

ECONOMY**Context: Important Problems associated with Urban Unemployment, Periodic Labour Force Survey. In News, why?**

Data for July–September 2023 from the Periodic Labour Force Survey (PLFS), carried out by the National Sample Survey Office (NSSO), were just made public, providing insight into India's urban unemployment rate.

Which recent PLFS highlights stand out the most?**Urban Unemployment Rate:**

- Between July 2022 and September 2023, the unemployment rate in urban areas decreased from 7.2% to 6.6%.
- **Male:** dropped in the allotted time, from 6.6% to 6%.
- **Female:** Showed a more encouraging trend, dropping from 9.4% to 8.6% over the specified period.

Worker-Population Rate:

- For those aged 15 and over, the proportion of employed individuals in urban areas increased from 44.5% in July–September, 2022 to 46% in July–September, 2023.
- **Male:** grew from 68.6% to 69.4% in the specified time frame.
- **Female:** grew within the specified time period, going from 19.7% to 21.9%.

Labour Force Participation Rate:

From July to September of 2022 to July to September of 2023, the LFPR in urban areas grew from 47.9% to 49.3%.

Male: There was a slight increase throughout this time, going from 73.4% to 73.8%.

Female: Showed a more notable rise, going from 21.7% to 24.0%.

The Periodic Labour Force Survey: What is it?**About:**

- In April 2017, the NSSO introduced the Periodic Labour Force Survey in recognition of the significance of having labour force statistics available at more frequent time periods.
- The percentage of unemployed people among those in the labour force is known as the unemployment rate, according to PLFS.

Objective of PLFS:

- to calculate the major measures of employment and unemployment (i.e., the labor force participation rate, the unemployment rate, and the worker population ratio) for urban regions exclusively in the "Current Weekly Status" (CWS) within a three-month timeframe.
- to annually estimate the indices of employment and unemployment in "Usual Status" and CWS in both rural and urban areas.

Which Key Terms Are Related?

- The percentage of adults 15 years of age and older who are either employed or jobless but actively looking for employment is known as the labour force participation rate, or LFPR.
- Worker Population Ratio (WPR): This indicates what proportion of the population is employed.
- The percentage of those without jobs among those who are working is known as the unemployment rate, or UR.

Which are the Principal Problems with Urban Unemployment?**Structural Unemployment:**

- The skills required by industries and the abilities held by the workers are frequently out of sync in urban regions.
- There is an overabundance of workers who lack or have insufficient skills because the educational system is not in line with the demands of the labour market.
- The economy has changed and rapid technology improvements have caused established businesses to shrink, which has led to job losses for many urban people who lack the skills needed for developing areas.

Informal Sector Dominance:

- The informal sector, which is typified by poor pay, unstable employment, and a lack of social security benefits, employs a sizable fraction of the urban workforce.

- Seasonal variations are common in this industry, which results in erratic job prospects.
- Because there are few formal employment possibilities, many workers are compelled to accept positions that are below their skill levels, which results in an underutilization of human resources.
- In India, 83% of the workforce is employed in the unorganized sector, according to the IMF.
- In addition, 92.4% of workers in the economy do not have a signed contract, paid time off, or other benefits.

Demographic Challenges:

- As a result of faster urbanization and population inflow into cities than job growth, the labour market is under pressure and unemployment rates are rising.
- Migration from rural to urban areas frequently results in an overabundance of labour in urban areas, which raises migrant communities' unemployment rates and exacerbates urban poverty.
- Credential inflation occurs when people place too much weight on their educational background relative to the number of jobs that are available, which can result in underemployment or unemployment.

Which initiatives does the government have in relation to employment?

- Assistance to Marginalized People for Employment and Subsistence (SMILE)
- Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi, or PM-DAKSH
- The National Rural Employment Guarantee Act of Mahatma Gandhi
- Start Up India Program: Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
- Rozgar Mela
- Rajasthan's Indira Gandhi Urban Employment Guarantee Scheme.

The Way Ahead

- **Reformative Education:** Reformative education involves revising curricula to impart relevant skills, placing a strong emphasis on vocational training, and encouraging lifelong learning to improve employability in order to better align education with current market demands.
- **Supporting the start-up ecosystem:** Creating a business-friendly atmosphere for start-ups by cutting red tape, lowering costs, and giving mentorship opportunities.
- **Pro-Employment Policies:** Developing and putting into practice measures that support the creation of jobs, such as infrastructure spending, rules that are favourable to business, and financial incentives for hiring companies.
- **Encouraging creative economy:** It means making investments in the arts, cultural industries, and creative sectors as well as helping craftspeople, artists, and artisans create jobs through cultural entrepreneurship.

ENVIRONMENT & CLIMATE CHANGE**Context: remaining steadfast****Introduction:**

India has reiterated its commitment to mitigating global warming while highlighting the fundamental tenets of its climate diplomacy, namely equity and justice, during the first two days of COP28 in Dubai.

India's stand in the COP28

- Prime Minister Narendra Modi summed up the country's standpoint in his speech at the UNFCCC meeting on Friday: "For global good, it is important that the rights of everyone are protected, and everyone has equal participation."
- India achieved its emission intensity-related target 11 years ago and is on track to achieving its Nationally Determined Contribution (NDC) towards the Paris Pact, he said.
- Prime Minister Modi also reiterated the country's renewable energy commitments.
- At the same time, the government has been unequivocal about coal's important role in the country's economy.
- "Coal is and would remain an important part of India's energy mix," Foreign Secretary Vinay Mohan Kwatra said on the eve of the PM's visit to Dubai.
- These statements send an important message that India will not buckle under pressure to raise its climate ambition — certainly not at the cost of its development priorities.

- These declarations deliver a crucial message: India won't back down from pressure to increase its ambition for the climate, and definitely not at the expense of its top development goals.

The maze of "phasing down coal" and coal substitutes

- Reducing coal consumption will undoubtedly be one of the hotly debated topics at the Dubai COP.
- India, China, and other rising economies exerted last-minute pressure at Glasgow two years ago to change the final wording of the COP26 proclamation from a "phase out" to a "phase down" of the fossil fuel.
- The Glasgow debate also framed the dilemma faced by nations trying to lower emissions while raising the standard of life for their expanding populations.
- For example, India's energy basket has seen a rise in the proportion of renewables for the past five years.
- Nonetheless, coal meets more than 70% of the nation's energy requirements.
- As the nation's economy recovers from the crisis brought on by Covid, power demand has been rising at a reasonable rate.
- The US and several European nations were able to transition away from coal because to their natural gas deposits.
- On the other hand, growing economies such as South Africa, Indonesia, and China lack that alternative.
- Even though natural gas emits less pollution than other fossil fuels, its effectiveness as a temporary clean energy source is still up for debate.
- As a result, India has insisted on a gradual phase-out of the use of all fossil fuels, not just coal.

What steps may be taken globally to reduce coal use?

- **Regulations and Policy Implementation:** To discourage the use of coal and encourage the use of renewable energy sources, governments must enact strict policies and regulations. This entails establishing aggressive goals for reducing the use of coal, enacting carbon pricing schemes, and offering financial assistance for renewable energy initiatives.
- **Accelerated Renewable Energy Deployment:** In order to replace coal as a source of electricity, significant investments must be made in renewable energy sources as solar, wind, geothermal, and hydropower. This include funding infrastructure for renewable energy sources, expediting the approval process, and encouraging research and development.
- **Energy Efficiency Measures:** Reducing overall energy consumption and dependence on coal can be accomplished by making considerable improvements in energy efficiency across all sectors, from transportation to buildings. This entails enacting more stringent building regulations, endorsing energy-efficient products, and boosting the use of public transit.
- **Just Transition for Affected Communities:** Reducing reliance on coal requires policies that assist the workers and communities who depend on the coal sector. To guarantee a smooth and equitable transition, this involves offering retraining programs, helping with job placement, and implementing economic diversification measures.
- **International Collaboration and Cooperation:** A successful phase-out of coal requires international collaboration. International agreements, like the Paris Agreement, offer a structure for concerted efforts, and multilateral organizations can help with information exchange, technology transfer, and lending money to developing nations.
- **Public Education and Awareness:** Gaining support for a coal phase-out requires educating the public about the negative effects that coal has on the environment and human health. The benefits and urgency of moving away from coal can be effectively communicated through media involvement, community outreach initiatives, and public education campaigns.
- **Economic Incentives and Market Mechanisms:** The shift can be accelerated by establishing a market environment that rewards the use of renewable energy sources and penalizes the use of coal. This covers clean energy technology subsidies, preferential tariffs for renewable energy, and carbon pricing schemes.

- **Using the Power of Finance:** Raising finance to fund the switch from coal is a major responsibility of the financial industry. Financial flows can be directed toward renewable energy and sustainable development by promoting green investments, selling assets connected to coal, and embracing sustainability ideals.

Conclusion,

India did a good job of reiterating its commitment to combating climate change while emphasizing its development goals. India and other like-minded nations will be under additional pressure to phase out coal use as a result of global expectations. They need to maintain their positions since they are based on principles.

PRELIM FACTS**1. Voice over 5G (Vo5G)****Context:**

Reports indicate Reliance Jio, India's largest mobile carrier, has been testing Voice over New Radio (VoNR) behind the scenes.

About Voice over 5G:

- It is also known as Voice over New Radio (VoNR).
- This standard allows voice calls over 5G networks instead of the current standard that uses 4G.
- In simple terms, Vo5G takes all the improvements of 5G – speed, capacity, responsiveness – and applies them squarely to voice.
- It aims to have all that infrastructure and interoperability ready well in advance.
- To use Vo5G, you need three things: a phone that supports Vo5G, a carrier that offers Vo5G, and a 5G signal in your area.
- How is VoNR better than VoLTE?
- VoNR brings clear advances over VoLTE with 5G's substantially higher bandwidth and lower latency compared to 4G LTE.
- Enhanced call quality: It utilizes more advanced audio codecs that provide superior clarity and fidelity based on 5G's
- increased data capacity.
- Faster connection times: It promises faster call connection times, ensuring a seamless and prompt user experience.
- Improved reliability: Vo5G aims to eliminate the notorious call drop issues, particularly during transitions between 5G and
- 4G.
- Lower packet loss contributes to better reliability, minimising the occurrence of voice cutouts during calls.

2. Anthrobots**Context:**

Recently, researchers have developed miniature robots using human cells and termed them as anthrobots.

About Anthrobots:

- These are constructed from human tracheal cells which are bio-robots that possess self-assembly capabilities.
- These are capable of both movement and healing neurons within a laboratory setting.

They can spontaneously fuse together to form a larger structure called a superbot, which was able to encourage the growth of neurons.

- Size: They are measuring between the width of a human hair and the tip of a sharpened pencil.
- Structure: The anthrobots displayed diversity in structure and behavior. Some took on a spherical shape fully
- covered in cilia, while others resembled a football shape irregularly adorned with cilia.
- These anthrobots are different from Xenobots, which are created from embryonic stem cells of frog.

- Application
- They hold promise for regenerative medicine, wound healing, and disease treatment.
- What are Tracheal cells?
- These are from the lining of the bronchi/trachea, the network of tubes used to convey air to the lungs.
- They are responsible for producing lubricating mucus to keep the airways functional and they are a type of
- epithelial cell, a term used generally to refer to cells lining the inside or outside of the body.
- These cells generate mucus and a number of other compounds, which play an important role in respiration

3. International Maritime Organisation

Context

- India was re-elected to the International Maritime Organisation (IMO) Council with the highest tally at elections held at its Assembly in London for the 2024-25 biennium.
- International Maritime Organisation is a specialized agency of the United Nations which is responsible for measures to improve the safety and security of international shipping and to prevent pollution from ships.
- It is the global standard-setting authority for the safety, security and environmental performance of international shipping.
- Funding for the organization comes from contributions by Member States, as well as voluntary donations and commercial activities.
 - Assembly is the highest Governing Body of the IMO.
 - It consists of all Member States, and it meets once every two years in regular sessions.
 - The Assembly is responsible for approving the work program, voting the budget and electing the Council.

4. The Leadership Group for Industry Transition (Lead IT) 2.0

Context:

- Recently, India and Sweden launched Leadership Group for Industry Transition (LeadIT) 2.0 during the COP28 World Climate Action Summit, hosted in Dubai.
- About Leadership Group for Industry Transition (LeadIT) 2.0:
- Since its inception in 2019, LeadIT has grown into a collaborative effort involving 18 countries and 20 industry-leading companies.
- The LeadIT initiative, initially centered around pivotal sectors such as iron, steel, cement, and aluminum, focused on industry transition and knowledge sharing.
- LeadIT has played a pivotal role in accelerating the adoption of low-carbon technologies, aligning with global environmental goals.

Three core areas of LeadIT 2.0:

- Inclusive and Just Industry Transition: Ensuring that industry transitions are not only efficient but also equitable, promoting fairness and inclusivity in the process.
- Low Carbon Technology Development and Transfer: Placing renewed emphasis on the development and seamless transfer of low-carbon technologies, crucial for achieving sustainable practices across industries.
- Emerging Economy Technology Transfer: Facilitating the expedited transfer of innovative solutions to
 - emerging economies, assisting in their transition to more sustainable practices.
 - It serves as a platform for public-private collaboration, fostering sector-specific and cross-sectoral learning, especially concerning innovation opportunities and new technologies.
 - Recently, the Prime Minister of India announced the launch of the Green Credit Initiative at COP28 summit, which was backed by multiple world leaders at the meeting.

- To take ahead the 'LiFE' – 'Lifestyle for Environment' movement, the Ministry of Environment, Forest and Climate
- Change (MoEFCC) has introduced the Green Credit Program (GCP) to encourage environmentally friendly practices.
- According to the MoEFCC, green credit is a market-based mechanism designed to incentivize voluntary environmental actions across diverse sectors by various stakeholders like individuals, communities, private sector industries, and companies.
- Under GCP, green credits will be assigned to specific environmental activities, and will be treated as tradable commodities. These green credits will be able to be sold on domestic market platforms.

5. Global Green Credit Initiative

Context:

India launches Global Green Credit Initiative (GGCI) at COP 28 (UAE) of UNFCCC

GGCI will serve as the international platform for dialogue, collaboration, and the exchange of innovative

environmental programs and instruments.

- Also referred as Global Platform for Nature's Ecological Transformation.
- GGCI is aligned with the principles of the Green Credit program (GCP).
- It aims to replace conventional approach of focusing on carbon emissions to recognizing and incentivizing a broader spectrum of efforts.

Key Purposes:

- Science: Sharing of global technical know-how and experiences.
- Policy: Shaping green credit policy instruments.
- Supporting implementation (practice component):
- Creating one common value chain.
- It will connect communities, self-help groups, etc. with companies/corporates and other stakeholders who can participate in the program through one marketplace.

Key Benefits:

- Knowledge Sharing, innovative solutions, collective actions, and participating countries can assert global leadership in providing environmental solutions.
- GCP is an initiative that rewards and incentivizes eco-friendly activities (such as tree plantation) by offering Green Credits, encouraging environmental sustainability and conservation.
- Notified through Green Credit Rules, 2023 by the Ministry of Environment and Climate Change under the Environment Protection Act, 1986.
- Governance Structure: Steering Committee, Indian Council of Forestry Research and Education (ICFRE)(Administrator), and Technical Committees. At the event, India also proposed to host the 2028 climate change conference (COP33).

ANSWER WRITING

Q. Terrorism poses a challenge to national security. Discuss measures that need to be taken in order to combat this threat.

Terrorism poses a grave challenge to national security by leading to loss of lives, creating panic among people; affecting tourism industry; decline in foreign investment; damaged economy (as terrorist attacks lead to a loss of property and businesses); and imperil security of the nation.

Dealing with the menace of terrorism would require a comprehensive strategy wherein various stakeholders – the Government, political parties, security agencies, civil society and media – would have an important role to play.

The following components of a strategy are essential:

- **Political agreement:** To enable effective integration and seamless information sharing between different security and intelligence services, a national agreement on the essential elements of a planned strategy for internal security is required.
- **Socioeconomic development and good governance:** These are essential for preventing the population's disenchantment with radicalism and terrorism. Development efforts and their practical implementation on the ground require transparent, accountable, and corruption-free administration at all levels.
- **Building capacity:** The process of building capacity ought to encompass the apparatus used for obtaining intelligence, security organizations, civil administration, and the general public. Preventive, mitigating, relieving, and rehabilitative strategies should all be included in the plan.
- **Combating Financing:** Terrorist operations typically need a significant amount of funding. The primary pillars of a strategy would be the reporting of questionable financial activities by people and organizations; anti-money laundering protocols; capacity building; and systems for collaboration amongst the financial agencies concerned.
- **Global Support:** In order to reduce terrorist support and supply networks, India must also mobilize a robust global consensus against terrorism. India has been advocating for various measures such as the Convention on Countering International Terrorism (CCIT), a consensus on the definition of terrorism, steps to stop funding terrorism, UN Global Counter-Terrorism Strategy as a common platform for action, and the inclusion of Masood Azhar and Jaish e-Mohammad in the UNSC global terrorist list.

Response to counterterrorism:

- The effectiveness of counterterrorism operations is largely dependent on a prompt, appropriately armed, trained, and equipped force for the task at hand.
- Involvement of the Community: Terrorism is violence directed against onlookers. Fighting terrorism entails lessening the terror that terrorists inspire in addition to attempting to stop them. That can be accomplished by aggressively engaging the public and regaining their trust in terms of safety.
- Since the National Security Guard is India's main counterterrorism strike force, it needs the resources to react quickly to terror acts in order to reduce deaths and prevent the culprits from regrouping.
- The Laws to Combat Terrorism: In its 173rd Report (2000), the Law Commission looked into this matter and emphasized the necessity of passing legislation in order to combat terrorists in a firm and efficient manner.

Conclusion:

- To combat the threat, a multifaceted strategy is required. In this situation, socioeconomic development is crucial to prevent vulnerable segments of society from falling for terrorist propaganda. Additionally, the administration must be receptive to long-standing, legitimate grievances from the public so that they can be promptly resolved and prevented from being used as a springboard by terrorist organizations.
- To effectively combat terrorism, India must implement a Trident Strategy that combines proactive action, strong political will, and information technology.

MCQs

1. Consider the following statements regarding 'VoLTE and VoNR/Vo5G'
 1. VoLTE has a lower latency rate than VoNR/Vo5G.
 2. VoLTE has lower call-dropping possibilities than VoNR/Vo5G.
 3. VoNR/Vo5G is faster in comparison with VoLTE.

How many statements given above are correct?

a) Only one b) Only two
c) All three d) None
2. Consider the following statements:

Statement-I: Gajraj is an AI-based surveillance system developed to prevent elephant deaths.

Statement-II: This system can alert loco pilots about the presence of elephants on tracks.

Which of the following is correct in respect of the above statements?

a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

- b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
 c) Statement-I is correct but Statement-II is incorrect
 d) Statement-I is incorrect but Statement-II is correct
3. With reference to Green Credit, consider the following statements:
 1. The Green Credit Program was introduced by the Ministry of Environment, Forest and Climate Change.
 2. Green credit is a market-based mechanism designed to incentivize voluntary environmental actions.
 3. These credits will be assigned to specific environmental activities and will be treated as tradable commodities.
 Which of the statements given above is/are correct?
 a) 1 only b) 1 and 2 only
 c) 2 and 3 only d) **1, 2 and 3**
4. Recently, 'Anthrobots' was in the news. Which one of the following best describes it?
a) It is constructed from human tracheal cells which are bio-robots with self-assembly capabilities.
 b) It is a robot imitating human anatomy to the minutest details.
 c) It is a robot having human intelligence capability.
 d) It is one of the kinds of robots that can evolve like humans sensing the environment.
5. Consider the following statements with respect to 'Leadership Group for Industry Transition (LeadIT) 2.0'
 1. It is a collaborative effort involving countries and industry-leading companies focused on industry transition and knowledge sharing
 2. It was recently launched by India and United States of America recently
 Select the correct statement(s)
a) 1 only b) 2 only
 c) Both 1 and 2 d) Neither 1 nor 2
6. With reference to 'International Maritime Organization', consider the following statements
 1. It is the global standard-setting authority for the safety, security and environmental performance of international shipping
 2. Funding for the organization comes from contributions by Member States and voluntary donations
 3. The Assembly is the highest Governing Body of the IMO
 How many of the statement(s) given above are correct
 a) Only one b) Only two
c) All three d) None
7. 'Methotrexate' seen in news recently is a class of
 a) Pesticide
b) Anti-cancer drug
 c) Tracer gas
 d) TB vaccine
8. In the context of Indian polity, how many of the following is/are classified as part of Parliamentary Standing Committees?
 1. Committees to Enquire
 2. Committees to Scrutinise and Control
 3. Committees Relating to the Day-to-Day Business of the House
 4. House-Keeping Committees
 Select the correct answer using the code given below:
 a) Only one b) Only two
 c) Only three d) **All four**
9. Consider the following statements:
 1. An anticyclone's winds rotate clockwise in the Northern Hemisphere around a center of high pressure.
 2. Cyclones are rapid inward air circulation around a high-pressure area.
 Which of the statements given above is/are correct?
a) 1 only b) 2 only
 c) Both 1 and 2 d) Neither 1 nor 2
10. Which of the following regions of India is the natural habitat of the 'Great Indian Hornbill'?
 a) Sand deserts of northwest India
 b) Great Himalayan Range
 c) Salt marshes of western Gujarat
d) Western Ghats