

• **RBI \$10 bn buy-sell swap:**

- RBI decided to inject rupee liquidity for longer duration through \$10 billion dollar-rupee buy-sell swap arrangement.
- In this swap, a bank will sell US dollars to RBI and simultaneously agrees to buy the same amount of US dollars at the end of swap period.
- Swap mechanism can help stabilize currency by providing immediate liquidity support, thereby mitigating pressure on rupee during periods of foreign fund outflows.
- Also, RBI has been selling dollars to stabilise rupee, thereby sucking out an equivalent amount in rupee from economy.

• **Iraq is sinking:**

- Team of researchers has found a sinking oceanic “slab” below Earth’s surface is pulling northern region of Iraq (Zagros mountains) down with it.
- A growing tear is forming in a region along Arabian and Eurasian continental plates known as Neotethys oceanic slab.
- Slab, which formed floor of an ancient ocean more than 66 million years ago, is splitting from southeast Turkey to northwest Iran. So now, the slab is sinking into Earth’s mantle.

• **Barytes, Felspar, Mica and Quartz are now major mineral:**

- Ministry of Mines has shifted minerals Barytes, Felspar, Mica and Quartz from list of minor minerals to category of major minerals.
- This move follows recent approval of National Critical Mineral Mission by Union Cabinet in January 2025.
- Mission envisages exploration and mining of critical minerals within the country including recovery of these minerals from mines of other minerals, overburden and tailings.
- Quartz, Felspar and Mica are found in pegmatite rocks, which are an important source of many critical minerals such as Beryl, Lithium, Niobium, Tantalum, Molybdenum, Tin, Titanium, Tungsten, etc.
- These minerals have vital role in various new technologies, in energy transition, spacecraft industries, healthcare sector, etc.
- Baryte has industrial applications like oil and gas drilling, electronics, TV screens, rubber, glass, ceramics, paint, radiation shielding and medical applications.
- Baryte is used to make high density concrete to block x-ray emissions in hospitals, power plants, and laboratories.
- Baryte often occurs as concretions and vein fillings in limestone and dolostone. It is found in association with ores of Antimony, Cobalt, Copper, Lead, Manganese and Silver.
- Revenue from mines of these minerals will continue to accrue to the State Government as earlier.

• **Perovskite LEDs:**

- Perovskite is class of compounds which have same type of crystal structure as CaTiO_3 – Calcium Titanate.

- Perovskite LEDs (PeLEDs) combine advantages of OLEDs (Organic Light-Emitting Diode) & QLEDs (Quantum Dot Light-Emitting Diode), making them as an excellent choice for next-generation lighting.
- However, their widespread application is limited by challenges such as sensitivity to heat and moisture, as well as colour instability caused by anion migration.
- To tackle this issue, researchers at Centre for Nano and Soft Matter Sciences (CeNS) in Bengaluru, an autonomous institute under Department of Science and Technology (DST), have developed an innovative method to minimize anion migration in CsPbX_3 perovskite nanocrystals.

• **AphidControl and XanthoControl:**

- Centre for Cellular and Molecular Platforms (C-CAMP) has successfully transferred two novel bioactive non-chemical solutions, AphidControl and XanthoControl, to PI Industries Ltd.
- Transfer of these technologies is a part of ‘Transforming Deep Science Discoveries into Impactful Innovations for India’ initiative under Discovery to Innovation Accelerator (DIA) programme at C-CAMP.
- AphidControl has superior efficacy compared to existing biopesticides, ensuring a stronger, eco-friendly defense mechanism against aphids.
- XanthoControl is a breakthrough biocontrol agent developed from microbial metabolites that effectively combats Xanthomonas, a bacterial pathogen responsible for bacterial blight in over 40 crops, including tomatoes and pomegranates.
- This innovative solution provides a safer and more sustainable alternative to synthetic pesticides, addressing concerns surrounding antimicrobial resistance and environmental sustainability.

• **Bathouism:**

- It is traditional faith of the Bodos, largest plains tribe of Assam. Their homeland has been on north bank of Brahmaputra, with foothills of Bhutan to north.
- Bathoubwrai or Sibwrai - supreme god of Bodos.
- ‘Ba’ in Bodo means ‘five’ and ‘thou’ means ‘deep philosophical thought’.
- Bathou faith is centred on Sijou plant.
- Sarnaism, another indigenous faith largely practiced on Chota Nagpur Plateau. Sarnaism is centred on sacred grove.

• **Desh Ka Prakriti Parikshan Abhiyaan** by National Commission for Indian System of Medicine (NCISM), with the support of the Ministry of Ayush, Government of India.

• **Bharat Tech Triumph Program (TTP)** has been launched as part of the Create in India Challenge Season 1. Organized by the Interactive Entertainment and Innovation Council (IEIC) in partnership with Ministry of Information and Broadcasting (MIB) the program aims to identify and showcase India’s gaming talent on the international stage.

• **Qatar is India’s largest supplier of LNG.**

PRACTICE MCQs

Q1. Consider the following statements about a mineral:

1. It often occurs as concretions and vein fillings in limestone and dolostone.
2. It has industrial applications like oil and gas drilling, electronics, TV screens, rubber, glass, ceramics, paint, radiation shielding and medical applications.
3. It is used to make high density concrete to block x-ray emissions in hospitals, power plants, and laboratories.

Which of the following minerals is described in above statements?

- a) Mica
- b) Feldspar
- c) Quartz
- d) Baryte

Answer: D

Q2. AphidControl and XanthoControl, recently mentioned in the news, are –

- a) Biopesticides
- b) Chemical fertilisers
- c) Plant growth chemicals
- d) Drought-prone varieties of crops

Answer: A

Q3. Perovskite compounds are used in manufacturing of –

- a) Electronic device displays
- b) Drones
- c) Man-made diamonds
- d) Batteries

Answer: A

Q4. Which of the following statements correctly describes the term 'Bathouism'?

- a) Traditional faith of indigenous people in Amazon basin of Brazil.
- b) Traditional faith of Bodo community of Assam.
- c) Traditional faith of Gond community in India.
- d) Traditional faith of tribal communities of Manipur.

Answer: B

Q5. Ministry of Mines has recently changed category of certain minerals from minor to major mineral. Which of the following is not among them?

- a) Mica
- b) Feldspar
- c) Quartz
- d) Gypsum

Answer: D

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