

**GEOGRAPHY- PHYSICAL AND ECONOMIC****Gondwanatheria**

Researchers have unearthed teeth in Patagonia belonging to a mammal called Magallanodon baikashkenke that lived 74 million years ago, the oldest such remains yet discovered in the South American country.

Magallanodon baikashkenke

- The small mammal would have lived in southern Patagonia during the late Cretaceous era, alongside dinosaurs, crocodiles, turtles and birds.
- It is the southernmost record of Gondwanatheria, a group of long-extinct early mammals that co-existed with dinosaurs. Gondwanatheria remains from the Cretaceous era are extremely rare.

**Gondwanatheria**

- Gondwanatheria is an extinct group of mammals that lived during the Upper Cretaceous to the end of the Eocene. They lived in the Southern Hemisphere continents which had been part of the supercontinent Gondwana.
- These mammals are known only from isolated teeth and a few lower jaws. Because of these fragmentary remains, their relationships are unclear.

Related Info : Patagonia is a region at the southern end of South America, shared by Argentina and Chile.

**GOVERNANCE- WELFARE SCHEMES, E-GOVERNANCE, SERVICES ETC.****Spandan Campaign**

Chhattisgarh Police has launched a campaign 'Spandan' to protect the police personnel from depression and stress.

**About:**

- More than 50 police personnel, including personnel of paramilitary forces, committed suicide in Chhattisgarh over the past two years. Apart from this, Jawans opening fire on their colleagues were also reported in recent years.
- Taking stock of these increasing incidents, the Chhattisgarh police has prepared an action plan and launched a campaign named Spandan.
- Under this campaign, Yoga classes, music therapy, interactive programmes and counselling from psychologists will be organized for jawans.
- Senior police officers will visit police lines, police stations and armed forces companies and spend time with the jawans in order to be aware of their problems.
- A special app is being prepared for monitoring the problems of police personnel at the police headquarters level. Through this app, policemen and their families will be able to communicate their problems to the concerned officials.

**INTERNATIONAL AFFAIRS- BILATERAL, GROUPINGS, ORGANISATIONS****Juneteenth**

Amid the ongoing nation-wide anti-racism protests, US President Donald Trump announced the postponement of his upcoming election rally in Tulsa, Oklahoma by a day so that it does not clash with Juneteenth, the day that celebrates the end of slavery in the US.

**About:**

- Juneteenth is the portmanteau of June and nineteenth and while it is not a federal holiday, it is recognised as a state holiday in over 45 US states.
- The day is the oldest nationally celebrated commemoration of the ending of slavery in the US and is observed on June 19.
- It is also known as Emancipation Day or Juneteenth Independence Day.

**Background:**

- On January 1, 1863, then-president Abraham Lincoln issued the Emancipation Proclamation, which declared that "all persons held as slaves" within the states in rebellion "are, and henceforward shall be free."
- Even so, over 2.5 years after Lincoln's proclamation, many slave owners continued to hold their slaves captive by hiding this information from them and holding them slaves for one more harvest season.
- On June 19, 1865, Major General Gordon Granger arrived in Galveston, Texas and announced the end of both the Civil War and slavery. Since then, Juneteenth has become a largely symbolic date representing freedom for African Americans.

**SOCIO-ECONOMIC DEVELOPMENT****International Day of Family Remittances**

The International Day of Family Remittances (IDFR) 2020 is being observed on 16 June under the theme "Remittances are a lifeline."

About:

- The International Day of Family Remittances (IDFR) is a universally-recognized observance adopted by the United Nations General Assembly and celebrated every year on 16 June.
- The day recognizes the contribution of over 200 million migrants to improve the lives of their 800 million family members back home. Half of these flows go to rural areas, where poverty and hunger are concentrated.

Impact of COVID-19 on Remittances

- Global remittances to developing countries are projected to fall by US\$ 110 billion in 2020, and not return to pre-pandemic levels for many years thereafter.
- In March 2020, the UN Secretary-General called for global solidarity in responding to the coronavirus crisis stating "remittances are a lifeline in the developing world – especially now".

Related Info :

- Sustainable Development Goal (SDG) 10.c commits, by 2030, to reduce to less than 3 % the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 %.
- The contribution of migrant workers through remittances has also been recognized in the Global Compact for Safe, Orderly and Regular Migration, adopted in 2018. Its Objective 20 indeed calls for the reduction of remittance transfer costs.

**India Stares At 5th Recession**

The current recession staring at India is different from previous recessions as it comes with a fresh set of challenges.

About:

- Recession is generally defined as a fall in the overall economic activity for two consecutive quarters (six months) accompanied by a decline in income, sales and employment.
- Since independence, India has witnessed four recessions. As per Reserve Bank of India (RBI), the recessions occurred in 1958, 1966, 1973 and 1980. There was contraction of -1.2% (FY58), -3.66% (FY66), -0.32% (FY73) and -5.2% (FY80).
- Previous contractions in India's GDP had common culprits - weak monsoon and energy crisis.
  - Recession in FY58 was due to Balance of Payment (BoP) crisis
  - Recession in FY66 was due to Severe Drought
  - Recession in FY73 was due to Energy Crisis. In 1973, world witnessed its first energy crisis as the Organisation of Arab Petroleum Exporting Countries (OAPEC) proclaimed an oil embargo.
  - Recession in FY80 was due to oil shock during 1979-80. It occurred due to a decrease in oil production in the wake of Iranian revolution and led to increase in oil prices. This was followed by Iran-Iraq war which further curtailed production and escalated prices.

**SCIENCE AND TECHNOLOGY- EVERYDAY SCIENCE, SPACE, NUCLEAR, DEFENCE ETC**

**Stages Of Vaccine Development**

According to the Centers for Disease Control and Prevention (CDC), there are six stages of vaccine development: exploratory, pre-clinical, clinical development, regulatory review and approval, manufacturing and quality control.

About:

- Exploratory: This research-intensive phase of the vaccine development process is designed to identify "natural or synthetic antigens that might help prevent or treat a disease."
- Pre-clinical: During this phase, researchers use tissue-culture or cell-culture systems and animal testing to determine whether the candidate vaccine will produce immunity.
- Clinical development: It is a three-phase process.
  - During Phase I, small groups of people receive the trial vaccine.
  - In Phase II, the clinical study is expanded and vaccine is given to people who have characteristics similar to those for whom the new vaccine is intended.
  - In Phase III, the vaccine is given to thousands of people and tested for efficacy and safety.
- Regulatory review and approval: If a vaccine passes through all three phases of clinical development, the vaccine developer submits a Biologics License Application (BLA) to the FDA.
- Manufacturing: Major drug manufacturers provide the infrastructure, personnel and equipment necessary to create mass quantities of vaccines.

- Quality control: Stakeholders must adhere to procedures that allow them to track whether a vaccine is performing as anticipated.

**Centers for Disease Control and Prevention (CDC):**

- The Centers for Disease Control and Prevention (CDC) is the national public health institute of the United States. It is a United States federal agency, under the Department of Health and Human Services.

**Rt-Npcr Test**

Researchers at the Centre for Cellular and Molecular Biology (CCMB) have developed a new low-cost and low-tech required test for SARS-CoV-2 testing. This test is known as reverse transcription 'nested' polymerase chain reaction (RT-nPCR) test.

**About:**

- The Indian Council of Medical Research (ICMR) has recommended only reverse transcription 'quantitative' polymerase chain reaction (RT-qPCR) test for novel coronavirus testing.
- Now researchers at the CCMB have developed the RT-nPCR test. The nested PCR (RT-nPCR) approach does not depend on real-time quantitative RT-qPCR but uses standard RT-PCR as part of an endpoint assay.
- This new test is awaiting approval from ICMR.

**Bose-Einstein Condensates (BECs)**

NASA Scientists have observed the "fifth state of matter" in space aboard the International Space Station (ISS) for the first time, offering insight that could help solve some of the quantum universe's most intractable conundrums.

**About:**

- Bose-Einstein condensates (BECs) -- the existence of which was predicted by Albert Einstein and Indian mathematician Satyendra Nath Bose almost a century ago -- are formed when atoms of certain elements are cooled to near absolute zero (0 Kelvin, minus 273.15 Celsius).
- At this point, the atoms become a single entity with quantum properties, wherein each particle also functions as a wave of matter.
- BECs straddle the line between the macroscopic world governed by forces such as gravity and the microscopic plane, ruled by quantum mechanics.
- Scientists believe BECs contain vital clues to mysterious phenomena such as dark energy -- the unknown energy thought to be behind the Universe's accelerating expansion.

**DAILY ANSWER WRITING PRACTICE**

**Q. India is still home to the largest number of poor. Discuss the underlying factors responsible for the prevalence of poverty in India and suggest strategy in order to accelerate poverty eradication in a sustainable manner?**

Poverty is a condition characterized by severe deprivation of basic human needs and the person is unable to fulfil the basic necessities for the sustenance of life. According to the 2018 global Multidimensional Poverty Index(MPI) released by the UN, over 270 million people in India moved out of poverty in the decade since 2005-06. But India is home to 26% of the global extreme poor. Global Hunger Index 2018 placed India at 103rd position out of 119 countries.

**There are different dimensions to poverty in India such as:**

**Economic causes:**

- Slow economic growth leads to increase in unemployment and poverty.
- Decreased agricultural output due to unpredictable weather patterns leads to some serious inflation issues.
- Due to inadequate industrialization in certain areas employment opportunities become limited.
- Uneven concentration of wealth and resources in the country.
- Unemployment and Under-employment.

**Social causes:**

- Social evils like untouchability affects democratic rights like employment etc. which leads to poverty among certain lower castes.
- Widespread ignorance and illiteracy: Uneducated people are unaware of their full potential which leads to limited earning sources.
- Mass migration to cities causes increased competition in the employment sector especially in cities which leads to poverty even among the educated population.
- High divorce rates and unequal employment opportunities to women leads to feminization of poverty.

**Geographical Factors:**

- Selective fertility of land creates fertile islands in the country and the unfertile lands are pushed towards poverty naturally.
- Environmental and climatic factors include floods, droughts etc.
- Now there is more focus on job creation via entrepreneurship and converting job seeker into job creator through hand holding approach in terms of targeted loans under Mudra Scheme, Start-Up India, Stand-Up India, Aspire etc.

Providing employment also mitigates poverty in following ways:

- Better wages provide access to education as well as health care thus, providing future avenues of poverty alleviation
- Increased Income also provides better access to government services, even if they are for free.
- According to NITI Aayog, the strategy for combating poverty must rest on two approaches
  - Sustained rapid growth that is also employment intensive and
  - Making anti-poverty programs even more effective.

Thus, rapid growth alone is not a sufficient condition for rapid expansion of social spending, but it is a necessary condition nonetheless. There needs to be focus on combating Poverty through efficient anti-poverty programmes as well to ensure direct help to the poor in terms of addressing specific aspects of poverty such as food and nutrition, water, toilets, literacy, health etc.:

Various steps taken by the government to mitigate poverty:

- National Food Security Act: Providing 75% rural population and 50% urban population with 5 kg of food grains per month, ensuring health and prospects of coming out of poverty.
- MGNREGA: provides with specified wage in a given year to unskilled labour, thus providing them some source of income, thereby increasing their purchasing power for essential needs.
- Housing for All- rural and Urban to enable affordable asset creation for poor covering shelter part for the poor.
- In order to make anti-poverty programs effective, the government has taken a lot of efforts like channelizing the potential of JAM (Jan Dhan Yojana, Aadhaar, and Mobile) trinity, providing biometric identity to the poor to avail the benefits of government schemes.
- These direct measures towards poverty reduction are required to support poor families to ensure basic necessities are available and accessible for the poor. At the same time, job creation is also important to empowering them so that they continue to fulfil their needs.

To have sustainable poverty reduction, these areas must be focused:

- Accelerate rural poverty reduction: Capitalize on growing connectivity between rural and urban areas, and between the agriculture, industry and services sectors, has been effective in reducing poverty.
- Creating more and better jobs: Efforts are needed to address tepid job creation in labour intensive sectors.
- More focus is required on the low participation of women in the labour market and the slow progress among Scheduled Tribes.
- Smart Cities along with Smart Villages are required (PURA model).
- Improve human development outcomes for the poor which are central to improving their quality of life.
- Special Employment Schemes for the Poor such as MGNREGA.
- Need to incorporate technology for identification of beneficiaries to prevent leakages of various subsidies, adopt direct benefit transfers such as in PDS.
- Revolutionizing the anti-poverty programmes by replacing the current cumbersome and checking the leakages in the distribution of benefits.
- Adopting a holistic definition of poverty should be considered instead of the current expenditure-based poverty line etc.

Poverty is a multi-faceted problem so the solution also needs to be a multi-faceted one. We have taken leaps in poverty reduction with the increased employment based growth and efficient anti-poverty scheme implementation, but more needs to be done to take poverty heads on. Overcoming poverty should be seen as a fundamental right of the citizens and should be given its due importance.