus used in the oral polio vaccine mutates and regains the ability to cause paralysis.
2. More than 90% of vaccine-derived poliovirus outbreaks are due to the type 2 virus present in oral polio vaccines.
3. Vaccine-associated paralytic poliomyelitis (VAPP) is a rare event that can occur in people who receive the oral polio vaccine (OPV).

How many of the statements given above are correct?

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

Answer : c

Vaccine-derived Polio

A two-year-old child from Meghalaya's West Garo Hills district was recently tested positive for Vaccine-derived Polio, in rare occasion can trigger the disease in children with weak immune systems.

- Vaccine-derived polio is a rare condition that occurs when the weakened (also called attenuated) strain of poliovirus used in the oral polio vaccine mutates and regains the ability to

cause paralysis.

- The oral polio vaccine (OPV) contains a live, attenuated virus that is used for immunisation against the disease.
- This weakened virus triggers an immune response when administered, thus protecting people from the disease.
- The *attenuated virus replicates in the intestines for a limited period* and is excreted in the stool.
- In rare cases, the virus can mutate enough to cause the disease again, and circulate in areas where either immunisation is low, or where immunocompromised persons reside, or regions with poor sanitation and hygiene.
- This is how vaccine-derived poliovirus (VDPV) spreads.
- According to the World Health Organization (WHO), ***the virus is classified as "circulating" (cVDPV2.***
- If it is detected in at least two different sources and at least two months apart, that are genetically linked, showing evidence of transmission in the community.
- ***More than 90% of vaccine-derived poliovirus outbreaks are due to the type 2 virus present in oral polio vaccines***.
- ***Vaccine-associated paralytic poliomyelitis (VAPP) is a rare adverse event that can occur in people who receive the oral polio vaccine (OPV)***.
- It particularly affects immune-deficient individuals.
- **Types of polioviruses** – The 3 types of the poliovirus are:
    1. Wild poliovirus type 1 (WPV1)
    2. Wild poliovirus type 2 (WPV2)
    3. Wild poliovirus type 3 (WPV3)
- Symptomatically, all these strains are identical.
- **Jonas Salk** – The first successful polio vaccine for poliovirus was developed by him.
- Inactivated Polio Vaccine (IPV) uses formaldehyde-inactivated virus.
- It induces systemic immunity when injected into muscles.

4) SNA-SPARSH is a cash management initiative to ensure real-time quick transfers through integration of which of the following?

1. Public Financial Management System (PFMS) of Union.
2. Integrated Financial Management and Information System of states.
3. e-kuber platform of Reserve Bank of India (RBI).

Select the correct answer using the code given below:

a. 1 and 2 only

b. 2 and 3 only

c. 1 and 3 only

d. 1, 2 and 3

Answer : d

SNA-SPARSH

- SNA-SPARSH aims to ensure real-time quick transfers through the integration of:
    1. Public Financial Management System (PFMS) of Union.
    2. Integrated Financial Management and Information System of states.
    3. e-kuber platform of Reserve Bank of India (RBI).
- SNA-SPARSH has been developed under Government Integrated Financial Management Information System (GIFMIS) on the PFMS platform.
- It is a major cash management initiative for Centrally Sponsored schemes introduced as an alternative fund flow mechanism for CSS funds.

- **E-Kuber** – Is the Core Banking Solution (CBS) platform of Reserve Bank of India's (RBI).
- The members of the electronic platform include:
    - Commercial banks, scheduled UCBs, Primary Dealers, insurance companies and
    - Provident funds, who maintain funds account (current account) and securities accounts (Subsidiary General Ledger (SGL) account) with RBI.
- All members of E-Kuber can place their bids in the auction through this electronic platform.

5) Consider the following statements with respect to Atacama Salt Flat

1. The lake under the salt flat has one of the largest lithium reserves in the world.
2. It is the biggest salt deposit in the world.
3. It is sinking at a rate of 1 to 2 centimetres per year due to lithium brine extraction.

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

Atacama Salt Flat

According to a new study, Chile's Atacama salt flat is sinking at a rate of 1 to 2 centimetres per year due to lithium brine extraction.

- Atacama Salt Flat is the biggest salt deposit in Chile.
- It has a rough white surface below which there is a large Salt Lake.
- The lake under the salt flat has one of the largest lithium reserves in the world.

*The world's largest salt deposit is situated at Sifto Salt Mine in Goderich, Ontario, **Canada**.*

- This lithium mineral is highly used in the technology industry and it is exploited in the southern area of the flat.
- This salt layer has holes which have become small lagoons which are home several quatic birds, such as flamingoes, red-gartered coots, and guallatas.
- There are also fauna species like the Chilean and the Andean Flamingo, Puna Plover, Hudson Mohawk, Andean Seagull, Austral Negrito, Burrowing Owl, and some types of Swallows.
- The surroundings of the salt flat also have many attractions.
- On the North and West side there is the Cordillera de la Sal (Salt Mountain Range), a chain of hills within the shape of dinosaurs located by the route connecting Calama and San Pedro de Atacama.
- ***Atacama salt flat is sinking at a rate of 1 to 2 centimetres per year due to lithium brine extraction***.
- ***Lithium*** is also known as "white gold", is one of the most sought-after metals on Earth.
- It is used in rechargeable batteries, which power not only laptops and mobile phones but also electric vehicles, a crucial part of the world's plan to tackle climate change.
- **Impacts of lithium extraction on environment:**
- The ***brine evaporation method*** used to produce lithium requires massive quantities of fresh water, which is already scarce, especially in the Atacama Desert.
- Chemicals such as sulphuric acid and sodium hydroxide that are used for lithium extraction contaminate soil and water, poisoning ecosystems and endangering species.
- It has led to a decline in the number of flamingos in the area due to a drop in water levels in the Atacama, fewer flamingos are reproducing.