Daily Current Affairs Prelims Quiz 15-07-2024 & 14-07-2024 (Online Prelims Test)

1) Consider the following statements with respect to Indian Newspaper Society (INS)

1. Initially it represented and acted solely under the authority of newspapers, magazines, reviews and other journals published in India, Burma, Ceylon and other countries of Asia.
2. It serves as a central body promoting common interests of newspapers in India.

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 : c

Indian Newspaper Society (INS)

Prime Minister Narendra Modi has recently inaugurated the Indian Newspaper Society (INS) Towers in Mumbai, Maharashtra.

- The primary objective Indian Newspaper Society (INS) was to acts as a Central Body for promoting the common interests of newspapers in India, Burma and Ceylon.
- The organization began as the India, Burma & Ceylon Newspapers' London Committee, renamed to Indian & Eastern Newspaper Society (IENS) in 1935.
- It was initially based in London, representing newspapers and journals from India, Burma, Ceylon, and other Asian countries.
- A need arose for a local coordinating body of newspaper proprietors to handle daily issues in newspaper production.
- This led to the formation of The Indian & Eastern Newspaper Society.
- It was launched on February 27, 1939, in New Delhi, with 14 founding publications and Arthur Moore, Editor of the Statesman, as chair.
- Its main goal was to promote common interests of newspapers in India, Burma, and Ceylon.
- The 14 founding publications are:
    - Bombay Chronicle
    - The Times of India
    - The Rangoon Gazette
    - The Amrita Bazar Patrika
    - The Hindustan Times
    - The Hindustan Standard
    - Advance
    - The Pioneer
    - The Leader
    - The Tribune

    - The Civil and Military Gazette.
    - The Hindu
    - The Madras Mail.
    - The Statesman
- ***Arthur Moore*** was the first president of this society.
- The Society consists of President, Deputy President, Vice President, Secretary and Treasurer and also a Committee five.
- The President is responsible for running of the Secretariat and Secretary shall maintain all records.
- The Treasurer shall be responsible for all the funds of the Society.
- The executive committee consists of not be less than 15 nor more than 50 consisting of:
    - Office Bearers(4)
    - Past Presidents(not exceeding 10)
    - Members elected by the General Body(31)
    - Co-opted members(5)

2) Consider the following statements with respect to Global Critical Minerals Outlook Report, 2024

1. It assesses key risks to the reliability, sustainability and diversity of critical mineral supply chains and analyses the consequences for policy and industry stakeholders.
2. It is an initiative of International Atomic Energy Agency (IAEA).

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

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : b

Global Critical Minerals Outlook Report, 2024

- Global Critical Minerals Outlook Report, 2024 provides a snapshot of industry developments in 2023 and early 2024.
- It offers medium- and long-term outlooks for the demand and supply of key energy transition minerals based on the latest technology and policy trends.
- It is an initiative of the ***International Energy Agency (IEA)***.
- The report also assesses key risks to the reliability, sustainability and diversity of critical mineral supply chains and analyses the consequences for policy and industry stakeholders.
- It will be accompanied by an updated version of the ***Critical Minerals Data Explorer***, an interactive online tool that allows users to explore the latest IEA projections.
- **Key findings of the report**
- Fast-growing critical minerals markets remain turbulent, with prices falling sharply in 2023 following two years of dramatic increases.
- Battery materials saw particularly large declines with lithium spot prices plummeting by 75% and cobalt, nickel, and graphite prices dropping by 30-45%.
- Demand for critical minerals experienced strong growth in 2023, with lithium demand rising by 30%, while demand for nickel, cobalt, graphite and rare earth elements all saw increases ranging from 8% to 15%.
- Clean energy applications have become the main driver of demand growth for a range of critical minerals.
- Electric vehicles (EVs) consolidated their position as the largest-consuming segment for lithium, and increased their share considerably in the demand for nickel, cobalt and graphite.

3) Consider the following statements:

1. Stereocilia are hair-like projections found on hair cells within the human cochlea.
2. Adjacent stereocilia are connected by filamentous extracellular tethers called tip links.
3. Atomic Force Microscopy employs a sharp tip in a raster motion to measure and visualize materials at the atomic and Nano scales.

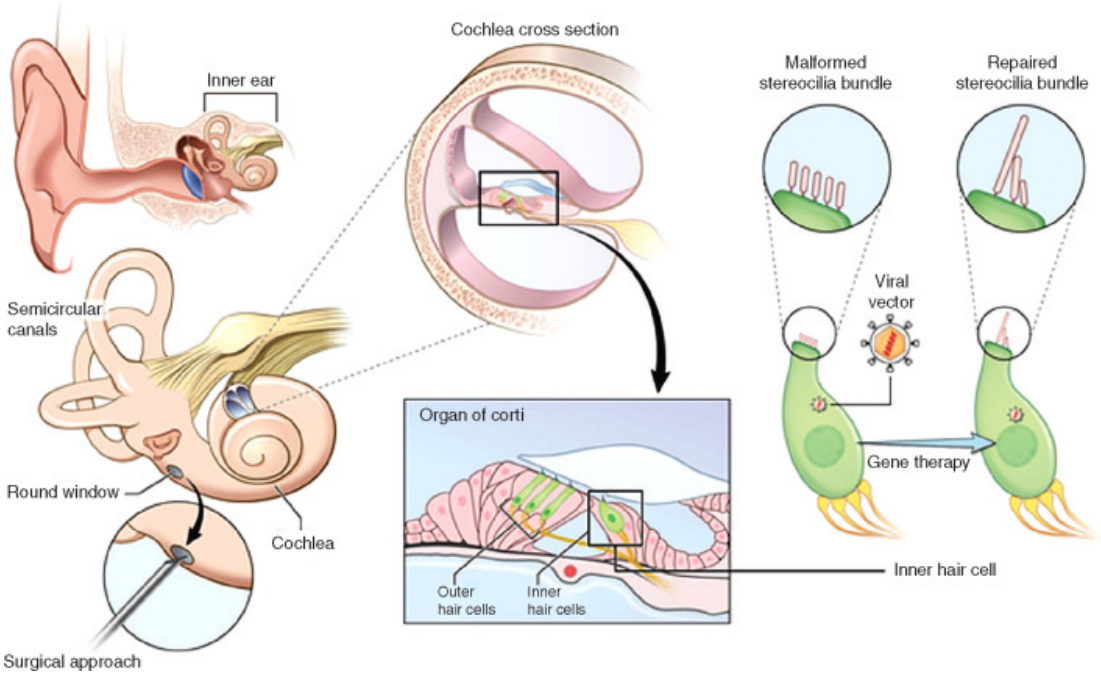
How many of the statements given above are correct?

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

Answer : c

Stereocilia & Atomic Force Microscopy

- Human ears have mechanisms that help adjust to 'see' in dim sound environments and protect us from harsh sound environments.
- Humans ***can perceive sounds between 20 Hz to 20 kHz in frequency*** and 5-120 decibels in intensity.
- At the heart of our auditory system are intricate hair cells nestled within the human cochlea.
- Each ***cochlea*** houses around 16,000 of these flask-shaped sensory cells, each with a cluster of hair-like projections called stereocilia.
- ***Stereocilia*** are hair-like projections found on hair cells within the human cochlea.
- These stereocilia, arranged like a staircase from the shortest to the tallest, are the key to our hearing.
- Adjacent stereocilia are connected by filamentous extracellular tethers called tip links.
- These tip links, functions like a complex network of connections, are pivotal in our hearing process, converting sound waves into electrical signals our brain can interpret.
- Tip links consist of two proteins:
    1. Cadherin-23 (CDH23)
    2. Protocadherin-15 (PCDH15)
- Tip links break in response to loud noises as a protective mechanism, but can regenerate.
- The average lifetime of a tip link complex is about 31.8 seconds, but this varies based on sound intensity.
- Researchers used an atomic force microscope to study tip link responses to different forces.
- Tip links exhibit three distinct responses based on the applied force:
    1. Decreased lifetime at low forces.
    2. Stability at mid-range forces (36-70 pN).
    3. Disconnection at high forces (>80 pN) to protect hearing.
- Mutations in the PCDH15 protein can lead to inherited deafness.
- **Atomic Force Microscopy (AFM)** – Is a high resolution form of scanning probe microscopy that employs a sharp tip in a raster motion to measure and visualize materials at the atomic and Nano scales.
- AFM uses a variety of techniques, also known as measurement modes, to analyze samples at a scale ranging from below a nanometer (<1 nm) (0.5 nm is the average size of an atom) up to 1 micrometer (also known as a micron).
- AFM is also valuable for measuring local electrical, mechanical, and other material properties.
- It is suitable for a wide range of materials including electrically conductive and insulating, transparent and opaque, soft and stiff, and more.



4) Tirzepatide, sometimes seen in the news recently, is associated with?

a. A permanently frozen layer of soil in Antarctica.
b. A drug for chronic weight management in adults.
c. A triparty agreement between India, France and World Bank.
d. A political wave in Latin America towards left-wing governments.

Answer : b

Tirzepatide

Zepbound (Tirzepatide) was recently approved by an expert committee of India's drug regulator and awaiting final approval for launch in the Indian market.

- In November 2023, Eli Lilly, US pharma company got FDA approval for the drug Zepbound (Tirzepatide) to treat obesity.
- It is prescribed to people with obesity, with a body mass index of over 30) or overweight and have at least one other health condition related to their weight (such as high blood pressure, high cholesterol, or type 2 diabetes).
- Tirzepatide is a polypeptide that boosts two naturally-occurring hormones:
  - Glucagon-like-peptide 1 (GLP-1) and
  - Glucose-dependent insulinotropic polypeptide (GIP).
- These hormones control weight through brain and digestive tract mechanisms.
- Zepbound is a prescription medicine. It cannot and should not be used for cosmetic weight loss.
- It is injected under-the-skin and dosage gradually increased to a maximum of 15 mg.
- It is used alongside reduced-calorie diet and increased physical activity.
- **Side Effects** – Nausea, diarrhoea, vomiting, constipation, abdominal pain.
- Potential risk of thyroid tumours, including thyroid cancer.

5) Consider the following statements with respect to Saline Lakes

1. They make up around 45 % of all lakes worldwide.
2. They are found on every continent including Antarctica.
3. The Aral Sea is the world’s largest saline lake in the world.

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

Saline Lakes

- Saline lakes are water bodies that have salinities in excess of 3 grams per litre.
- ***They make up 44% of all lakes worldwide and are found on every continent including Antarctica***.
- These lakes' existence depends on a delicate balance between a river basin's water input (precipitation and inflows) and output (evaporation and seepage).
- The main cause of change in a saline lake is disturbances in its water balance.
- Saline lakes are highly sensitive to changes in water balance, making them responsive to both natural and human-caused factors affecting water resources.
- These lakes quickly react to changing conditions, reflecting regional and potentially global water resource status.
- Many saline lakes worldwide are shrinking rapidly, indicating potential issues with water sustainability.
- Like canaries in coalmines that alerted miners to dangerous air quality, saline lakes can alert us to looming water resource problems.
- Changes in saline lakes often point to broader water management challenges in their regions.
- The ***Caspian Sea is the world's largest saltwater lake by volume surface area and by depth***.
- This land-locked sea is bounded to the north by Russia, to the south by Iran, to the west by Azerbaijan, and to the east by Kazakhstan and Turkmenistan.