

DAILY CURRENT AFFAIRS

By



SOURCES



Date: 06 Jan. 2024

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Important News Articles

GS II

1. India committed to redefining ties with neighbourhood partners: EAM in Nepal - Indian Express

Relevance: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

News:

- INDIA under the leadership of **Prime Minister is committed to redefining its relationship with partners in its neighbourhood**, especially Nepal

Key Highlights

- His remarks came a day after the two countries **signed a slew of pacts during a meeting of the 7th India-Nepal Joint Commission**
 - including an agreement for India to import 10,000 MW of hydroelectricity over the next 10 years.
- India has also decided to extend a **financial package of Nepali Rs 1,000 crore (or USD 75 million) for reconstruction of infrastructure** in the districts affected in the 2015 earthquake.
- The two sides reviewed all aspects of bilateral relations as well as areas of cooperation.
- The Treaty of Peace and Friendship of 1950, security and boundary-related matters were also discussed
- PM during his visit to Nepal in 2014 had given the **'HIT' formula for India-Nepal** relations. "HIT as in H for highways I for Iways and T for Transways

Prelims Takeaway

- India-Nepal Joint Commission
- Nepal

2. Red Sea disruption: Costs up, crisis may deepen, says official - Indian Express

Relevance: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

News:

- Disruptions along the Red Sea trade route** have begun pushing up shipping and insurance costs as **shippers have begun taking longer routes** fearing further attacks,

Key Highlights

- Traders diverting all vessels from Red Sea routes around Africa's Cape of Good Hope** for the foreseeable future, warning customers to prepare for significant disruption.
- Shippers across the world are switching away from the Red Sea **(the shortest route from Asia to Europe via the Suez Canal)**
 - after Iranian-backed Houthi militants in Yemen stepped up attacks on vessels in the Gulf region to show their support for Palestinian Islamist group Hamas fighting Israel in Gaza.
- The trip round Africa can add about 10 days to journey times and requires more fuel and crew-time, jacking up shipping costs.
- Denmark' it would pause all vessels bound for the Red Sea following an attack on one of its ships by Houthi militants**, and has since begun redirecting ships around Africa.
- Earlier this week, the US and eleven other countries issued a joint statement reiterating a call for an end to Houthi attacks in the Red Sea.

Red sea

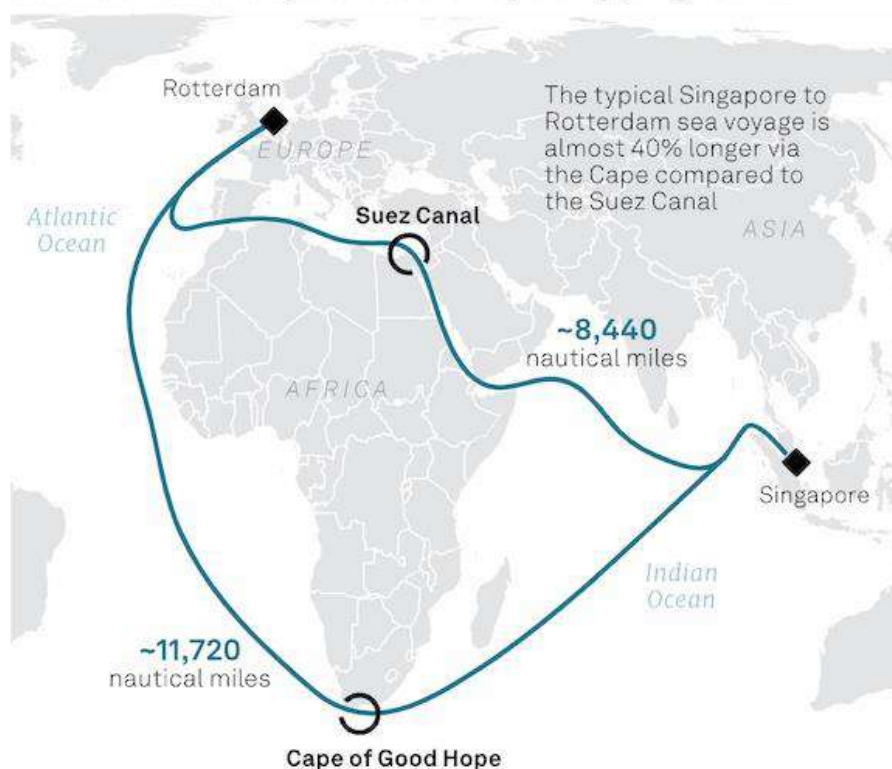
- An inlet of the Indian Ocean between **Africa and Asia**.

Prelims Takeaway

- Red sea
- Cape of good hope

- One of the **most saline bodies** of water in the world.
- Bordering Countries: **Egypt, Saudi Arabia, Yemen, Sudan, Eritrea and Djibouti.**
- Connected to the Indian ocean in the south through the Bab el Mandeb strait and the Gulf of Aden.
- In the north are the Sinai Peninsula, the Gulf of Aqaba, and the Gulf of Suez (leading to the Suez Canal).
- It occupies a part of **Great Rift Valley** (Afro-Arabian Rift Valley).

Suez Canal vs. Cape of Good Hope shipping routes



Source: Global Maritime Hub, S&P Global Commodity Insights

3. Ministry of Education launches PRERANA program - PIB

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

News:

- Department of School Education & Literacy, Ministry of Education, Government of India has launched '**Prerana: An Experiential Learning program**

Key Points of scheme

- **Objectives**
 - To offer a **meaningful, unique, and inspiring experience to all participants**, thereby empowering them with leadership qualities.
 - To integrate principles of the Indian education system and the philosophy of value-based education which is a **cornerstone of the National Education Policy (NEP) 2020.**
- Prerana is a **week-long residential program for selected students of class IX to XII.**
- It is an experiential and inspirational learning program for students with the **best-in-class technology** where heritage meets innovation.
- **A batch of 20 selected students (10 boys and 10 girls) will attend the program**, every week from various parts of the country.
- Prerana program will run from a **Vernacular School, established in 1888**, in one of the oldest living cities of India, Vadnagar, district Mehsana, Gujarat.

Prelims Takeaway

- Vernacular School
- National Education Policy (NEP) 2020

- The day-wise program schedule will feature yoga, mindfulness, and meditation sessions, followed by experiential learning, thematic sessions, and hands-on interesting learning activities.
- Evening activities will include visits to ancient and heritage sites, inspirational film screenings, mission life creative activities, talent shows etc. ensuring a holistic learning approach.
- Apart from this, students will engage in diverse activities, embracing indigenous knowledge systems, latest State-of-Art technologies, and learning from inspirational personalities.

4. Cabinet clears PRITHVI initiative for ease of research in earth sciences - Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- The government recently granted approval for a new initiative named 'PRITHVI'.

'PRITHVI' Initiative

- It allows for **cross-disciplinary projects** and **combined utilization of funds** within the Ministry of Earth Sciences allocated for separate verticals **over a five-year period**.
 - Unlike traditional verticals, such as atmosphere, cryosphere, geosphere and ocean science.
- **Objective:** To streamline earth sciences research, promote cross-disciplinary projects, and enhance the ease of conducting research.
- It treats earth system sciences as a **unified entity**.
- The ministry holds a budget of Rs 4,797 crore, encompassing allocations for **five distinct sub-schemes** related to earth sciences.
- **Sub-schemes**
 - Atmosphere and Climate Research-Modelling Observing Systems and Services
 - Ocean Services, Modelling Application, Resources and Technology
 - Polar Science and Cryosphere Research
 - Seismology and Geosciences
 - Research, Education, Training and Outreach
- It also enables the Ministry of Earth Sciences to **collaborate with overseas institutes** by awarding research projects to them.

Prelims Takeaway

- PRITHVI Initiative
- Ministry of Earth Sciences

GS III

5. Navy thwarts hijacking attempt in Arabian Sea - The Hindu

Relevance: Security challenges and their management in border areas – linkages of organized crime with terrorism.

News:

- In a recent incident in the North Arabian Sea, **Indian Navy MARCOS successfully averted a hijacking attempt on the merchant vessel Lila Norfolk**.
- The operation resulted in the safe evacuation of all 21 crew members, including 15 Indians.

Hijacking Attempt Details

- The bulk carrier Lila Norfolk reported a hijacking attempt via the UK Maritime Trade Operations portal, stating that approximately five to six armed individuals had boarded the vessel.

Indian Navy's Swift Response

- The Indian Navy responded promptly, **diverting the anti-piracy patrol destroyer INS Chennai to intercept the vessel**.

Prelims Takeaway

- Exclusive Economic Zone
- MARCOS

- **Maritime Patrol Aircraft (MPA) established** contact with the vessel, ensuring the safety of the crew.
- **INS Chennai intercepted the vessel, and Marine Commandos (MARCOS)** carried out sanitization operations on board.

Broader Maritime Security Measures

- The Indian Navy has significantly **increased maritime surveillance efforts in the Central and North Arabian Sea.**

Response to Recent Incidents

- **Attacks by Houthi rebels on merchant ships in the Red Sea and Arabian Sea** have led to heightened vigilance.
- The **Indian Navy is coordinating with the Coast Guard to maintain enhanced surveillance** within the Exclusive Economic Zone (EEZ).
- Information Management and Analysis Centre (IMAC) and Information Fusion Centre for Indian Ocean Region (IFC IOR) are **actively monitoring white shipping**, with a focus on Indian-flagged merchant vessels.

Ships in distress

In the last month of 2023, India responded to three distress calls from ships in trouble



Dec 14: Malta-flagged vessel *m.v. Ruen*, with an 18-member crew, sent a mayday message indicating boarding by about six unknown persons around 700 nautical miles from the Indian coast

Dec 23: *m.v. Chem Pluto*, with 21 Indian and 1 Vietnamese crew members, reported a projectile attack around 217

nautical miles southwest of Porbandar. Initial investigation by the Navy indicated a drone attack

Dec 23: A Gabon-flagged crude oil tanker *m.v. Saf Baba* with an all-Indian crew heading to India was hit by a one-way attack drone in the Southern Red Sea; no injuries were reported

Safe and secure: The cargo ship Lila Norfolk, after the rescue, prepares to move to the next port of call. PTI

6. 'Deep tech' policy to be sent to Cabinet for approval, says scientific adviser - The Hindu

Relevance: Science and Technology- developments and their applications and effects in everyday life.

News:

- A note on a **new 'deep tech' policy for India** in the coming weeks will be sent to the Union Cabinet for approval.

Key Highlights

- In July 2023, the **government unveiled a draft of the policy for public comment** and following feedback from industry, a final version is reportedly ready.
- **'Deep tech' is a buzzword in tech and startup circles** with no precise definition as yet.
- India's draft policy document on 'deep tech' cites Startup India's database, which claims that there are **10,298 startups recognised by the Department for Promotion of Industry and Internal Trade**
 - which are classified across various sub-sectors within the larger deep tech space as of May 2023.
- Deep tech startups have **developed intellectual property that promise an outsize impact but are yet to be realised, and are premised on new scientific breakthroughs.**
- Crucially, businesses and startups based on ideas that are **easily replicable do not qualify as deep tech startups.**

Prelims Takeaway

- CSIR
- Deep tech

- The DSIR would in the coming days focus on **transferring technology to medium and small scale industries**
- The CSIR would target industry at large and the National Research and Development Corporation, also a CSIR entity, would focus on startups,

7. ISRO tests fuel cell-based power system in space - The Hindu/ ISRO tests fuel cell to potentially power space missions - Indian Express

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News:

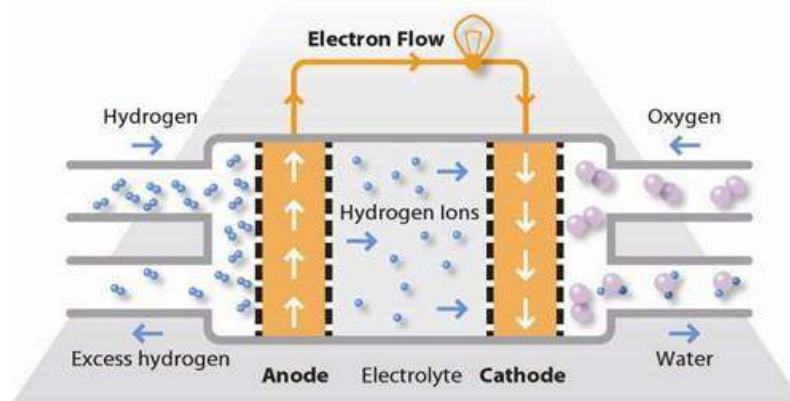
- The **Indian Space Research Organisation (ISRO)** has achieved a milestone by successfully demonstrating a **fuel cell in space**.

The Experiment

- ISRO tested a 100 W class **Polymer Electrolyte Membrane Fuel Cell based Power System (FCPS)** on its orbital platform, **POEM3**.
- **Objective:** To assess the operation of Polymer Electrolyte Membrane Fuel cells in space and gather data for designing systems for future missions.
- The fuel cell, deployed on the **fourth stage of the PSLV**, generated 180W of power during a brief test.
- The fuel cell, developed by the **Vikram Sarabhai Space Centre (VSSC)**, serves as a **precursor to future power systems for space stations**.

Polymer Electrolyte Membrane (PEM) Fuel Cells

- Also known as **proton exchange membrane fuel cells**, they are **electrochemical devices** that convert chemical energy into electrical energy.
- They use a **proton-conducting polymer membrane** as the **electrolyte** and typically use **hydrogen as the fuel**.



Significance of Fuel Cells

- Fuel Cells utilise **hydrogen and oxygen** to generate electricity while producing **heat and water as byproducts**.
- These are deemed **ideal for human space missions** due to the **dual benefits** of generating power and essential byproducts like heat and water.
- This integrated system can cater to **multiple mission requirements** simultaneously.
- They **produce electricity directly** and are **efficient, emission-free, and ideal for space missions**.

- The zero-emission fuel cells may find applications on Earth as **potential replacements for vehicle engines.**

Silicon-based Cell

- ISRO also successfully demonstrated a **Silicon-based cell** developed by VSSC, offering a **cost-effective and lighter alternative to current cells.**
- This innovation utilizes a **silicon-graphite composite**, providing **higher energy generation per unit weight** compared to conventional Li-ion cells.

Operational Missions and Mass Saving

- The demonstrated fuel cell is expected to be utilized in upcoming operational missions, offering a significant **battery mass saving of 35-40%.**
- The design incorporates **cost-effective hardware** and a **crimped sealing mechanism**, reducing fabrication costs.

Editorials, Gists and Explainers

8. Drug war - The Hindu

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

Context:

- The **'First Multicentric Point Prevalence Survey of Antibiotic Use at 20 NAC-NET Sites India 2021-22'** reveals alarming statistics.
- It was conducted by the **National Centre for Disease Control** under the Health Ministry

Survey Findings

- Over 70% of patients in tertiary-care hospitals across 15 States and two UTs were prescribed antibiotics.
- More than 50% of prescribed antibiotics have the potential to cause Antimicrobial Resistance (AMR).
- 55% of patients received antibiotics as prophylaxis or as a preventive, while only 45% were prescribed antibiotics for actual infection treatment.
 - A mere 6% of patients received antibiotics after identifying the specific bacteria causing the infection.

Antimicrobial Resistance (AMR) Crisis

- AMR occurs when pathogens evolve, rendering themselves resistant to drugs and unresponsive to antimicrobial treatment.
- Unsound medical and animal husbandry practices contribute to the escalating crisis.
- The misuse and overuse of antimicrobials cause the development of drug-resistant pathogens that in turn pose great risk to life and exacerbate morbidity.
- WHO estimates that bacterial AMR directly caused 1.27 million global deaths in 2019 and contributed to 4.95 million deaths.
- AMR compromises the effectiveness of medical procedures like surgery, caesarean sections and cancer chemotherapy.

Way Forward

- Specialists emphasise the need for rational antibiotic prescriptions and restrictions on drug use to promote growth in animals and plants.
- Urgent measures are required to develop new drug candidates, and more equitable access to them to address the antibiotic research and development pipeline crisis.
- Both doctors and the government play crucial roles in regulating drug use, especially the government.
- Patients' expectations of immediate relief should also be tempered with an understanding of the complexities of medical science.
- Strict regulation of antimicrobial use and increased funding for antibiotic research are essential in the battle against AMR.

9. The need to examine the examination system - The Hindu

Relevance: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

Context:

- Recurring **scandals during examination seasons** emphasise a **crucial connection** between the **credibility of examination systems** and the **standards of certificates** issued by educational boards.
- The current examination pattern has **several drawbacks**, such as a focus on memory testing and inflation of marks.
- A **credible examination system** is one of the key ways to improve the standard of education.

<p>Decentralized System Challenges</p> <ul style="list-style-type: none"> India's extensive education system with numerous universities and colleges faces challenges has diversified modes of assessment. A balance between secrecy and standardisation is essential, as <ul style="list-style-type: none"> excessive secrecy without proper checks can lead to scandals excessive standardization hampers experimentation in assessment and curriculum The credibility of assessment and standard of education can be ensured only through transparency in teaching and assessment. <p>Inconsistency in Examination Systems</p> <ul style="list-style-type: none"> In educational institutions, the summative examination is to test and certify a student's learning. The validity and comparability of examinations across institutions are currently meaningless. There are concerns over the inconsistency of examination systems in testing scholastic abilities. <p>Issues with Current Examination Practices</p> <ul style="list-style-type: none"> Complaints about examination boards primarily testing memory, leading to rote learning. Flaws in question papers, including language errors, conceptualization errors and irrelevant questions. Indiscriminate evaluation of answer scripts, with grades not reflecting differences in learning achievements. Employability of graduates dependent on higher-order learning, while examination boards fail to certify such skills. 	<p>Challenges</p> <ul style="list-style-type: none"> Regulatory institutions in India emphasize outcome-based learning and provide detailed advisories. However, the lack of regular and effective oversight leads to institutions not fully adhering to these guidelines. Despite syllabi outlining course objectives and expected outcomes, a closer examination reveals inconsistencies and inadequacies. Issue of secrecy in the examination process, from question paper setting to evaluation and mark sheet preparation. Confidentiality can provide cover for mediocre work by some teachers and may contribute to scandals in examinations. <p>Autonomy and Oversight</p> <ul style="list-style-type: none"> Regulatory bodies encourage colleges to pursue academic autonomy, allowing them to certify students based on their own examinations. However, the autonomy regulations provide limited oversight authority for the affiliating university. The farce of standardization in examinations within a decentralized education system is criticized. In a decentralized education system, transparency and proper oversight play crucial roles in examination systems to ensure credibility and adherence to minimum standards. <p>Steps for Improvement</p> <ul style="list-style-type: none"> A transparent oversight model and greater involvement of professional bodies in curriculum design and teaching is needed. There is a need for simultaneous changes in curriculum and examination processes. Specification of minimum standards for learning outcomes. Utilization of technology in assessment to enhance credibility. External audit of assessment systems in universities and school boards with a focus on transparency, reliability and consistency. Codification of negligence, fraud and quality issues, with linked corrective measures and punishments.
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10. Bangladesh elections & India - Indian Express

Relevance: India and its neighbourhood- relations.

Context:

- As **Bangladesh conducts its national elections**, India will be observing closely.
- The countries share a **4,100-km border** and deep **historical, cultural and economic ties**.
- A **stable, prosperous Bangladesh** is deemed beneficial for India, making India a supporter of the incumbent Sheikh Hasina.

<p>Key Interests for India</p> <ol style="list-style-type: none"> National Security <ul style="list-style-type: none"> Hasina's cooperative leadership eased India's security concerns on the eastern border. <ul style="list-style-type: none"> Previously, the Bangladesh Nationalist Party-led government was quite hostile to India. It provided safe haven to numerous anti-India terrorist and militant groups. It allegedly also had links to Pakistan's ISI, and gave space to hardline Islamist radicals. Her crackdown on anti-India elements and counter-terrorism cooperation has improved India's overall security situation. Given the situation in Myanmar, the need for close security partnership becomes more crucial. Deep Economic Ties <ul style="list-style-type: none"> Bangladesh's economic rise has replaced Pakistan as the second largest economy in the region. In 2022-23, Bangladesh was the fifth largest export destination for Indian goods, accounting for over 2.7% of all Indian exports. Under Hasina, Bangladesh is facilitating efficient connectivity to India's Northeast through overland transit and inland waterways. Regional Cooperation <ul style="list-style-type: none"> India envisions Bangladesh as a fulcrum for regional cooperation in the Bay of Bengal, linking South and Southeast Asia. Dhaka hosts the BIMSTEC secretariat that connects the eastern subcontinent with Myanmar and Thailand. Bangladesh's political stability and growing regional importance support India's interests. 	<p>Concerns Addressed</p> <ol style="list-style-type: none"> Democratic Backsliding <ul style="list-style-type: none"> Concerns about democratic backsliding under Hasina exist. However, the alternatives are viewed as bigger threats to democracy, peace, and prosperity in the region. Proximity to China <ul style="list-style-type: none"> Concerns about Hasina's increasing proximity to China are somewhat overstated. Compared to other neighbours, Bangladesh has been careful in navigating the tensions between India and China. India's primary consideration is that Bangladesh, or any neighbour, does not compromise India's security. US Criticism <ul style="list-style-type: none"> Historical reasons contribute to Bangladesh's tense relationships with the US and the UK. Recent rethinking in the US, with a shift in tone observed, reflect a potential improvement in US-Bangladesh relations.
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Conclusion

- India's interests in Bangladesh, spanning national security, economic ties, and regional cooperation, align with **supporting Sheikh Hasina's leadership**.
- A stable Bangladesh is **crucial** for India, and India hopes for a fair and peaceful election process that allows for **positive strategic relations** between the two countries.



Mentorship
India

Quick Look

1. Polygonum Chaturbhujanam

- Recently, a new plant species of Polygonum genus has been discovered at Gol Pahadi Island of the Pench Tiger Reserve (PTR), Maharashtra.
- The new plant species named Polygonum Chaturbhujanam is an herb.
- Six plant species endemic to India have also been found in Pench.
- They are Aegineta indica, Boerhavia crisper, Habenaria gibsonii var foetida, Iphigenia pallida, Petalidium barlerioides and Barleria gibsonii.

2. Similipal Kai Chutney

- Recently, the Similipal kai chutney made with red weaver ants by the tribal people of Odisha's Mayurbhanj district (Odisha) received the GI tag.
- The savoury chutney is popular in Mayurbhanj region for its healing properties and also deemed important for nutritional security of the tribal people.
- Many indigenous people from Mayurbhanj district venture into nearby forest to collect kai pimpudi (red weaver ant).
- Health benefits
 - The scientists analysed the red weaver ants and found it contains valuable proteins, calcium, zinc, vitamin B-12, iron, magnesium, potassium, sodium, copper, amino acids etc.
 - Consuming the species can help boost the immune system and prevent diseases.
 - The tribal healers also prepare a medicinal oil in which they dip the ants along with pure mustard oil which is used as body oil for babies and to cure rheumatism, gout, ringworm and other diseases by the tribes.
 - The local people also consume this to stay fit and strong.

3. Northeast African Cheetah

- A group of experts have appealed to the IUCN to reclassify the status of the Northeast African Cheetah to 'endangered' from 'vulnerable'.
- Northeast African Cheetah, also known as the Sudan cheetah, is found in the Horn of Africa.
- This subspecies is more closely related to the Southern African cheetah than to Saharan cheetah populations.
- The cheetah's long tail helps it keep its balance when changing direction mid-chase. Appearance: The Northeast African cheetah is fairly large. Physically, it most resembles the East African cheetah.
- Distribution: South Sudan and Ethiopia; live in wide open lands, grasslands, semi-arid areas, and other open habitats where prey is abundant such as in the East Sudanian Savanna.
- The subspecies' cubs are being heavily trafficked across the Red Sea to Arab countries like Saudi Arabia, the United Arab Emirates and Yemen.
- IUCN Status: Vulnerable

4. INS Chennai

- It is the Indian Navy's indigenously designed and constructed guided missile destroyer.
- It is the third and last ship of the Kolkata-class stealth-guided missile destroyers (Project 15A).
- It was constructed by the Mazagon Dock Limited (MDL) at Mumbai.
- It was commissioned into the Indian Navy on November 21, 2016.
- It measures 163 metres in length and has a beam of 17.4 metres.
- Displacement: Over 7,500 tons.
- Top Speed: 30 knots (approx. 55 KM/hour)
- It is powered by four reversible gas turbine engines.

- It can carry 350 to 400 people.
- Armament: It is armed with Vertical launch and long-range surface-to-air and surface-to-surface missile systems like supersonic BrahMos, 'Barak-8' Long Range Surface to Air missiles.

5. PRITHVI Scheme

- It is an initiative of the Ministry of Earth Sciences (MoES) to enhance the understanding of the Earth and its vital signs.
- This overarching initiative, with an allocation of Rs 4,797 crore for the period 2021-26, aims to significantly enhance research, modelling, and service delivery across crucial areas like weather, climate, oceans, and the polar regions.
- The Prithvi scheme integrates five existing sub-schemes:
 - Atmosphere and Climate Research-Modelling Observing Systems and Services (ACROSS)
 - Ocean Services, Modelling Application, Resources and Technology (O-SMART)
 - Polar Science and Cryosphere Research (PACER)
 - Seismology and Geosciences (SAGE)
 - Research, Education, Training, and Outreach (REACHOUT).



Mentorship
India

Prelims Track Question

Q1. Consider the following statements about India-Nepal relations

1. India and Nepal share an open border, which is regulated by the Treaty of Peace and Friendship of 1950.
2. The Kalapani-Limpiadhura-Lipulekh region has been a source of recent territorial disputes between India and Nepal.
3. India and Nepal have a history of strong cultural and economic ties, but occasional diplomatic strains have impacted the relationship.

How many of the statements given above is/are incorrect?

- A. Only one
- B. Only two
- C. All three
- D. None

Q2. Consider the following statements

1. The Red Sea is a key maritime passage connecting the Mediterranean Sea to the Indian Ocean.
2. The Suez Canal, situated in Egypt, is a significant artificial waterway that facilitates navigation between the Mediterranean Sea and the Red Sea.
3. Bab el Mandeb, a strait located at the southern end of the Red Sea, connects the Red Sea to the Gulf of Aden.

How many of the statements given above is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

Q3. Consider the following statements

1. Ministry of Education has launched 'Prerana: An Experiential Learning program
2. It aims to offer a meaningful, unique, and inspiring experience to all participants, thereby empowering them with leadership qualities.
3. Prerana is a week-long residential program for selected students of class IX to XII.

How many of the statements given above is/are incorrect?

- A. Only one
- B. Only two
- C. All three

D. None

Q4. With reference to PRITHVI Initiative, seen in the news recently, consider the following statements

1. It aims to provide flexibility in utilising funds allocated to five specific sub-schemes related to earth sciences over a five-year period.
2. It allows the Ministry of Earth Sciences to collaborate with overseas institutes.

Which of the statements given above is/are correct?

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

Q5. Consider the following statements about the white shipping

1. It refers to the exchange of prior information on the movement and identity of commercial non-military merchant vessels
2. Information regarding the identity of the vessels is very important to tackle any potential threat from sea routes.
3. Information Management and Analysis Centre (IMAC) and Information Fusion Centre for Indian Ocean Region (IFC IOR) are actively monitoring white shipping
4. India and the U.S had signed the White Shipping Agreement (WSA) as it establishes an information network protocol that allows the navies of both countries to exchange information about ships in their oceanic territories.

How many of the statements given above is/are correct?

- A. Only one
- B. Only two
- C. Only three
- D. All four

Q6. Consider the following statements regarding "Deep Tech"

1. Deep Tech refers to technologies that involve incremental improvements and enhancements to existing products and processes.
2. Quantum computing and genetic engineering are examples of technologies that fall under the Deep Tech category.

3. Deep Tech startups usually have shorter research and development cycles compared to startups in other sectors.
4. Governments and private investors are often cautious about investing in Deep Tech startups due to the high-risk nature of their projects.

How many of the statements given above is/are correct?

- A. Only one
- B. Only two
- C. Only three
- D. All four

Q7. Consider the following statements about Hydrogen Fuel Cells

1. They are a clean, reliable, quiet and efficient source of high-quality electric power.
2. They use hydrogen as a fuel to generate electricity with water and heat as the by-products.
3. These are deemed ideal for human space missions due to the dual benefits of generating power and essential byproducts like heat and water.

How many of the statements given above is/are incorrect?

- A. Only one
- B. Only two
- C. All three
- D. None

Q8. Consider the following statements about Antimicrobial Resistance (AMR)

1. It is the resistance acquired by any microorganism against antimicrobial drugs that are used to treat infections.
2. Antimicrobial Resistance doesn't occur naturally.
3. WAAW is a global campaign that aims to raise awareness of antimicrobial resistance worldwide and encourage best practices.

How many of the statements given above is/are incorrect?

- A. Only one
- B. Only two
- C. All three
- D. None

Q9. With reference to SWAYAM Scheme, consider the following statements

1. It is an indigenous IT platform for hosting the Massive Open Online Courses (MOOCs).
2. It aims to achieve the three cardinal principles of Education Policy viz. access, equity and quality.

Which of the statements given above is/are correct?

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

Q10. Consider the following statements with reference to Bangladesh

1. India was the first country to recognise Bangladesh as a separate and independent state.
2. India shares the longest border with Bangladesh.
3. Both India and Bangladesh are active partners in the Belt and Road Initiative (BRI).

How many of the statements given above is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

Prelims Track Answer

Answer 1 Option D is correct

Explanation

- India and Nepal do share an open border, and the regulation of this border is governed by the Treaty of Peace and Friendship signed in 1950. The treaty allows for free movement of people and goods between the two countries.

Hence, statement 1 is correct

- The Kalapani-Limpiyadhura-Lipulekh region has been a point of contention between India and Nepal. The disagreement arose over the depiction of the boundary on the political map, leading to diplomatic tensions. Both countries have engaged in discussions to address the issue. **Hence, statement 2 is correct**
- India and Nepal indeed share deep-rooted cultural, historical, and economic ties. However, diplomatic strains have occurred at times, often related to border issues or other geopolitical concerns. Despite occasional challenges, both nations continue to work towards maintaining friendly and cooperative relations. **Hence, statement 3 is correct**

Answer 2 Option C is correct

Explanation

- The Red Sea is a crucial waterway that links the Mediterranean Sea to the Indian Ocean. It serves as a vital trade route for maritime commerce, connecting Europe, Africa, and Asia. **Hence, statement 1 is correct**
- The Suez Canal is a vital artificial canal in Egypt that connects the Mediterranean Sea to the Red Sea. It plays a pivotal role in global trade, providing a shortcut for ships traveling between Europe and Asia. **Hence, statement 2 is correct**
- Bab el Mandeb is a strategically important strait situated at the southern entrance of the Red Sea. It connects the Red Sea to the Gulf of Aden and ultimately to the Arabian Sea. This maritime passage is crucial for vessels navigating between the Mediterranean and the Indian Ocean. **Hence, statement 3 is correct**

Answer 3 Option D is correct

Explanation

- Ministry of Education has launched 'Prerana: An Experiential Learning program' **Hence, statement 1 is correct**
- Objective

- It aims to offer a meaningful, unique, and inspiring experience to all participants, thereby empowering them with leadership qualities.
- to integrate principles of the Indian education system and the philosophy of value-based education which is a cornerstone of the National Education Policy (NEP) 2020. **Hence, statement 2 is correct**
- Prerana is a week-long residential program for selected students of class IX to XII. **Hence, statement 3 is correct**
- It is an experiential and inspirational learning program for students with the best-in-class technology where heritage meets innovation.

Answer 4 Option C is correct

Explanation

- PRITHVI Initiative allows for cross-disciplinary projects and combined utilization of funds within the Ministry of Earth Sciences allocated for separate verticals over a five-year period. **Hence, statement 1 is correct.**
- Objective: To streamline earth sciences research, promote cross-disciplinary projects, and enhance the ease of conducting research.
- It also enables the Ministry of Earth Sciences to collaborate with overseas institutes by awarding research projects to them. **Hence, statement 2 is correct.**

Answer 5 Option D is correct

Explanation

- It refers to the exchange of prior information on the movement and identity of commercial non-military merchant vessels. **Hence, statement 1 is correct**
- India and the U.S had signed the White Shipping Agreement (WSA) as it establishes an information network protocol that allows the navies of both countries to exchange information about ships in their oceanic territories. Ships would be classified into white (commercial ships), grey (military vessels), and black (illegal vessels). **Hence, statement 2 is correct**
- Information regarding the identity of the vessels is very important to tackle any potential threat from sea routes. This particularly helps in the development of a proper regional maritime domain awareness. **Hence, statement 3 is correct**

- Information Management and Analysis Centre (IMAC) and Information Fusion Centre for Indian Ocean Region (IFC IOR) are actively monitoring white shipping. **Hence, statement 4 is correct**

Answer 6 Option B is correct**Explanation**

- Deep Tech, in contrast, is characterized by revolutionary advancements and innovations that often go beyond incremental improvements, bringing about fundamental changes based on scientific breakthroughs. **Hence, statement 1 is incorrect**
- Deep Tech encompasses cutting-edge technologies that often involve significant scientific and engineering advancements, such as quantum computing and genetic engineering. **Hence, statement 2 is correct**
- Deep Tech startups often face longer research and development cycles due to the complexity and depth of the technologies involved, requiring extensive testing and validation before market entry. **Hence, statement 3 is incorrect**
- Deep Tech ventures are considered high-risk due to the uncertainty associated with translating complex research into viable commercial products, making governments and private investors cautious about investing in these startups. **Hence, statement 4 is correct**

Answer 7 Option D is correct**Explanation**

- Fuel Cells utilise hydrogen and oxygen to generate electricity while producing heat and water as byproducts. **Hence, statement 1 is correct.**
- These are deemed ideal for human space missions due to the dual benefits of generating power and essential byproducts like heat and water. **Hence, statement 3 is correct.**
- This integrated system can cater to multiple mission requirements simultaneously.
- They produce electricity directly and are efficient, emission-free, and ideal for space missions. **Hence, statement 2 is correct.**
- The zero-emission fuel cells may find applications on Earth as potential replacements for vehicle engines.

Answer 8 Option A is correct**Explanation**

- Antimicrobial Resistance (AMR) occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines making infections harder to treat and increasing the risk of disease spread, severe illness and death. **Hence, statement 1 is correct.**
- Antibiotic resistance occurs naturally, but misuse of antibiotics in humans and animals is accelerating the process. **Hence, statement 2 is incorrect.**
- The World Health Organisation (WHO) has identified AMR as one of the top ten threats to global health.
- World Antimicrobial Awareness Week (WAAW), held annually since 2015, is a global campaign that aims to raise awareness of antimicrobial resistance worldwide and encourage best practices among the general public, health workers and policy makers to slow the development and spread of drug-resistant infections. **Hence, statement 3 is correct.**
- WHO's GLASS has been conceived to progressively incorporate data from surveillance of AMR in humans, surveillance of the use of antimicrobial medicines, AMR in the food chain and in the environment.

Answer 9 Option C is correct**Explanation**

- Study Webs of Active Learning for Young Aspiring Minds (SWAYAM), was launched in 2017 by the Ministry of Human Resource Development to provide one integrated platform and portal for online courses.
- This covers all higher education subjects and skill sector courses.
- The objective is to ensure that every student in the country has access to the best quality higher education at the affordable cost. **Hence, statement 2 is correct.**
- Academicians from hundreds of institutions throughout the country are involved in developing and delivering Massive open online courses (MOOCs) through SWAYAM in almost all disciplines from senior schooling to Post Graduation. **Hence, statement 1 is correct.**

Answer 10 Option B is correct**Explanation**

- India was the first country to recognise Bangladesh as a separate and independent state and established diplomatic relations with the country immediately after its independence in December 1971. **Hence, statement 1 is correct.**
- Bangladesh is India's biggest trading partner in the subcontinent.
- India and Bangladesh share 4096.7 km. of border; the longest land boundary that India shares with any of its neighbours. **Hence, statement 2 is correct.**
- The two also conduct Joint Exercises viz. Exercise Sampriti (Army) and Exercise Bongosagar (Navy).
- India and Bangladesh have been cooperating in developing cross-border infrastructure projects, such as the Akhaura-Agartala rail link and Maitri Setu.
- India and Bangladesh are also engaged in regional cooperation through multilateral forums such as SAARC, BIMSTEC and Indian Ocean Rim Association (IORA).
- At present, Bangladesh is an active partner in the Belt and Road Initiative (BRI). India is not a part of BRI. **Hence, statement 3 is incorrect.**



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