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Jobs at Your Doorstep Report



Overview:

Recently, the Union Minister for Education along with the Minister of Labour and Employment and Youth Affairs launched a World Bank's report titled *Jobs at Your Doorstep: A Jobs Diagnostics for Young People in Six States*, at an event in New Delhi.

About Jobs at Your Doorstep Report:

- This report serves as both a diagnostic and roadmap to providing strategic linkages and convergence **between education and the jobs agenda of India.**
- It goes deep into the job landscape **of six states:** Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Odisha, and Rajasthan, and identifies key priority sectors and roles that offer the **highest employment potential for young people** graduating from secondary school.
- The report is a **skills gap analysis that attempts to align** trades offered in schools industry-specific needs of the districts where the schools are present.
- It underscores the significant benefits of embedding skill-based education from Classes 9-12 to prepare students for diverse career paths relying on a **bottom-up approach.**
- The study was initiated to reimagine the skill education offering through **in-depth primary as well as secondary research** in six STARS states.
- **What is the STARS Scheme?**
 - It became effective in 2021 for a period of **five years. up to FY: 2024-25.**
 - STARS project would be implemented under the Department of School Education and Literacy, **Ministry of Education with the financial support of World Bank.**

- It is being implemented in six identified States Himachal Pradesh, Maharashtra, Odisha, Rajasthan, Madhya Pradesh and Kerala. These states will be supported for various interventions for improving the quality of education.
- It is **carved out of Samagra Shiksha**, with a focus on those elements of the scheme that will most directly support school education enhancement.

Q1: What is the World Bank?

The WB is an international financial institution that provides loans and grants to the governments of low and middle-income/developing countries for the purpose of pursuing capital projects. It was established along with the IMF at the 1944 Bretton Woods Conference.





Project Veer Gatha



Overview:

More than 1.76 crore school students from all 36 States and UTs have participated enthusiastically in Project Veer Gatha 4.0.

About Project Veer Gatha:

- It was instituted in 2021 with the aim of **disseminating the inspiring tales** of valour, selfless **sacrifice and courage of the Gallantry Awardees** and the life stories of these brave hearts among the students to inculcate the spirit of patriotism amongst them.
- Project Veer Gatha enhanced this noble aim by providing a **platform for the school students** to do creative projects/activities based on heroic deeds and sacrifice of gallantry award winners.
- Three editions of the Veer Gatha Project have been conducted in 2021, 2022 and 2023, respectively.
- It is a joint initiative of the **Ministry of Defence and Ministry of Education**.

Key facts about Gallantry Awards

- Gallantry Awards have been **instituted by the Government of India** to honour the acts of bravery and sacrifice of the officers/personnel of the Armed Forces, other lawfully constituted Forces and civilians.
- These are **announced twice in a year** - first on the occasion of the Republic Day and then on the occasion of the Independence Day.
- These awards are the **Ashoka Chakra, the Kirti Chakra and the Shaurya Chakra**.

- Order of precedence of these awards is the Param Vir Chakra, the Ashoka Chakra, the Mahavir Chakra, the Kirti Chakra, the Vir Chakra and the Shaurya Chakra

Q1: What is Param Vir Chakra?

It is India's highest military decoration awarded for the highest degree of valour or self-sacrifice in the presence of the enemy. The Param Vir Chakra was introduced on January 26, 1950, on the first Republic Day with retrospective effect from 15 August 1947.



Pobitora Wildlife Sanctuary



Overview:

Pobitora Wildlife Sanctuary is witnessing a surge in the arrival of migratory birds as the winter season sets in.

About Pobitora Wildlife Sanctuary:

- **Location:** It is located on the **southern bank of the river Brahmaputra** in Morigaon district, adjacent to Guwahati in **Assam**.
- It was declared a reserve forest in 1971 and a wildlife sanctuary in 1987.
- It is home to the **highest population density of the Indian One-Horned Rhinoceros** species (around 102 rhinos in an area of 38.8 sq. km).
- **Landscape:** It is dominated by **alluvial lowlands and marshland**.
- The **Brahmaputra River offers a natural boundary** to the premises of the sanctuary **on the north**, while the **Garanga Beel offers a natural boundary to its south**.
- **Flora:**
 - 72% of Pabitora consists of **wet savannah** of Arundo donax, Erianthus ravennae, Phragmites karka, Imperata cylindrica, and Saccharum spp.
 - **Water hyacinth (Eichornia crassipes) is a major problem**, especially to waterfowl, as it forms thick mats on the water surface.
- **Fauna:**
 - Besides rhinoceros, the other animals are **leopard, wild boar, Barking deer**, wild buffalo, etc.
 - It is also home to more than 375 species of **resident and migratory birds**, such as the **Indian pied Hornbill, Osprey, Hill Myna, Kalij Pheasant**, etc.

Q1: Which are the major tributaries of Brahmaputra river?

The tributaries namely Subansiri, Ronganadi, Dikrong, Buroi, Borgong, Jiabharali, Dhansiri (North) Puthimari, Manas, Beki, Aie, Sonkosh are the main tributaries on the North while the Noadehing, Buridehing, Desang,

Dikhow, Bhogdoi, Dhansiri (South), Kopilli, Kushi, Krishnai, Dhdhnoi, Jinjiran are the main tributaries on the south bank of the river Brahmaputra.





Minke whales



Overview:

For the first time, scientists have directly measured the hearing range of minke whales, discovering that the species can detect high-frequency sounds as high as 90 kilohertz (kHz), according to a new study.

About Minke whales:

- They are members of the **baleen or "great" whale** family and are the smallest of the rorquals.
- There are two recognized species of minke whales with partially overlapping ranges
 - The **Common minke whale** (*Balaenoptera acutorostrata*), and the **Antarctic minke whale** (*B. bonaerensis*).
 - Dwarf minke whales are an unnamed subspecies of the common minke whale that occurs almost exclusively in the Southern Hemisphere.
 - In addition the North Atlantic and North Pacific common minke whales also have separate sub-species designations (*B. a. acutorostrata* in the North Atlantic and *B. a. scammoni* in the North Pacific).
- **Distribution:** Minke whales are widely distributed through **most tropical, temperate and polar regions** from approximately 65°S to 80°N.
- Common minke whales are found in all ocean basins, with the dwarf minke whale subspecies more or less limited to the Southern Hemisphere.
- They feed most often in cooler waters at higher latitudes and can be found in both coastal/inshore and oceanic/offshore areas.
- **IUCN Conservation status**
 - **Common minke whale:** Least concern
 - **Antarctic minke whale :** Data deficient

Q1: What is the International Whaling Commission?

It was set up under the International Convention for the Regulation of Whaling (ICRW) which was signed in Washington DC in 1946. It has the objective to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry.





Dal Lake



Overview:

The famous Chinar boat race 2024 was organised recently in J&K's Dal Lake by the Army.

About Dal Lake:

- It is a small mid-altitude lake situated in **Srinagar, Jammu and Kashmir**.
- It is **surrounded by the Pir Panjal mountains**.
- It is named the "**Jewel in the crown of Kashmir**" or "**Srinagar's Jewel**".
- It is the **second-largest lake in Jammu and Kashmir**.
- The lake covers an area of 18 sq.km. and is **part of a natural wetland** which covers 21.1 sq.km.
 - The wetland is divided by causeways into four basins: Gagribal, Lokut Dal, Bod Dal, and Nagin (although Nagin is also considered an independent lake).
- The **shoreline** of the lake, is about 15.5 kilometres (9.6 mi), is encompassed by a boulevard **lined with Mughal-era gardens, parks, houseboats, and hotels**.
- The **floating gardens**, known as "**Raad**" in Kashmiri, blossom with lotus flowers during July and August.
- Dal Lake is also popular for the **floating market** where vendors have their own Shikaras/wooden boats and approach tourists.
- The depth of water varies from 6 metres at its deepest to 2.5 metres at its shallowest.
- During the **winter season**, the temperature sometimes reaches $-11\text{ }^{\circ}\text{C}$ ($12\text{ }^{\circ}\text{F}$), **freezing the lake**.
- **Islands:**



- Dal Lake includes 3 islands, 2 of which are marked with beautiful Chinar trees.
- The island located on the Lakut Dal is known as **Roph Lank (Silver Island)**, is marked with the presence of majestic Chinar trees at the four corners, thus known as Char-Chinari (Four Chinars).
- The second **Chinar Island**, known as **Sone Lank (Gold Island)**, is located on the Bod Dal (Big Dal) and overlooks the holy shrine of Hazratbal.

Q1: What is the Pir Panjal Range?

It is a group of mountains in the Inner Himalayan region. It runs from east-southeast (ESE) to west-northwest (WNW) across the Indian state of Himachal Pradesh and Jammu Kashmir.





What is Eastern Imperial Eagle?



Overview:

*A rare imperial eagle, scientifically known as **Aquila heliaca**, was recently spotted from the kole fields, Kerala.*

About Eastern Imperial Eagle:

- It is a large, graceful **bird of prey** that breeds in **southeastern Europe and extensively through West and Central Asia**.
- **Scientific Name: *Aquila heliaca***
- Like all eagles, the Eastern imperial eagle is a member of the **family Accipitridae**. Furthermore, its well-feathered legs mark it as a member of the subfamily Aquilinae.
- It tends to **live in forests**, where it will **build a huge, conspicuous nest** in an isolated tall tree.
- Most populations are **migratory and winter in northeastern Africa, the Middle East, and South and East Asia**.
- **Habitat:** Old forests, and the forests in mountains, hills, and along rivers are all common habitats.
- **Features:**
 - It is a **large eagle**. Adult total length can range from 68 to 90 cm with a typical wingspan of 1.76 to 2.2 m.
 - The species displays **reverse sexual dimorphism** as do most birds of prey, in which males are usually smaller than the females.
 - They have a **pale golden crown and nape** and a **greybase** that extends to the tail. They also have very **apparent white "braces" on their scapulars**.

- Like other eagles, they have **strong legs and feet**. Their feet include long, curved talons that they use to seize, kill, and carry their prey.
- They also have **large eyes** that are located slightly to the side of the head. These eyes provide them with extremely **keen eyesight**, allowing them to spot prey from high in the air.

- **IUCN Red List: Vulnerable**

Q1: What is sexual dimorphism?

Sexual dimorphism is the systematic difference in form between individuals of different sex in the same species. For example, in some species, including many mammals, the male is larger than the female. In others, such as some spiders, the female is larger than the male.



Nafithromycin



Overview:

In a ground breaking step for India's biotechnology sector, Union Minister formally launched the first indigenous antibiotic "Nafithromycin" for resistant infections.

About Nafithromycin:

- It is an **antibiotic** which has been developed with the support of "**Biotechnology Industry Research Assistance Council**" (**BIRAC**).
- It has been brought to market under the trade name "**Miqnaf**".
- It is the country's first indigenously developed antibiotic aimed at **tackling Antimicrobial Resistance (AMR)**.
- This innovation is designed to treat **Community-Acquired Bacterial Pneumonia (CABP)**.
- Nafithromycin's efficacy stands out as it targets both typical and atypical pathogens, offering a potent solution where no new antibiotic in this class has been developed worldwide for over three decades.
- The antibiotic has **minimal gastrointestinal side effects**, no significant drug interactions, and remains unaffected by food, making it a versatile option for patients.
- It offers **10x Efficacy** with Just 3 doses to Combat Drug-Resistant Pneumonia.
- The development of Nafithromycin represents 14 years of dedicated research and an investment of ₹500 crores, with clinical trials spanning the U.S., Europe, and India.

Key facts about Community-Acquired Bacterial Pneumonia

- It is one of the most **common infectious diseases** and an important cause of mortality and morbidity worldwide.
- Typical bacterial pathogens that cause CAP include *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Moraxella catarrhalis*.

Q1: What is Biotechnology?

It is the application of living organisms or their parts to make technological advances and utilise those technologies in various fields. The modern era of biotechnology started with the discovery of the DNA structure as well as the development of genetic engineering techniques and the polymerase chain reaction.





Compressed Biogas



Overview:

India's first modern, self-sufficient gaushala with a state-of-the-art Compressed Biogas (CBG) plant was launched in Gwalior, Madhya Pradesh.

About Compressed Biogas

- It is the mixture of **hydrocarbon gases and vapours** consisting **mainly of Methane** in gaseous form.
- It has been produced by the **decomposition of animal and plant waste**, purified and compressed for use as an automotive fuel and industrial application;
- CBG has **calorific value and other properties similar to CNG** and hence can be utilized as green renewable automotive fuel.
- Thus it can replace CNG in automotive, industrial and commercial areas, given the abundance of biomass availability within the country.
- Conversion of agricultural residue, cattle dung and municipal solid waste (MSW) into CBG in a commercial scale is expected to have the following benefits
 - **Import reduction of natural gas** and crude.
 - Utilization of agricultural residue, cattle dung and MSW for the production of CBG and thus to achieve **reduction in emissions and pollution**.
 - A boost towards fulfillment of National commitments in achieving climate change goals.
 - Providing a buffer against energy security concerns and crude/gas price fluctuations.
 - Contribution towards Swachh Bharat Mission through responsible waste management
 - Lowering pollution and carbon emission.

- Providing additional **source of revenue to the farmers**, rural employment and amelioration of the rural economy

Q1:What is Natural Gas?

It is a mixture of gases which are rich in hydrocarbons. It is a colorless and odorless gas composed of 70-90% methane (CH₄). Its other ingredients include ethane (C₂ H₆) and propane (C₃ H₈).





What is Chagas Disease?



Overview:

A recent study shows that Trypanosoma cruzi—the parasite that causes Chagas disease—can survive in dead kissing bugs (Triatominae) even within insecticide-treated dog kennels.

About Chagas Disease:

- Chagas (CHAH-gus) disease is an **inflammatory, infectious disease** caused by the **protozoan parasite, Trypanosoma cruzi**.
 - This parasite is **found in the feces of the triatomine (reduviid) bug**.
 - This bug is also known as the "**kissing bug**."
- Chagas disease is **common in South America, Central America, and Mexico**, the primary home of the triatomine bug.
- Also called **American trypanosomiasis**, Chagas disease can infect anyone. **Left untreated**, Chagas disease later **can cause serious heart and digestive problems**.
- **Treatment:**
 - **During the acute phase** of infection, treatment of Chagas disease **focuses on killing the parasite**.
 - In people who have **chronic Chagas disease**, it's **no longer possible to kill the parasite**. **Treatment** in this later phase is about managing signs and symptoms.

Q1: What are Protozoa?

Protozoa are single celled organisms which have a membrane bound nucleus. Most protozoa are free living, but some are parasitic. They are heterotrophs, meaning that they eat other plants or animals for energy and nutrients. They come in many different shapes and sizes ranging from an Amoeba which can change its shape to Paramecium with its fixed shape and complex structure.

Dibang Multipurpose Project



Overview:

The Union Minister of State for Consumer Affairs, Food, and Public Distribution recently visited the Dibang Multi-Purpose Hydro Power project site at Arunachal Pradesh's Dambuk village as part of her two-day tour to the Lower Dibang Valley district.

About Dibang Multi-Purpose Hydro Power Project:

- It is a **flood control cum hydroelectric power project** planned to be developed on the **Dibang River**, a **tributary of the Brahmaputra River**, in **Arunachal Pradesh**.
- At 2,880MW installed capacity, it **will be the country's biggest hydropower facility**.
- It is being developed by India's state-run **National Hydroelectric Power Corporation (NHPC)**.
- The Project is designed as an **energy storage project, with flood moderation** as one of the key objectives, besides power generation.
- **Project Features:**
 - The project envisages the construction of a **278m-high and 375m-long concrete gravity dam**, which **will be the highest Concrete-Gravity Dam of India**.
 - The Dam is planned to be constructed with **Roller Compacted Concrete (RCC)** technique and it will be the **highest RCC Dam of the World**.
 - The dam will create a 43 km-long reservoir with a gross storage capacity of 3.85 billion cubic metres.
 - It includes six Horseshoe-shaped head race tunnels of length varying from 300 m to 600 m with 9 m diameter, an underground Power House, and six horseshoe-shaped tail race tunnels of length varying from 320m to 470 m with 9 m diameter.

Q1: What is a Gravity Dam?

A gravity dam is a type of dam structure that is primarily designed to resist the force of gravity and hold back water or other materials. It relies on its own weight and mass to counteract the horizontal pressure

exerted by the water or other materials it is retaining. Gravity dams are among the oldest and most common types of dams used for various purposes, including water supply, irrigation, flood control, and hydroelectric power generation.

