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2550TH MAHAVEER NIRVAN MAHOTSAV

Context

 Recently, the Prime Minister of India inaugurated the 2550th Bhagwan Mahaveer Nirvan Mahotsav on the auspicious occasion of Mahaveer Jayanti at Bharat Mandapam in New Delhi.

About Mahaveer Jayanti (aka Mahavir Janma Kalyanak)

- It celebrates the birth of Mahavira, the last Tirthankara and the founder of Jainism.
- Mahavira was born on the 13th day of the bright half of the Hindu month of Chaitra, which usually falls in March or April.

Mahavira Swami

Birth and Early Life:

- He was born to King Siddhartha and Queen Trishala of the Ikshvaku dynasty, in 540 BC at Kshatriyakund (part of the well known Vaishali republic) in Bihar.
- He was named Vardhaman, which means continuously increasing.
- He was a kshatriya prince of the Lichchhavis, a group that was part of the Vajji Sangha.
- Though he was born with worldly comforts and luxuries, they never attracted him and at the age of thirty, he left home and went to live in a forest. For twelve years he led a hard and lonely life.

Kevaljnan:

- At the age of forty-two he attained Kevaljnan (omniscience) through right knowledge, right faith and right conduct (Three Jewels of Jainism).
- He became a Jina (conqueror) and the twentyfourth tirthankara.
 - Rishabh Deva was the first tirthankara.

Teachings and Contributions:

- All living beings have a soul and all souls are equal.
- He questioned the authority of the Vedas and also emphasised individual agency and suggested the masses to attain liberation from the trials and tribulations of worldly existence.

- This was in marked contrast to the Brahmanical position, wherein, an individual's existence was thought to be determined by his or her birth in a specific caste or gender.
- He added one more vow to the four great vows from the time of Lord Parshvanath. The five great vows are:
 - Ahimsa (non-violence);
 - Satya (truth);
 - Asteya (non-stealing);
 - Aparigraha (non-possession);
 - Brahmacharya (chastity, added by Mahavira).
- There are two forms of these five vows:
 - Mahavrata: The 5 great vows followed by Jain monks and nuns.
 - **Anuvrata**: The less strict version of great vows followed by Jain lay people.
- As the last Tirthankar, he revived the Tirth (religious order) and this order is known as the Jain Sangh (order).

Language:

- He used **Prakrit language** so that ordinary people could understand the teachings as Sanskrit was not understood by many.
- There were several forms of Prakrit, used in different parts of the country and named after the regions in which they were used.
 - For example, the **Prakrit spoken in Magadha** was known as Magadhi Prakrit.

Death:

 He attained mahaparinirvana at the age of seventy-two at **Pavapuri near Patna** in 468 BC and became a Siddha (free from the cycle of birth and death).

Jainism

- The word Jain comes from the term Jina, meaning conqueror.
- The basic philosophy was already in existence in North India before the birth of Lord Mahavira.
- According to Jain tradition, Mahavira was preceded by 23 tirthankaras (teachers), literally, those who guide men and women across the river of existence.
- The most important idea in Jainism is that the entire world is animated and even stones, rocks and water have life.



- Non-injury to living beings, especially to humans, animals, plants and insects, is central to Jain philosophy.
- According to Jain teachings, the cycle of birth and rebirth is shaped through karma and asceticism and penance are required to free oneself from the cycle of karma. This can be achieved only by renouncing the world, therefore, monastic existence is a necessary condition of salvation. In order to do so, Jain monks and nuns had to take the five vows.

Seven Tattvas (elements) of Jain Philosophy:

- Jiva (living substance);
- Ajiva (matter or non-living substance);
- Asrava (influx of Karmic matter in the soul);
- Bandha (bondage of soul by Karmic matter);
- Samvara (stopping of Asrava);
- Nirjara (gradual removal of Karmic matter);
- Moksha (attainment of perfect freedom or salvation).

Karmas responsible for distortions of the soul:

- Ghati (Destructive) Karma: These obstruct the true nature of the soul.
 - Jnanavarniya (Knowledge obscuring) Karma;
 - Darshanavarniya (Perception obscuring) Karma;
 - Antaräy (Obstructing) Karma;
 - Mohniya (Deluding) Karma
- Aghati (Non-destructive) Karma: These affect only the body in which the soul resides. As long

as Aghati karmas will be present, human souls will stay caged in some kind of a body and will have to experience pain and sufferings in many different forms.

- Vedniya (Feeling producing) Karma;
- Nam (Body determining) Karma;
- Gotra (Status determining) Karma;
- Ayushya (Age determining) Karma;
- Vedniya (Feeling producing) Karma

Spread of Jainism:

 Over hundreds of years, it spread to different parts of north India and to Gujarat, Tamil Nadu and Karnataka.

Literature:

- Jain scholars produced a wealth of literature in a variety of languages namely Prakrit, Sanskrit and Tamil.
- Jain literature is classified into two major categories
 - Agam Literature: This consists of original scriptures compiled by Ganadhars and Srut-kevalis. They are written in the Prakrit language.
 - Non-Agam Literature: This consists of commentary and explanation of Agam literature and independent works, compiled by elder monks, nuns, scholars, etc. and are written in many languages such as Prakrit, Sanskrit, Old Marathi, Gujarati, Hindi, Kannad, Tamil, German and English.

Jain Councils:

Jain Councils	Year	Place	Chairman	Development
1st	300 BC	Patilputra	Sthulabhadra	Compilation of Angas.
2nd	512 AD	Vallabhi	Devardhi Kshmasramna	Final compilation of 12 Angas and Upangas.

Sects of Jainism

 Famine in Magadha led to the division of Jaisim into two sects namely Digambar (meaning sky clad) and Shwetamber (meaning white clad).

Digambar Sect:

- It was led by **Bhadrabahu**, leader of monks who
 moved to the south. It is more austere and is closer
 in its ways to the Jains at the time of Mahavira.
 - In recent centuries, it has been further divided into various sub-sects.

Major sub-sects:	Minor sub-sects:	
Bisapantha	Gumanapantha	
Terapantha	Totapantha	
Taranapantha or Samaiyapantha	·	



Shwetambar Sect:

- It was led by **Sthulabhadra**, the leader of Monks who stayed in the North.
 - Like the Digambar Sect, it has also been divided into three main sub-sects:
- Murtipujaka
- Sthanakvasi (avoided Idol Worship/ Murtipujak)
- Terapanthi (simpler worship pattern than Digambar TeraPanthi)

Differences Between Digambar and Shwetambar:

Dimensions	Digambar	Shwetambar
Clothes	They live completely naked.	They wear white clothes.
Women	Women cannot achieve liberation.	Women can achieve liberation.
Images	Digambara images of tirthankaras have	Svetambara images have prominent staring
	downcast eyes, are plain and always carved	eyes and are richly decorated.
	as naked figures.	

Difference Between Jainism and Buddhism

Dimension	Buddhism	Jainism
Soul	Does not believe in the soul. No soul theory	Believe in the soul, which is present in
	is propounded (Nairatmyavada).	everything.
God	Generally silent on questions related to the	Does believe in God, not as a creator, but as
	existence of God.	a perfect being.
Varna System	Condemn it.	Do not condemn it.
Incarnation	Do not believe in incarnations.	Believe in incarnations.

Source: PIB

FISCAL CHALLENGES CONFRONTING LOW-INCOME NATIONS

Context

 The International Monetary Fund (IMF) has expressed its concern over the debt and fiscal challenges confronting low-income nations.

Background

- The IMF lowered its 2024 growth forecast for lowincome countries as a group to 4.7% from an estimate of 4.9% in January.
- Meanwhile, the World Bank noted a concerning trend where half of the world's 75 poorest countries are experiencing a widening income gap with wealthier economies, marking a reversal in development progress seen earlier this century.

Fiscal challenges of low-income countries

- In Sub-Saharan Africa, currently countries face debt service payments of 12% on average, compared to 5% a decade ago.
- In some countries debt payments are up to 20% of revenues. Those countries had far fewer resources to invest in education, health, infrastructure and jobs.

- High interest rates in advanced economies
 have lured away investments from low income
 countries, and raised their cost of borrowing.
- There are concerns regarding debt trap challenges from China and other emerging official creditors. Almost 40 countries saw external public debt outflows in 2022.

How does the IMF help countries?

- Countries seek help from the IMF (bailout)
 usually when their economies face a major
 macroeconomic risk, mostly in the form of a
 currency crisis.
- The IMF basically lends money, often in the form of special drawing rights (SDRs), to troubled economies that seek the lender's assistance.
- SDRs simply represent a basket of five currencies, namely the U.S. dollar, the euro, the Chinese yuan, the Japanese yen, and the British pound.
- The IMF carries out its lending to troubled economies through a number of lending programs such as the extended credit facility, the flexible credit line, the stand-by agreement, etc.



- Countries receiving the bailout can use the SDRs for various purposes depending on their individual circumstances.
- The IMF usually imposes conditions on countries before it lends any money to them.
 - For example, a country may have to agree to implement certain structural reforms as a condition to receive IMF loans.

Significance of IMF bailouts

- IMF bailouts provide a source of financial support to stabilize a country's economy, prevent further economic decline and restore confidence in the country's ability to repay its debts.
- IMF bailouts help prevent financial crises from spreading to other countries by containing the economic damage and stabilizing the financial system of the affected country.
- IMF bailouts often come with conditions for economic policy changes and structural reforms that help the country address its underlying economic problems and put it on a sustainable path to growth and development.

Way Ahead

- Affected countries needed to increase their domestic revenues by raising taxes, continuing to fight inflation, paring back spending and developing local capital markets.
- It is vital for these countries to make themselves more attractive to investors, and the IMF needs to engage with countries to help them do that.

International Monetary Fund (IMF)

- The IMF was established in 1944 in the aftermath of the Great Depression of the 1930s.
- The organization is currently composed of 190 member countries.
 - Each member has representation on the IMF's executive board in proportion to its financial importance.
- The primary goal of the IMF back then was to bring about international economic coordination to prevent competing currency devaluation by countries trying to promote their own exports.
- Eventually, the IMF evolved to be a lender of last resort to governments of countries that had to deal with severe currency crises.

Source: TH

IRDAI MARKS 25TH ANNIVERSARY

Context

 The Insurance Regulatory and Development Authority of India (IRDAI) celebrated its Silver Jubilee on April 19.

Insurance Regulatory and Development Authority of India (IRDAI)

- IRDA was constituted in 1999 as an autonomous body after the recommendations of the Malhotra Committee report to regulate and develop the insurance industry.
 - It was incorporated as a statutory body on April 19, 2000.
- The Authority has the power to frame regulations under **Section 114A of the Insurance Act, 1938.**
- **Objective:** The main objective of the IRDA is to protect the interests of the policyholder and regulate the insurance industry.
- IRDAI is under the jurisdiction of the Ministry of Finance, Government of India.
- It has framed regulations ranging from registration of companies for carrying on insurance business to protection of policyholders' interests.

Recent Initiatives by IRDAI

- IRDAI has lifted the age cap on purchasing health insurance policies, effective from April 1, 2024.
 Previously, individuals were restricted to buying new insurance policies only until the age of 65.
- Bima Sugam initiative: It aims to empower all insurance stakeholders by connecting them all through a single platform.
 - The platform uses advanced technology to simplify processes for insurance companies, policy holders', intermediaries, insurance repositories and external data sources etc.
- It has replaced 34 regulations with six regulations to enhance clarity and coherence in the regulatory landscape.
- Mandatory e-insurance: IRDAI mandated the digitisation of insurance policies across all categories to streamline processes, enhance efficiency, and improve accessibility for policyholders.
- IRDAI has decreased the health insurance waiting period from 48 months to 36 months.

 The waiting period refers to the duration during which policyholders are not eligible to claim benefits for any pre-existing health conditions they might have during the purchase of the insurance policy.

Concluding Remarks

- Over the past two decades, IRDAI has played a pivotal role in fostering innovation, safeguarding consumer interests, and propelling industry advancement.
- It has revolutionized the sector by actively engaging with policyholders and prioritizing their well-being with its unwavering commitment to excellence and regulatory standards.

Source: BL

FOURTH GLOBAL MASS CORAL BLEACHING

In News

 The National Oceanic and Atmospheric Administration (NOAA) revealed the fourth global mass coral bleaching event has started due to ocean temperatures.

About

- The first mass bleaching took place in 1998 in which 20% of the world's reef areas suffered bleaching-level heat stress.
- The next two global bleaching events occurred in 2010 (35% of reefs affected) and between 2014 and 2017 (56% of reefs affected).
- The fourth global bleaching event is currently underway. Nearly 54 countries, territories and local economies — from Florida, the US, Saudi Arabia to Fiji — have confirmed bleaching.

Reason for Rising Temperature & Bleaching

- The primary reason behind the soaring temperatures is the rising emissions of heattrapping greenhouse gases (GHGs) such as carbon dioxide and methane in the atmosphere.
 Nearly 90% of the extra heat trapped by GHGs has been absorbed by the oceans.
- The rise in temperature has been exacerbated by El Niño, a weather pattern which is associated with warmer oceans.

 Coral Bleaching could have serious consequences for ocean life and millions of people who rely on reefs for food, jobs, and coastal defence.

What are Coral & Coral Reefs?

- Corals are essentially animals, which are sessile, meaning they permanently attach themselves to the ocean floor.
- Each individual coral animal is known as a polyp and it lives in groups of hundreds to thousands of genetically identical polyps that form a 'colony'.
- Corals are largely classified as either hard coral or soft coral. It is the hard corals that are the architects of coral reefs.
- Unlike soft corals, hard corals have stony skeletons made out of limestone that are produced by coral polyps. When polyps die, their skeletons are left behind and used as foundations for new polyps.
- Geographical Conditions: Temperature: 20°C-35°C; Salinity: Between 27% to 40%. Coral reefs grow better in shallow water; less than 50 m.
- Australia's Great Barrier Reef (World Heritage Site) is the largest in the world, stretching across 2,028 kilometers.
- Coral reefs in India: Gulf of Kutch, Gulf of Mannar, Andaman & Nicobar, Lakshadweep Island and Malvan.

Coral Bleaching

- Most corals contain algae called zooxanthellae
 — they are plant-like organisms in their tissues.

 Corals and zooxanthellae have a symbiotic relationship.
- While corals provide zooxanthellae a safe place to live, zooxanthellae provide oxygen and organic products of photosynthesis that help corals to grow and thrive. Zooxanthellae also give bright and unique colours to corals.
- Corals are very sensitive to light and temperature and even a small change in their living conditions can stress them. When stressed, they expel zooxanthellae and turn entirely white. This is called coral bleaching.
- Coral bleaching doesn't immediately lead to the death of corals. Coral bleaching reduces the reproductivity of corals and makes them more vulnerable to fatal diseases.
- Global mass bleaching of coral reefs is when significant coral bleaching is confirmed in the Atlantic, Indian and Pacific oceans.



Importance of Corals

- Coral reefs, also referred to as "rainforests of the sea", have existed on the Earth for nearly 450 million years.
- Thousands of marine species can be found living on one reef.
- These massive structures also provide economic goods and services worth about \$375 billion each year. More than 500 million people across the world depend on coral reefs for food, income and coastal protection from storms and floods.
- Coral reefs can absorb up to 97% of the energy from waves, storms, and floods, which prevents loss of life, property damage, and soil erosion.

Way Ahead

- To curb global warming to no more than 1.5 degree Celsius, countries need to bring GHG emissions to a net zero by 2050, according to the Paris Agreement.
- Steps needed in direction of Climate resiliency (Paris agreement, SDG 8 & 12)
- R & D for heat resistant corals.

Source: IE

NEWS IN SHORT

PANHALA FORT

Context

 The Archaeological Survey of India (ASI), Mumbai Circle celebrated World Heritage Day at Panhala Fort.

About

• Location: It is located in Panhala, Kolhapur in Maharashtra. It is strategically placed in proximity to the trade routes connecting the Sahyadri mountains, the Deccan plateau, and the Konkan coast.

- The fort was built between 1178 and 1209 CE, by the Shilahara ruler Bhoja II.
- The fort reflects the transfer of power in the hands of the Yadavas of Devagiri, the Bahmani of Bidar, the Adil Shahi of Bijapur, the Marathas and the Mughals.

Architecture

- The fort had 3 double walled gates, namely;
 Chaar Darwaja, Teen Darwaja, Wagh Darwaja.
- There are several water bodies such as, Someshwar Tank, Sadhoba Tank, Khokad Tank and Idgah Tank.
- There is a three-storied tower called the Nayikinicha Sajja or the dancing girl's tower, built during the reign of Ibrahim Adil Shah II.
- **Sajja Kothi** is a double storied structure with an upper gallery occupying the prominent and highest position on the hill.

Significance

- In 1954, Panhala Fort was declared as a Monument of National Importance.
- Panhala Fort, is one of the 11 forts that has been nominated by ASI for inclusion in the UNESCO World Heritage List under the title, 'Maratha Military Landscapes'.

Source: TH

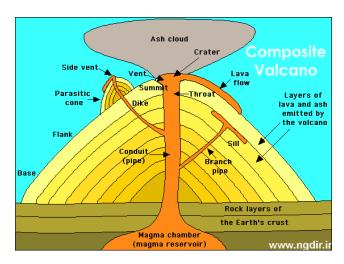
MOUNT RUANG

In News

- A tsunami alert was issued in Indonesia after multiple eruptions of the Mount Ruang volcano.
 - Indonesia, with 120 active volcanoes, faces frequent volcanic activity due to its location along the Ring of Fire.

What are Volcanic Eruptions?

- A volcano is a vent or fissure in Earth's crust through which lava, ash, rocks, and gases erupt.
- A volcano can be **active**, **dormant or extinct**.
- The magma is lighter than solid rock, it can rise through vents and fissures on the surface of the earth. After it has erupted, it is called lava.



Ring of Fire

- It is also called the Circum-Pacific Belt, which is a path along the Pacific Ocean characterized by active volcanoes and frequent earthquakes.
- It traces boundaries between several tectonic plates including the Pacific, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates.
- It is home to about 75 per cent of the world's volcanoes and about 90 per cent of its earthquakes.
- Formation: The Ring of Fire is the result of the subduction of oceanic tectonic plates beneath lighter continental plates. The area where these tectonic plates meet is called a subduction zone.
 - Here, the plate which is below at the convergent boundary is pushed down, or subducted, by the plate above. As the rock is subducted, it melts and becomes magma.

Source: IE

BIRD FLU (H5N1)

In News

• Recently, Kerala's Alappuzha district has been hit by a **bird flu outbreak**.

About Bird Flu

- It was first detected in the state of Maharashtra in 2006.
- Cause: Bird flu also known as avian influenza (H5N1), is a disease that primarily affects birds and is caused by a virus of the Orthomyxoviridae family.
- **Transmission:** Human cases of avian influenza occur occasionally and transmission of infection from person to person is very rare.

- There is no evidence to suggest that avian influenza viruses can be transmitted to humans through properly prepared and cooked poultry or eggs.
- **Symptoms:** Infected birds show nervousness, lack of coordination and movements, tremors, gasping for air, swelling and redness around neck, head and eyes.
 - Symptoms of infection in humans include cough, muscle aches, runny nose and sore throat.
- Treatment and Prevention: Antiviral medications, such as Oseltamivir (Tamiflu) can help in reducing the severity and duration of symptoms.

Source: DTE

RODENTICIDE POISONING & YELLOW PHOSPHOROUS

In News

- Several states are grappling with a significant number of deaths related to the ingestion of yellow phosphorus-based rat poison.
 - A six-month survey carried out in six districts in Tamil Nadu in 2019 by the Tamil Nadu chapter of Indian Society of Gastroenterology (TN-ISG) found 450 people suffered from liver toxicity caused by ingestion of rat poison.
 - TN government is undertaking **plasma** exchange to treat rodenticide-induced acute liver injury and acute liver failure cases

About Yellow Phosphorus

- There are three forms of phosphorus available like white, red, and black.
- Yellow phosphorus(YP) is formed by a small amount of red phosphorus resulting in discoloration of white phosphorus.
- It is a general protoplasmic toxin and is used in the manufacture of fireworks, rodenticide, and fertilizers.

Source: TH

DURGA-2 (DIRECTIONALLY UNRESTRICTED RAY GUN ARRAY)

In News

 DRDO is conducting tests on a prototype of its DURGA-2 laser defense system.

About

• It damages or destroys its target using focused energy by means of lasers, microwaves or particle beams.



- Russia, France, Germany, the United Kingdom, Israel, and China already have this system.
- Their beams are not affected by the constraining effects of gravity or atmospheric drag.

Advantages

- Directed energy weapons, also called laser weapons, if developed and deployed operationally, can neutralise any drone or ballistic missile attacks from the skies or even at the originating location as it can travel at the speed of the light. It can deflect the path of the missiles and can even destroy a fighter aircraft.
- The present generation of anti-aircraft or anti-missile systems are not considered fool-proof but the laser weapon promises to have 100 percent kill probability.

Source: TH

EUVICHOL-S

Context

 Recently, the World Health Organisation (WHO) prequalified a new oral simplified vaccine for cholera.

About the Euvichol-S

- Euvichol-S is a simplified formulation of the WHO prequalified inactivated oral cholera vaccine, Euvichol-Plus.
 - Cholera, a deadly diarrheal disease, caused by the bacterium Vibrio cholerae, has been surging globally since 2021, with high case fatality rates despite the availability of simple, effective, and affordable treatment.
- The approval of Euvichol-S is expected to increase the overall supply of oral cholera vaccines available in 2024, with approximately 50 million doses now forecasted to be available to the global stockpile this year, compared to 38 million in 2023.

Source: FE

OLIVE RIDLEY SEA TURTLES

Context

 Recently, there was a media highlight that the annual mass nesting of Olive Ridley turtles near the Rushikulya river mouth has been delayed by over a month compared to the previous year.

Olive Ridley Sea Turtles (Lepidochelys Olivacea)

Sea Turtles in India:

- Leatherback;
- Loggerhead;
- Hawksbill;
- Green; and
- Olive Ridley.
- Location: Found in warm waters of the Pacific, Atlantic and Indian oceans.
- Known for their unique mass nesting called Arribada (which means 'arrival by the sea' in Spanish), where thousands of females come together on the same beach to lay eggs.
- They hatch in 45 to 60 days.
- **Gender:** determined by the temperature at which they are hatched.
 - A male turtle is born if the egg hatches at a temperature below 29 degrees Celsius.
 - Above that, the hatchling is a female.
 - Features:
 - One of the smallest sea-turtles on the earth.
 - Olive green colour of their shell.
 - They can grow up to two-and-a-half feet in length and weigh 30-45 kilograms.
- **Food:** Mainly shrimp, crab, molluscs, fish and crabs.

Nesting Sites:

- Rushikulya rookery coast (Odisha),
- Gahirmatha beach (Bhitarkanika National park) and
- Mouth of the Devi River.

Threats:

- More frequent and intense flooding and cyclones
- Sex ratio is getting skewed because of global warming.
- Hunted for meat, shell
- Anthropogenic factors like fishing trawlers etc.

Conservation Status:

• IUCN Red List: Vulnerable

• Wildlife (Protection) Act, 1972: Schedule I

CITES: Appendix I

Source: TOI

LLAMA 3

Context

 Meta introduced its most capable Large Language Model (LLM), the Meta Llama 3.

About

 It also introduced an image generator, which updates pictures in real-time even as the user types out the prompt.

What is Llama 3?

- Llama or Large Language Model Meta AI is a family of LLMs introduced by Meta AI in 2023.
- Llama 3, the latest iteration of its LLM and has been released in two sizes, 8B and 70B parameters.

 Parameters are a measure of the size and complexity of an Al model and generally, a larger number of parameters means an Al model is more complex and powerful.

Large Language Models (LLMs)

- A large language model (LLM) is a type of artificial intelligence (AI) algorithm that uses deep learning techniques and massively large data sets to understand, summarize, generate and predict new content.
- Deep learning involves the probabilistic analysis of unstructured data, which eventually enables the deep learning model to recognize distinctions between pieces of content without human intervention.
- It helps to understand how characters, words, and sentences function together.

Source: IE

