



# **VAJIRAM & RAVI**

Institute for IAS Examination

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**GENERAL STUDIES - 3**

## **Civil Services (Main)**

### **Examination, 2023**

**Model Answers**

**Q.1) Faster economic growth requires increased share of the manufacturing sector in GDP, particularly of MSMEs. Comment on the present policies of the Government in this regard.**

**(10 Marks, 150 words)**

**Answer:** India has followed a unique growth trajectory. Over the past two decades, the services sector grew rapidly without a manufacturing boom, unlike other countries where manufacturing growth precedes services. The services sector's contribution to GDP has risen from 45 percent to 55 percent while manufacturing has remained largely stagnant at 15 percent in 2017 and 17 percent in 2022. The Micro, Small and Medium Enterprises (MSMEs) play an important role in the manufacturing sector of the country.

**Importance of the MSME sector for faster economic Growth:**

- contribute more than **29% to the GDP**
- responsible for **50%** of the country's **total exports**.
- accountable for **one-third of India's manufacturing output**.
- employ more than **11 crore people**, and the aim is to grow this number to 15 crore in the coming years.
- **A lower capital-output ratio** which leads to a small investment offers a good growth rate.
- job opportunities in both urban and rural parts of the country, **leading to inclusive and balanced growth**.

**The Government has taken a number of recent initiatives to support MSMEs in the country which include the following:**

- 'Make in India' initiative and the 'Atmanirbhar Bharat Abhiyaan': They have played a key role in promoting business and local manufacturing in the country, giving special thrust to Micro, Small and Medium Enterprises (MSMEs).
- One district one product: The scheme would help Micro, Small and Medium Enterprises (MSME) to produce and promote products that are unique in each district.
- Rs. 5 lakh crore **Emergency Credit Line Guarantee Scheme (ECLGS)** for business, including MSMEs.
- Access to Credit and handholding through **Start Up India, Stand Up India and the MUDRA** yojna
- Rs. 50,000 crore equity infusion through **MSME Self-Reliant India Fund**.
- New **revised criteria** for classification of MSMEs.
- Tenders for government procurement will no longer be open for global companies in projects worth up to Rs 200 crore. This will give push to domestic manufacturing units especially MSMEs. Launching of an **online Portal "Champions"** in June, 2020 to cover many aspects of e-governance including grievance redress and handholding of MSMEs.
- Inclusion of **Retail and Wholesale trades as MSMEs** w.e.f. 02nd July, 2021.
- **Non-tax benefits** extended for 3 years in case of an upward change in status of MSMEs.
- Roll out of **Raising and Accelerating MSME Performance (RAMP) programme** with an outlay of Rs. 6,000 crore over 5 years.
- Launch of **Udyam Assist Platform (UAP)** on 11.01.2023 to bring the Informal Micro Enterprises (IMEs) under the formal ambit for availing the benefit under Priority Sector Lending (PSL).
- Credit Linked Capital Subsidy and Technology Up-gradation Scheme (CLCS-TUS): One of the components under the schemes is Credit Linked Capital Subsidy (CLCS) under which capital subsidy up to Rs. 15 Lakh is provided to Micro and Small Enterprises (MSEs) for accessing modern technology.
- MSME Samadhaan Portal: Ease of filing application under Micro, Small and Medium Enterprise Development (MSMED) Act, 2006 which contains provisions of Delayed Payment to Micro and Small Enterprise (MSEs).

The MSMEs play an important role in the growth story of India as it enters the Amrit Kaal phase. They promote inclusive and balanced development and make India a global manufacturing hub. There is a need to focus on the implementation

and realising the outcomes.

**Q.2) What is the status of digitalization in the Indian economy? Examine the problems faced in this regard and suggest improvements. (10 Marks, 150 Words)**

**Answer:** The Digital Revolution in India started with the Government of India initiating the Digital India programme in July 2015 to transform India into a digitally enabled knowledge-based economy. Digitalization plays an important role in boosting growth, creating jobs, and improving productivity.

**Some of the advantages of Digital India are:**

- There is an increase in electronic transactions related to e-governance.
- An optical fibre network of 2, 74,246 km has connected over 1.15 lakh Gram Panchayats under the Bharat Net programme.
- A Common Service Center (CSC) is created under the National e-Governance Project of the Indian government which provides access for information and communication technology (ICT). Through computer and Internet access, the CSCs provide multimedia content related to e-governance, education, health, telemedicine, entertainment, and other government and private services.
- Establishment of digital villages along with well-equipped facilities such as solar lighting, LED assembly unit, sanitary napkin production unit, and Wi-Fi choupal.
- Internet data is used as a major tool for the delivery of the services and the urban internet penetration has reached 64%.

**Status of digitalization in the Indian economy:**

- **Digital payments:** As per PwC India report, UPI transactions are likely to reach 1 billion per day by 2026-27.
- **E-commerce:** The market is rapidly growing due to convenience and affordability factors, with a projected value of \$175 billion by 2025.
- **Smartphone and Internet penetration:** India currently has some 650 million smartphones along with the second-largest internet user base in the world. Hence there are many potential users for digital products and services.
- **Economic growth:** It estimated digital transformation to create \$1 trillion worth of economic value by 2025, resulting in 60 to 65 million jobs.

**Problems faced in digitalisation:**

- **Data protection:** A comprehensive law was missing. Only recently a Digital Personal Data Protection Act, 2023 was passed.
- **Digital literacy:** Lack of digital literacy reduces the acceptance of new digital products.
- **Cybersecurity:** Ransomware incidents in India have gone up by 53 per cent in 2022 over the incidents reported in the previous year, according to the CERT-In.
- **Poor digital infrastructure:** Many rural areas still lack access to high-speed internet.

**Suggested improvements:**

- Awareness generation and education of digitally illiterates. They should be taught about **Cyber hygiene**.
- Need to develop digital infrastructure such as **high-speed internet and data centers**.
- Effective implementation of the **new Data protection law**.
- Expand and improve government services online and Implement a **single-window clearance system**

With the recent focus of the government on Open Data Initiatives, Big Data and Industry 4.0, the status of digitalisation in India is poised to improve.

**Q.3) How does e-Technology help farmers in production and marketing of agricultural produce? Explain it. (10 Marks, 150 Words)**

**Answer:** Electronic technology, by harnessing real-time data, online market platforms, and precision farming methods, has enabled farmers to make well-informed choices, enhance productivity, and expand their reach into wider markets.

**Role of E-tech in agriculture:**

- **Production:**
  - **Efficient utilization of water:** Farmers can use soil moisture sensors to automatically turn irrigation systems on and off when needed. This can help counter the declining groundwater level.
  - **Monitoring of crops:** Farmers can deploy drones for continuous and real time monitoring of all types of pest attacks, hailstorms.
  - **Precision agriculture:** According to a report by the Indian Council of Agricultural Research (ICAR), precision agriculture can help farmers to increase their yields by up to 20% and reduce their input costs by up to 10%. Eg- using GPS-guided tractors to apply inputs more precisely.
  - **Agricultural extension services:** Providing access to agricultural crop information, new seed varieties etc.
  - **Environmental Monitoring:** Can help reduce pesticide use and minimize soil erosion via real time monitoring.
- **Marketing:**
  - **E-commerce and better price discovery:** can provide farmers with direct access to consumers and eliminate middlemen, hence fetching higher price. Eg- e-NAM
  - **Supply chain management:** This can help to reduce food waste and improve food safety. According to a report by the World Economic Forum, food waste can be reduced by up to 50% by using e-technology to improve supply chain management. Eg- by tracking the movement of produce from the farm to the consumer.
  - **Marketing and Promotion:** Through digital platforms and social media, farmers can promote their products directly to consumers, restaurants, and retailers.
  - **Global market access:** getting to know the trends of international prices, international market regulations and certifications.

Hence, E tech can not only help double the farm incomes but also turn the farmers into Agripreneurs. They empower farmers with data-driven insights, automation, and sustainability tools, ultimately leading to increased productivity, reduced environmental impact, and improved food security.

**Q.4) State the objectives and measures of land reforms in India. Discuss how land ceiling policy on landholding can be considered as an effective reform under economic criteria. (10 Marks, 150 Words)**

**Answer:** Land reforms means redistribution of land from the rich to the poor as well as regulation of ownership, operation, leasing, sales, and inheritance of land.

**Objectives of Land Reforms:**

- **Social Justice:** Eradicate feudalism, transfer land to the landless, and promote social and economic equality.
- **Increased Agricultural Productivity:** Allocate land for efficient farming to maximize its potential.



- **Poverty Alleviation:** Distribute land to the landless to improve their socioeconomic status and reduce rural poverty.
- **Tenancy Reforms:** Protect tenants' rights, ensure tenure security, establish fair rents, and prohibit unjust eviction.
- **Land Holdings Consolidation:** Prevent land fragmentation to enhance cultivation efficiency and agricultural productivity.

### **Measures of Land Reforms in India:**

- **Intermediary Abolition:** Abolished zamindari and feudal land tenure systems, granting land ownership to actual cultivators, eliminating exploitative intermediaries.
- **Tenancy Reforms:** Safeguarded tenants' rights, ensured tenure security, established fair rents, and prohibited arbitrary evictions.
- **Land Ceiling Rules:** Limited individual or family land ownership, redistributing surplus land to the landless and impoverished.
- **Consolidation of Land Holdings:** Reorganized fragmented land into continuous blocks, enhancing agricultural efficiency and output.

### **Land ceiling policy- considering as an effective reform under economic criteria:**

- **Equitable Land Distribution:** Limits property ownership, reducing wealth concentration, and promoting economic equality.
- **Incentives for Modern Farming:** Smaller landowners, benefiting from redistribution, invest in land, adopt modern techniques, and boost agricultural productivity.
- **Efficient Land Use:** Smaller landholders, reliant on their plots, manage them more efficiently, leading to better land use, crop rotation, and soil conservation.
- **Poverty Reduction:** Empowers landless and poor individuals with productive assets, reducing rural poverty.
- **Rural Economic Development:** Encourages economic activity in rural areas, creating jobs and improving living conditions, benefiting the overall economy.

Land ceiling and consolidation has been sporadic and patchy in India. Addressing administrative efficiency, property record accuracy, and preventing corruption and land grabbing is crucial to ensuring land ceiling regulations benefit intended beneficiaries. Nonetheless, these policies remain vital for India's economic and social justice, hinging on effective implementation and ongoing monitoring.

**Q.5) Introduce the concept of Artificial Intelligence (AI). How does AI help clinical diagnosis? Do you perceive any threat to privacy of the individual in the use of AI in the healthcare?**

**(10 Marks, 150 Words)**

**Answer:** Artificial intelligence (AI) is a discipline of computer science that focuses on developing intelligent agents—systems that can reason, learn, and make decisions on their own. AI research has given excellent solutions to a wide range of issues, from gaming to medical diagnostics.

### **AI's Role in Clinical Diagnosis:**

- **Medical Imaging:** Artificial intelligence (AI) systems can be trained to recognise disease-related patterns in medical pictures such as X-rays and MRIs, allowing for more accurate and early disease identification.
- **Predictive Models:** AI creates predictive models to estimate a patient's likelihood of developing specific diseases or problems, allowing for more personalised prevention and treatment measures.

- **Automation:** Artificial intelligence (AI) automates clinical procedures such as examining medical records and ordering tests, freeing up healthcare personnel to focus on patient care.

### **Privacy Concerns in AI Healthcare:**

- **Sensitive Data:** AI relies on large amounts of patient data for training, which may contain sensitive information, creating the risk of patient identity.
- **Data Security:** Risks include data breaches and unauthorised access to patient information via AI systems, which could lead to data theft or misuse.
- **Misuse and Hacking:** AI systems are vulnerable to hacking and misuse, which could jeopardise the integrity of patient data, resulting in false or dangerous diagnoses.

### **To address these privacy risks, several measures can be taken:**

- **Data Anonymization:** To limit the danger of patient identity, patient data used to train AI systems should be anonymized or pseudonymized.
- **Data Security Measures:** To protect patient data from breaches and unauthorised access, robust data security policies should be adopted.
- **Monitoring and Detection:** Continuous monitoring of AI systems can assist in identifying and preventing hacking attempts and misuse, hence maintaining data integrity and patient safety.

While AI has immense potential to change clinical diagnosis, privacy considerations must not be disregarded. We can ensure the ethical and secure use of AI to improve patient care and medical results by implementing strict privacy safeguards.

### **Q.6) Discuss several ways in which microorganisms can help in meeting the current fuel shortage. (10 Marks, 150 Words)**

**Answer:** Microorganisms such as bacteria, fungi, and algae are tiny life forms that hold potential to offer sustainable and eco friendly solutions to our energy demands.

### **Ways in which microorganisms can contribute in meeting the current fuel shortage**

- **Biogas:** Organic matter is broken down by Anaerobic microorganisms in the absence of oxygen to produce biogas, primarily methane (CH<sub>4</sub>). Biogas can then be used for electricity generation and as a vehicle fuel.
- **Bioethanol:** Fermentation process (using yeast) is used to convert sugars from various sources, like corn, sugarcane, or switchgrass, into bioethanol.
- **Biodiesel:** Algae can efficiently convert sunlight and carbon dioxide into lipids (oils) that can be converted into biodiesel. Algal biodiesel is considered a promising alternative to fossil fuels.
- **Advanced Biofuel Production:** Microorganisms can produce some advanced biofuels like **butanol and isobutanol** that have properties closer to gasoline and diesel.
- **Microbial Fuel Cells-** Electricity is generated directly from organic matter like wastewater using the metabolic activity of microorganisms.
- **Carbon Capture and Utilization-** Microorganisms can capture and convert carbon dioxide (CO<sub>2</sub>) emissions from industrial processes into biofuels. This can not only solve fuel shortage but also reduce greenhouse emissions.
- **Bioremediation-** Some oil eating bacteria can clean up oil spills while accumulating lipids suitable for biofuel production.
- **Hydrogen fuel-** Fermentation of biomass can also produce hydrogen gas, which is considered a clean and

efficient energy carrier.

Some microorganisms being used for the above purposes are **Algae (e.g., Chlorella and Spirulina), Bacteria (e.g., Clostridium and Escherichia coli) and Yeasts (e.g., Saccharomyces cerevisiae)**. Hence, they offer solutions to reduce not only the fuel shortage leading to higher crude prices but are also environmentally friendly.

**Q.7) Dam failures are always catastrophic, especially on the downstream side, resulting in a colossal loss of life and property. Analyze the various causes of dam failures. Give two examples of large dam failures. (10 Marks, 150 Words)**

**Answer:** Dam failure refers to the catastrophic breach of a dam structure which may result from diverse natural and anthropogenic causes. Its impact can be severe and far reaching, affecting both human lives, infrastructure and the environment. India has 5745 numbers of dams (5334 are completed and 411 are under construction). India is ranked third in the world in terms of building large dams.

### **Causes of Dam Failures**

- **Ageing Dams :** According to a UN report over 1,000 large dams in India will be roughly 50 years old in 2025 and such ageing embankments across the world pose a growing threat.
- **Structural failure:** Inadequate design, construction materials, or maintenance can lead to dam collapse.
- **Extreme weather events:** Heavy rainfall or flooding can cause dam failures, as seen in the 1979 Machchhu dam failure.
- **Geological instability:** Landslides or tectonic activity can compromise dam structures.
- **Overtopping:** Excessive water spilling over the top of a dam, often a precursor to dam failure.
- **Foundation Problems:** Weak or unstable foundation soils beneath the dam.
- **Operational Failures:** Improper operation of the dam, including inadequate release of water during periods of high inflow.

### **Examples of Large Dam failures**

- **1979 Machchhu dam failure:** Excessive rain and flooding led to the disintegration of the earthen walls of the Machchhu-2 dam in Gujarat, causing immense damage and loss of life.
- **Banqiao Dam Failure (1975):** The Banqiao Dam, part of a system of dams in Henan, China, experienced a catastrophic failure in 1975 during Typhoon Nina. The dam received excessive rainfall, and its spillways were not able to handle the inflow. The dam eventually overtopped and breached, leading to a series of downstream dam failures.

**India' Dam Safety Act 2021, and Dam Safety Rehabilitation and Improvement Project (DRIP)** provides for robust maintenance, monitoring, community preparedness to prevent catastrophic dam failures in India.

**Q.8) What is oil pollution? What are its impacts on the marine ecosystem? In what way is oil pollution particularly harmful for a country like India? (10 Marks, 150 Words)**

**Answer:** **Oil pollution** refers to the **contamination of water bodies**, specifically oceans, seas, or rivers, by oil or petroleum products. It typically occurs due to oil spills from accidents involving tankers, offshore drilling rigs, pipelines, or other oil-related activities. For example: **Mauritius Oil Spill (2020)**

### **Impacts of Oil Pollution on Marine Ecosystem**

- **Impact on Marine Biodiversity:**
  - Reduces **insulation capacity** of marine mammals. The oil coats the feathers or fur of birds and the fur of marine mammals, reducing their insulating properties and leading to **hypothermia**.

- It can also **damage the gills** of fish and other aquatic organisms, suffocating them or impairing their ability to **respire and reproduce**.
- **Destruction of Habitat:**
  - Harms **sensitive habitats** such as coral reefs, mangroves, and estuaries eg. **Sunderbans**
  - The oil can smother and kill organisms that live on or near the seabed, affecting the entire food chain and causing **long-term damage** to the **ecosystem**.
- **Disruption of Food Chain:**
  - Affects the **availability of food sources** for marine organisms eg. **Oil Spill in Red Sea(2021)**
  - **Phytoplankton**, the primary producers in the marine food chain, can be killed or inhibited from photosynthesizing due to oil contamination affecting the entire food web
- **Economic Impact:**
  - **Commercial fishing and Aquaculture Industries:** Leads to *reduced catches* and *financial losses* for fishermen.
  - **Tourism** suffers due to oil-contaminated *beaches* and *waters*

**For a country like India, oil pollution can be particularly harmful due to several reasons:**

- **Coastal Vulnerability:**
  - **Vast coastline** of over 7,500 kilometers, making it highly susceptible to oil spills and pollution.
  - Several **major ports, refineries,** and **offshore oil and gas installations,** all of which increase the risk of oil pollution incidents
- **Biodiversity Hotspots:**
  - **Coastal areas** are home to **diverse and ecologically sensitive ecosystems,** including coral reefs, mangroves, and estuaries can have long-term consequences for the **ecological balance** and the **livelihoods** of coastal communities.
- **Fishing and Aquaculture:**
  - **Fishing industry:** Oil pollution leads to the loss of fish stocks, contamination of seafood, and damage to aquaculture operations, affecting the income and food security of coastal communities.
- **Tourism and Coastal Economy:**
  - Oil spills and pollution can harm beaches, wildlife, and marine ecosystems, leading to a decline in tourism revenues and affecting the livelihoods of people employed in the tourism sector.

To **mitigate** the harmful impacts of oil pollution, preventative measures such as, **stringent regulations, improved safety protocols,** and **emergency response capabilities** are crucial. Promoting **sustainable practices,** investing in **alternative energy sources,** and raising **awareness** about the importance of environmental conservation are essential for protecting India's marine ecosystem from the detrimental effects of oil pollution.

**Q.9) Winning of 'Hearts and Minds' in terrorism affected areas is an essential step in restoring the trust of the population. Discuss the measures adopted by the Government in this respect as part of the conflict resolution in Jammu and Kashmir. (10 Marks, 150 Words)**

**Answer:** **Winning of 'Hearts and Minds'** aims to restore trust and pave the way for a **people-oriented process** for a long lasting peaceful resolution of conflict in the region. Some **important components** of **WHAM** are *building trust, providing security, respecting cultural sensitivities, delivering essential services and reconciliation and conflict resolution*. **For** example: **Kashmir**

**Measures adopted by the Govt wrt conflict resolution in Jammu and Kashmir:**

- Political Outreach
  - Abrogation of **Article 370** to integrate J&K fully with India
  - Elections enabling local participation in delivering good governance
- Economic Development
  - Creating employment and better infrastructure in transportation, health etc. For example: **PM's development package for J&K**
- Youth engagement & Education
  - Capacity building and youth employment eg.: **Project Himayat**
  - Empowerment of J&K women Eg: **Project Umeed**
- Security measures with humanitarian approach
  - A shift towards a **more humane approach** in counter-terrorism operations, minimizing civilian casualties.
  - Promoting **community policing** and involving local youth in maintaining law and order.
- Social welfare initiatives
  - **Khelo India centres:** 94 such centers in J&K which stand at around 10% of all India centers.
- Dialogue and Conflict resolution
  - Initiating **dialogue with various stakeholders**, including separatist groups, to find peaceful solutions to long-standing issues.
  - Encouraging **cross-border dialogue with Pakistan** to reduce tensions and find common ground.
- Cultural Preservation & Promotion
  - Preserving and promoting the rich cultural heritage of Jammu and Kashmir to foster a sense of identity and pride.
  - Celebrating local festivals and encouraging cultural exchanges

**WHAM strategy seems to be a success as observed by following events**

- **Seerat Naaz**, a five-year-old, requests the PM for reforms in her school.
- **Faizan Gul of Global Youth Foundation, Baramulla** wants to participate in the next polls though his parents have never voted.
- **Kashmiri footballer Majid Khan** left LeT after mother's plea and Indian army pressed no charges against him

The government's multifaceted measures aim to restore trust and pave the way for a peaceful resolution of the conflict in the region. Building long-lasting peace remains a complex challenge, but these initiatives represent important steps in the right direction.

**Q.10) The use of unmanned aerial vehicles(UAVs) by our adversaries across the borders to ferry arms/ammunitions, drugs, etc., is a serious threat to the internal security. Comment on the measures being taken to tackle this threat. (10 Marks, 150 Words)**

**Answer:** India's proximity to the notorious Golden crescent and Golden triangle makes it naturally vulnerable from the amenable forces and the emergence of new technology like unmanned aerial vehicles( UAVs) makes it even more challenging for the security agencies to manage borders and secure the internal security of our Country.

**UAVs pose a serious threat to Internal Security of India in the following ways:**

- There have been several instances where UAVs have been used by the anti-national elements to smuggle drugs and arms along the Indo-Pakistan border.

- Recently, a UAV was weaponized to attack the Jammu Indian Air Force Base.
- UAVs can be weaponized to target critical assets like Parliament, Rashtrapati bhavan, Nuclear instalments, Oil rigs etc. For example, Houthi rebels used weaponized UAVs to attack the Oil rigs of Saudi Arabia.

**To Counter this evolving threat from the use of UAVs, Indian government has been proactive in devising plans at various levels :**

- **Legal:** Government has formulated National Counter rogue drone guidelines 2019 to provide a legal framework to deal with the emerging threats posed by UAVs.
- **Institutional:** MHA has established the Anti Rogue Drone Technology Committee (ARDTC) under supervision of DG BSF with the mandate to evaluate the technology available to counter rogue drones and certify its effectiveness in dealing with rogue drones.
- **Technological:** DRDO has been developing Counter Drone systems which can detect, track and identify airborne drones using multiple sensors. They can transfer the information to associated systems and enable counter techniques to deny them the intended operation (soft kill) and/or destroy them (hard kill).
- **Intelligence:** The security agencies along borders conduct detailed vulnerability mapping along the border to deploy additional surveillance vehicles and special equipment. They have installed integrated surveillance technology equipped with cameras, sensors, and alarms with a command-and-control system at the International Border.
- **Operational:** The Border security agencies conduct round-the-clock surveillance through patrolling, checkpoints, and observation posts.
- **Federal Aspect:** MHA is promoting Border States to develop their own Counter Drone Policies.
- **Information, Education and communication:** The general public in border areas have been sensitised and made aware of such UAV/Drone activities, their likely security implications
- **International Cooperation:** India is actively Collaborating with Israel in developing its Anti Drone Technological ecosystem .

With the emergence of complex technologies, securing our borders and internal security will only increase and only through strong institutional development and coordination ( both Technological and Security Agencies) will India be able to effectively counter the threat.

**Q.11) Most of the unemployment in India is structural in nature. Examine the methodology adopted to compute unemployment in the country and suggest improvements. (15 Marks, 250 Words)**

**Answer:** Structural unemployment is a category of unemployment caused by differences between the skills possessed by the unemployed population and the jobs available in the market. Structural unemployment is a long-lasting condition that is caused by fundamental changes in the economy. According to ILO, 53% of businesses in India are not able to recruit due to the skill Gap. This implies that most of the unemployment in India is structural in Nature.

**Reason for structural unemployment**

- **Disguised unemployment in agriculture:** Most of the people involved in agriculture do not have adequate skill to take over jobs in another sector.
- **Poverty:** Lack of access to education and vocational skill.
- **The fast emergence of new and disruptive technology:** Evolution of AI, Block Chain, Big Data analytics, Quantum computing, etc. demand exceptionally different skill sets.
- **Concentration of Employment opportunities:** More than 75% of the non-agricultural jobs are in urban areas which hold around 35% of the population only.
- **Health status of the demography:** 14% of India's population is undernourished, according to 'The State of



Food Security and Nutrition in the World, 2020' report, this impacts cognitive ability and economic productivity.

- **Weak industry-academia interlinkages** to introduce job oriented courses. This means that industries and academic institutions do not collaborate on what skill sets to impart to the students so that they get the required skill set.

### **Measurement of Unemployment**

The extent of unemployment is measured by three different concepts used by the National Sample Survey Organization.

- **Current daily status:** It is calculated in the number of days or person years. It indicates the number of people who did not find work for one or more days in a week. This is considered as the most comprehensive measure of unemployment.
- **Current weekly status:** It is the number of people who did not find even an hour of work in a week.
- **Usual status or chronic unemployment:** It is the number of people who remained unemployed for the major part of the year.

**Method used:** The methodology adopted to compute unemployment in India involves the implementation of two major surveys:

- **Periodic Labour Force Survey (PLFS):** Conducted by the National Statistics Office (NSO), this survey provides annual and quarterly estimates of employment and unemployment characteristics. It measures short-term dynamics in labour force participation and employment status in urban areas, and key parameters like labour force participation rate(LFPR).
- **All-India Quarterly Establishment-based Employment Survey (AQEES):** Conducted by the Labour Bureau, this survey offers quarterly updates on employment in both organized and unorganized sectors of selected industries. It comprises the Quarterly Employment Survey (QES) for establishments employing 10 or more workers and the Area Frame Establishment Survey (AFES) for those employing 9 or less workers.

### **Issues with present method:**

- **Underreporting of Unemployment:** Many individuals, especially in the informal sector, are not captured in these surveys.
- **Inadequate Focus on Rural Areas:** The PLFS predominantly focuses on urban areas for short-term analysis.
- **Dynamic Nature of Employment:** The nature of employment is evolving with the rise of gig economy and freelance work.
- Narrow definition of unemployment, Underemployed not accounted.
- The sample size of the survey is very small in comparison with the real population size.

### **Suggestions:**

- **Enhancing Survey Frequency:** Conducting more frequent surveys, especially in dynamic sectors, would provide more timely and relevant data for policy-making.
- **Skill Development:** Assessing the skills possessed by the unemployed and comparing them with the demands of the job market can help in addressing structural unemployment.
- **Engagement with Stakeholders:** Collaborating with industry associations, educational institutions, and vocational training providers can facilitate a better understanding of the skill requirements in various sectors.
- **Use of Technology:** Implementing advanced data analytics and technology-driven tools for data collection, processing, and analysis can enhance the accuracy and efficiency of surveys.
- **Example, Labor Market Information System (LMIS)**
- Promote Entrepreneurship in MSMEs



Thus, it is imperative that certain structural reforms will be needed which will have more focus on Manufacturing and skill development to cater this issue related with the structural employment as India will have highest demographic dividend in 2042.

**Q.12) Distinguish between ‘care economy’ and ‘monetized economy’. How can care economy be brought into monetized economy through women empowerment? (15 Marks, 250 Words)**

**Answer:** The present GDP of India is \$3.7trillion but this figure do not include ‘Care economy’ which remain mostly unmonetized till now. In India, a 2% GDP investment in the care economy could potentially generate 11 million new jobs of which 35% will be women.

**‘Care Economy’ and ‘Monetized Economy’**

The **care economy** refers to unpaid and informal caregiving work, often performed by women within households. It involves child care, elder care, education, healthcare, domestic services, etc.

The **monetized economy** primarily revolves around buying and selling goods and services with money as the medium of exchange. It is driven by profit and market forces.

Since majority of unmonetized care economy is occupied by the women empowerment of women is necessary for bringing it in monetized fold.

**Measures to bring care economy in monetized economy**

- **Recognize unpaid Work:** Recognizing the economic value of unpaid care work.
- **Equal Pay for Equal Work:** Irrespective of whether it falls under the care or monetized economy.
- **Social Protection Measures:** Implementing policies like paid parental leave, Work from home (WFH) culture, subsidized healthcare, and pensions, which support women in their dual roles as caregivers and workers.
- **Supporting Women’s Employment:** Providing opportunities to participate in the formal labor force through skill development, training, education, and policies that enable work-family balance.
- **Promoting Women’s Entrepreneurship:** Encouraging and supporting women to start and grow businesses, especially in sectors related to care services.
- **Income-Generating Activities through Self-Help Groups.**
- **Elderly and Healthcare Services:** Creating job opportunities in the healthcare sector, including nursing, geriatric care, and other health-related services.
- **Quality and Accessible Childcare Services:** Establishing affordable and high-quality childcare services allows women to participate in the labor force without compromising their care responsibilities.
- **Cultural Shift:** Challenging gender stereotypes, and emphasizing the importance of both paid and unpaid work.

As India wants to become developed nation by 2047, contribution of half of population must be brought in the mainstream economy. This will also help us achieve SDG 5 (Gender Equality) too.

**Q.13) Explain the changes in cropping pattern in India in the context of changes in consumption pattern and marketing conditions. (15 Marks, 250 Words)**

**Answer:** Indian Agriculture is dominated by food crops. Amongst them, greater focus is on staple food grain such as rice and wheat rather than the high value crops such as spices, fiber, fruits, sugarcane, etc. Recently, due to a shift in consumption demand and market forces, this cropping pattern is also shifting correspondingly.

**Changing consumption pattern impacting cropping pattern**

- **Demand of protein rich food increase:** Led to rise of soyabean cultivation.
- **Demand for meat and dairy increasing:** Shift towards commercial fodder crop cultivation.
- **Preference of chemical free food:** Rise in area under organic and natural farming.
- **Push for more nutritious food:** Increasing area under horticulture crops.
- **Demand for exotic food:** Growth of hydroponics, and aeroponics crops.

**Changing Market condition influencing cropping pattern**

- **Push for export:** increasing cropping of high value crops.
- **Food processing product:** Rise of Farmer Producer Organization, co-operative pushing cropping pattern away from subsistence towards commercial one.
- **Cobweb phenomena:** Market demand in one year influences cropping pattern of next year especially with respect to TOP crops
- **Subsidies:** cropping pattern inclined towards 24 crops under Minimum Support Price.
- **E-market place:** Farmer now getting connected with the nation-wide market cropping pattern now aligning with the broader market forces rather than limiting to local demand.
- **Contract Farming and Value Chains:** Contract farming arrangements with agribusiness firms have encouraged farmers to shift towards crops with assured markets. This often involves crops like cotton, sugarcane, and certain horticultural products.

According to Ashok Dalwai committee report, to double the farmer income, it is necessary to align the cropping pattern according to the consumption and the market condition along with the adoption of sustainable and resilient agriculture practices.

**Q.14) What are the direct and indirect subsidies provided to the farm sector in India? Discuss the issues raised by the World Trade Organization(WTO) in relation to agricultural subsidies.**

**(15 Marks, 250 Words)**

**Answer:** A subsidy is defined as a form of financial assistance paid to an economic sector (institution, business or individual) to achieve certain policy objectives. Both Central and State governments direct and indirect subsidies to support agricultural production and alleviate the financial burdens on farmers.

**Direct subsidies provided to farm sector in India:** Those subsidies which involve an actual payment of funds toward a particular individual, group, or industry. These subsidies are delivered in the form of cash subsidies to the consumers. The beneficiary purchases the commodity at the market price. The following are the example of Direct Subsidies in India:

- **Subsidies in the form of direct cash transfer:** Here the cash is given to farmers directly.
  - **For example,** PM Kisan Samman Nidhi Scheme under which support of Rs.6000/- per year is provided to all land holding farmer families across the country, irrespective of land size, in three equal instalments.
- **Subsidies in the form of farm loan waiver:** Farm loans are loans taken from the banks by the farmers for agriculture requisites and production. In a farm loan waiver scheme, the Centre or the state Government repays the loan to the banks on behalf of the farmers, simply by using public money collected in the form of taxes.

**Indirect subsidies provided to farm sector in India:** Those subsidies which are provided in the form of discounts to lower the price of a particular commodity. It does not include direct cash payments to the beneficiary. It is intended to increase the consumption of a particular commodity by lowering its price in the market. The following are the example

of Indirect Subsidies in India:

- **Minimum Support Price (MSP):** The government provides a price guarantee to farmers for certain crops, such as wheat, rice, and sugarcane, by purchasing their produce at a fixed minimum support price.
- **Fertiliser Subsidies:** Subsidies are granted to make fertilisers more affordable for farmers, promoting the use of essential nutrients in agriculture.
  - **For Example,** the government subsidised urea fertiliser to ensure its affordability for farmers.
- **Subsidies in the irrigation sector:** Farmers receive subsidies for the installation of irrigation systems like drip irrigation, sprinklers, and canals to enhance water efficiency in agriculture.
  - **For Example,** the Pradhan Mantri Krishi Sinchai Yojana (PMKSY) provides subsidies for irrigation projects.
- **Interest rate Subsidies:** Farmers often receive loans at reduced interest rates, making credit more accessible and affordable for agricultural activities.
  - **For Example,** the Kisan Credit Card scheme offers affordable credit to farmers.
- **Crop Insurance Subsidies:** Subsidies are given to reduce the premium cost for crop insurance, protecting farmers from losses due to adverse weather or other factors.
  - **For Example,** Pradhan Mantri Fasal Bima Yojana (PMFBY) offers subsidised crop insurance to Indian farmers.
- **Electricity Subsidies:** Many states in India provide subsidised electricity to farmers for irrigation, reducing the cost of water for agricultural purposes.
- **Infrastructure Subsidy:** Subsidies are allocated for the construction and maintenance of rural infrastructure like roads, cold storage facilities, and market yards.
  - **For Example:** Subsidised loans for setting up cold storage units.
- **Research and Extension Services:** The government invests in research and extension services to improve agricultural practices, and these services indirectly benefit farmers.

**Following issues have been raised by the World Trade Organization(WTO) in relation to agricultural subsidies in India:**

- **Market Distortion:** The WTO argues that agricultural subsidies can distort international markets. Subsidies, such as the Minimum Support Price (MSP) provided by India, can lead to underpricing of Indian agricultural products in the international market. This can create an unfair competition environment in the global agricultural trade system.
- **Trade Barriers:** Subsidies can act as trade barriers, making it difficult for unsubsidized foreign producers to compete in the market where subsidised goods are sold.
- **Overproduction:** Subsidies can lead to overproduction of certain crops, which can further distort the market and lead to wastage.
- **Environmental Impact:** Overuse of fertilisers and water for irrigation, encouraged by subsidies, can lead to environmental degradation.
- **Inequity:** The benefits of subsidies often go to larger farmers rather than small-scale farmers who need them the most.

India's farm sector is heavily subsidised, aiming to support the livelihoods of millions of farmers and ensure food security. However, these subsidies have been a topic of dispute within the WTO. Addressing this issue effectively is essential to promote a fair and equitable global agricultural trade system.

**Q.15) The adoption of electric vehicles is rapidly growing worldwide. How do electric vehicles contribute to reducing carbon emissions and what are the key benefits they offer compared to traditional combustion engine vehicles? (15 Marks, 250 Words)**

**Answer:** Electric vehicles (EVs) are an important part of meeting global goals on climate change. They feature prominently in mitigation pathways that limit warming to well-below 2C or 1.5C, which would be inline with the Paris Agreement's targets.

### **The role of electric vehicles in reducing carbon emissions and combating climate change:**

- **Lower greenhouse gas emission:** Unlike conventional gasoline or diesel-powered vehicles, EVs produce lower or zero tailpipe emissions, thereby mitigating climate change.
- **Lower Lifecycle Emissions:** Over their lifetime, EVs emit considerably less carbon dioxide compared to conventional vehicles. Even when considering the emissions from electricity generation, the average EV produces far less emissions over its lifetime than a conventional vehicle.
- **Help in the transition to renewable energy:** The environmental benefits of electric vehicles are further amplified by the transition to renewable energy sources. As the electricity grid becomes cleaner, with a growing share of wind, solar, and other renewable sources, the carbon footprint of EVs decreases significantly.
- **Energy efficiency:** Electric vehicles are known for their superior energy efficiency compared to internal combustion engine vehicles. Electric motors boast high-energy conversion rates, typically exceeding 90%, while combustion engines struggle with lower efficiency levels.
- **Air quality improvement:** One of the immediate benefits of electric vehicles is their positive impact on air quality, particularly in densely populated urban areas. By producing zero tailpipe emissions, EVs help alleviate the problem of local pollution, which poses significant health risks.

### **Benefits offer by electric vehicles as compared to traditional combustion engine vehicles:**

- **Lower carbon emission:** EVs are responsible for considerably lower emissions over their lifetime than conventional (internal combustion engine) vehicles.
- **Can Lower the import of crude oil:** India depends on imports for approximately 85% of its domestic oil consumption, and spends a third of its total import values on crude oil alone. If electric vehicles occupy 30% share in new vehicle sales by 2030, India's oil import bills could reduce by 15% by around INR 1.1 lakh crores in 2030 alone.
- **Smooth and Quiet Operation:** EVs are well known for running smoothly and silently. As they use an electric engine instead of an exhaust system, they naturally operate with less noise pollution, whilst also having a smoother acceleration and deceleration.
- **Lower Operating Costs:** It is predicted that consumers will spend less on operational expenses for EVs, such as paying for electricity and repair/maintenance
- **Better Handling and Comfort:** Their lower centre of gravity provides better handling, comfort, and responsiveness.

Electric vehicles have emerged as a powerful tool in the global fight against carbon emissions and climate change. By reducing greenhouse gas emissions, leveraging renewable energy sources, improving energy efficiency, and enhancing air quality, EVs are revolutionising the transportation landscape.

**Q.16) What is the main task of India's third moon mission which could not be achieved in its earlier mission? List the countries that have achieved this task. Introduce the subsystems in the spacecraft launched and explain the role of the 'Virtual Launch Control Centre' at the Vikram Sarabhai Space Centre which contributed to the successful launch from Sriharikota. (15 Marks, 250 Words)**

**Answer:** Chandrayaan-3 is India's ambitious lunar mission aimed at achieving a soft landing on the Moon's surface. This mission represents India's determined effort to showcase its proficiency in lunar exploration and demonstrate its

capabilities in executing a precise soft landing on the lunar terrain. Like other countries (USA, China, and Russia) now India has also achieved the task of a successful soft landing on the Moon.

**The main task of India's third moon mission which could not be achieved in its earlier mission:**

- **To demonstrate India's capability to successfully execute a soft landing on the Moon:** In Chandrayaan-2, the lander named Vikram was intended to make a soft landing on the Moon, but it encountered difficulties during its descent in September 2019 and ultimately crash-landed. As a result, the rover Pragyan, which was housed within Vikram, could not be deployed for surface exploration.
- **Roving on the lunar surface** especially at the moon's south pole.
- To **conduct in-situ scientific experiments.**
- For **developing and demonstrating new technologies** required for Interplanetary missions.

**The countries that have achieved this task are:**

- **United States:** NASA's Apollo program conducted six successful manned lunar landings between 1969 and 1972 and conducted scientific experiments.
- **Russia:** The Soviet Union achieved several successful soft landings on the Moon using robotic spacecraft.
- **China:** China's Chang'e program has successfully achieved soft landings on the Moon with multiple missions.

**The spacecraft carried following subsystem:**

- **Radio Anatomy of Moon Bound Hypersensitive ionosphere and Atmosphere (RAMBHA):** To measure the near surface plasma (ions and electrons) density and its changes with time.
- **Chandra's Surface Thermo Physical Experiment (ChaSTE):** To carry out the measurements of thermal properties of the lunar surface near the polar region.
- **Instrument for Lunar Seismic Activity (ILSA):** To measure seismicity around the landing site and delineate the structure of the lunar crust and mantle.
- **Laser Retroreflector Array (LRA) Rover:** It is a passive experiment to understand the dynamics of the Moon system.
- **Alpha Particle X-Ray Spectrometer (APXS):** To determine the elemental composition (Mg, Al, Si, K, Ca, Ti, Fe) of Lunar soil and rocks around the lunar landing site.
- **Laser Induced Breakdown Spectroscopy (LIBS) Propulsion Module:** Qualitative and quantitative elemental analysis & to derive the chemical Composition and infer mineralogical composition to further our understanding of Lunar-surface.

**Virtual Launch Control Centre' at the Vikram Sarabhai Space Centre contributed to the successful launch of Chandrayaan 3 in the following way:**

- The facility allowed the Indian Space Research Organisation (ISRO) to remotely carry out system checkouts on the launch vehicle prior to a mission.
- System check-outs, including those of the electronics, actuators, and commands, will be carried out from the VLCC to make sure that they are operating properly.
- The VSSC is ISRO's lead unit for launch vehicles and is responsible for the design and development of the LVM3 (formerly GSLV Mk-III) launch vehicle.

The Chandrayaan-3 Mission's accomplishment is a testament to ISRO's talents and India's growth in space technology. The knowledge obtained from this mission will assist future launches, including Shukrayaan, Gaganyaan, and Aditya-L1. It will also bolster the confidence of Indian youth and space startups, helping India reach new heights in the Amrit Kaal in 2047.



**Q.17) Comment on the National Wetland Conservation Programme initiated by the Government of India and name a few India's wetlands of international importance included in the Ramsar Sites. (15 Marks, 250 Words)**

**Answer:** The National Wetland Conservation Programme (NWCP) was launched in 1985, it seeks to address the mounting threats to these fragile wetland ecosystems and promote their conservation. Furthermore, it aligns with international efforts to protect wetlands, including designating certain sites as Ramsar Sites, signifying their global significance.

**The key objectives of NWCP includes:**

- **Identification and Assessment:** The program involves the identification and delineation of wetlands across India. This process includes surveys and scientific assessments to categorise wetlands based on their ecological, hydrological, and socio-economic significance.
- **Conservation and Management:** Once identified, the wetlands are subjected to conservation and management measures to prevent degradation. These actions include habitat restoration, controlling pollution, and managing water resources sustainably.
- **Capacity Building:** The program emphasises capacity building at the local, state, and national levels. Training and awareness programs are conducted to involve local communities and stakeholders in wetland conservation efforts.
- **Research and Monitoring:** Ongoing research and monitoring activities are crucial for understanding the dynamic nature of wetlands and assessing the effectiveness of conservation measures.
- **Legal Framework:** The NWCP supports the development and enforcement of legal and policy frameworks for wetland conservation and protection.

**Some of the wetlands of international importance included in the Ramsar Sites in India are:**

- **Chilika Lake, Odisha:** Chilika Lake is the largest coastal lagoon in India and a crucial stopover point for migratory birds on the East Asia-Australasia Flyway. It supports a rich biodiversity of flora and fauna, including the Irrawaddy dolphin.
- **Sundarbans, West Bengal:** The Sundarbans mangrove forest is home to the Bengal tiger and numerous other endangered species. It serves as a buffer against coastal erosion and tidal surges while providing livelihoods for local communities.
- **Keoladeo National Park, Rajasthan:** Formerly known as Bharatpur Bird Sanctuary, this wetland is a UNESCO World Heritage Site and a haven for migratory birds, particularly waterfowl and waders. It is included in the **Montreux record**.
- **Loktak Lake, Manipur:** Loktak Lake is known for its unique floating Phumdis (massive floating islands). It supports a diverse range of aquatic life and is home to the endangered Manipur brow-antlered deer (Sangai deer). It is included in the **Montreux record**.
- **Kaziranga National Park, Assam:** While primarily renowned for its population of one-horned rhinoceroses, Kaziranga National Park also features significant wetland ecosystems.
- **Bhitarkanika Mangroves, Odisha:** This region harbours a unique biodiversity, including saltwater crocodiles, a variety of fish species, and numerous bird species.

These Ramsar Sites in India are not only biodiversity hotspots but also play a vital role in regulating local and global climate, maintaining hydrological cycles, and supporting the livelihoods of communities residing in their vicinity. The designation of Ramsar Sites further emphasises the international importance of Indian wetlands. However, continuous monitoring, research, and community engagement are necessary to ensure the long-term protection and sustainable management of these wetlands, not only for the benefit of India but also for the global environment and biodiversity.

**Q.18) The Intergovernmental Panel on Climate Change(IPCC) has predicted a global sea level rise of about one metre by AD 2100. What would be its impact in India and the other countries in the Indian Ocean region? (15 Marks, 250 Words)**

**Answer:** The projection of a one-meter sea level rise by AD 2100, as foreseen by IPCC, looms over the Indian Ocean region poses challenges from Coastal flooding to displacement of communities, impending crisis demands a comprehensive exploration of its far reaching implications.

**The potential impact of global sea level rise on India and other countries include:**

- **Coastal Erosion and Increased Flooding:** Rising sea levels will lead to the loss of beaches, shorelines, and land along the coast.
- **Saline Intrusion:** Rising sea levels can lead to the intrusion of saltwater into freshwater sources in coastal regions, affecting drinking water supplies and agriculture, impacting food security and livelihoods.
- **Loss of Biodiversity:** Coastal ecosystems, including mangroves and coral reefs, will be threatened as they face submergence. These ecosystems are vital for biodiversity, fishery resources, and protection against storm surges.
- **Economic Impact:** Sea level rise can disrupt maritime activities, including shipping and fishing. Also, the cost of adapting to sea level rise through infrastructure improvements and coastal defenses will be substantial.
- **Displacement and Migration:** The loss of habitable land along the coast and increased vulnerability to extreme events may force communities to migrate inland or to other regions. This could lead to conflicts over resources and create challenges for urban planning and housing.
- **National Security Concerns:** Displacement and resource scarcity could potentially lead to conflicts and security concerns.

**To mitigate these impacts, countries in the Indian Ocean region will need to adopt comprehensive strategies that include:**

- **Reducing Greenhouse Gas Emissions:** Measures to slow the rate of sea level rise in the long term.
  - For example **Carbon Capture and Sequestration**
- **Adaptation Measures:** Building seawalls, enhancing natural defenses like mangroves, and improving early warning systems.
  - For example, **Great Garuda Seawall** by Indonesia.
- **Sustainable Development:** Encouraging sustainable coastal development and land-use planning.
  - For example, **National Coastal Mission**.
- **International Collaboration:** Collaboration to address transboundary challenges and share knowledge and resources.
  - For example, **UN Framework Convention on Climate Change ( UNFCCC)**.

A one-meter sea level rise have multifaceted impacts, requiring coordinated efforts at the national and international levels, to adapt and mitigate these challenges. In this regard, following recommendations of **IPCC Assessment Report** can be a good step for the world.

**Q.19) What are the internal security challenges being faced by India? Give out the role of Central Intelligence and Investigative Agencies tasked to counter such threats. (15 Marks, 250 Words)**

**Answer: Internal security** refers to the measures and actions taken by a government or a nation to safeguard its territory, citizens, institutions, and resources from threats, risks, and challenges that originate within its borders.



**Internal Security Challenges:**

- Secessionist & separatist movements (e.g., J&K, North East, Punjab).
- Left-wing extremism (LWE) in 11 states.
- Caste crimes, religious conflicts, communal tensions.
- Trans-border illegal immigration (Bangladesh, Myanmar) causing conflicts.
- Challenges that do not see boundaries:
  - Terrorism (State & non-state)
  - Organized Crime (Drugs, trafficking)
  - Cybersecurity (Infrastructure, privacy)

**Role of Investigating Agencies in addressing these Internal Security threats:**

- **Terrorism:** Central Intelligence and Investigative Agencies are pivotal in detecting, preventing, and mitigating terrorist activities.
  - **NIA:** Deal with the investigation of crimes.
  - **Intelligence Bureau:** An apex intelligence body that collects and collates information within the country and also executes counter intelligence and counter-terrorism operations.
  - **Research and Analysis Wing (RAW):** Conducts counter-terrorism operations
  - **National Intelligence Grid (NATGRID):** Using ICT, track down suspected terrorists and prevent terrorist attacks.
  - **National Counter-Terrorism Center (NCTC):** Coordinate all counter-terrorism measures.
- **Naxalism/Maoism**
  - Central agencies provides assistance in training, modernization and upgradation of the State Police and their Intelligence apparatus
  - Sharing of Intelligence;
  - Facilitating inter-State coordination;
- **Insurgency:** Intelligence agencies, **RAW and IB**, in coordination with the military's intelligence units, play an integral role in surveillance, counter-insurgency operations, and crisis management.
  - The **National Security Guard (NSG)** leads counter-terrorism operations, while the **Central Reserve Police Force (CRPF)** assists in maintaining law and order.
- **Border Security : The Border Security Force (BSF), Assam Rifles, and other paramilitary forces** work with intelligence agencies to fortify borders, combat smuggling, and infiltrations.
  - **Border Protection Grid:** To be set up in Indian states bordering Bangladesh.
- **Cyber Threats:** Cyber Crime Units and specialized cyber cells focus on combating cybercrime,
  - **National Critical Information Infrastructure Protection Centre (NCIIPC)** to safeguard the Critical infrastructure.
- **Counterintelligence: Intelligence Bureau and RAW** monitor and counter espionage and foreign intelligence threats.
- **Economic Crimes: Enforcement Directorate(ED) and Central Bureau of Intelligence (CBI)** investigate and prosecute economic crimes and corruption cases.
  - Example, scandals like **Vyapam scam** were exposed.

Central intelligence and investigative agencies, along with state police forces and armed forces, collaborate to address these multifaceted internal security threats and maintain the country's security and stability which is important to achieve the **goal of Developed Bharat by 2047.**

**Q.20) Give out the major sources of terror funding in India and efforts being made to curtail these sources. In the light of this, also discuss the aim and objective of the ' No Money for Terror [NMFT]' Conference recently held at New Delhi in November 2022. (15 Marks, 250 Words)**

**Answer:** Terrorism is among the biggest threats to international peace and security. However, the financing of such activities is what keeps them alive. The NMFT is one such initiative which aims to curb their finances.

**Major sources of terror funding in India:**

- **Unlawful Activities:** Involvement in illegal activities such as drug trafficking, extortion, kidnapping, and smuggling.
- **Donations:** Contributions from sympathetic individuals and organisations
- **Proxy organisations:** Funding from non-profit or charitable institutions which are put up as fronts.
- **Organised crime:** Partnership with criminal organisations engaged in drug trafficking, narcotics trade, and smuggling of weapons, etc.
- **Fake Currency Network:** Manufacturing counterfeit currency.
- **Hawala Operations:** charge a fees for transfer of funds through an informal systems
- **Use of digital assets:** Such as cryptocurrencies.

**India's strategy against the financing of terrorism is based on these six pillars:**

- **Strengthening the Legislative and Technological Framework-** Amendment of Unlawful activities prevention act and strengthening National Intelligence Agency
- Creation of a **Comprehensive Monitoring Framework with Intelligence and security agencies** of Centre and States.
- A **Terror Funding and Fake Currency (TFFC) Cell** has been constituted in National Investigation Agency (NIA)
- Actionable intelligence sharing mechanism and strengthening of the investigation and police operations like the **Financial Intelligence Unit and Directorate of Revenue Monitoring** etc.
- Provision for **confiscation of property under UAPA.**
- Prevent misuse of legal entities and new technologies, such as through the implementation of **UN Security Council resolutions and FATF recommendations.**

**The agenda for the NMFT 2022 includes:**

- Discussion on preventing the use of **virtual assets and crowdfunding** platforms by terrorist entities, their use of the dark web,
- Disrupting the **links between terror financing** and legitimate economic activities, and **payment intermediaries** - misuse of non-profit organisations and non-financial businesses
- Focus on the challenges faced by investigation agencies while probing terror financing crimes, the sharing of information among financial intelligence units,

There is a need for cooperation among all such as intelligence agencies with strategies of Trace, Target and Terminate to be adopted to tackle economic crimes for better standardisation of structures to tackle the new terrorist. There should be no exceptions and excuses and India should move consistently to further build this paradigm for a safer world.

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