



GENERAL STUDIES (P) 2025 – Test – 01

1. A

Ladakh is home to several indigenous tribes, each with its own distinct culture and traditions. Key tribes include the Balti, Beda, Bot (Boto), Brokpa (Drokpa, Dard, Shin), Changpa, Garra, Mon, and Purigpa. It's not recognized as having any Particularly Vulnerable Tribal Groups (PVTGs). The official list of PVTGs, which are a subset of Scheduled Tribes, does not include any groups from Ladakh.

2. C

3. C The E-waste (Management) Rules, 2022 in India, for example, include a floor price for EPR certificates. This means producers must purchase these certificates from registered recyclers at a predetermined minimum price to demonstrate their responsibility for managing the end-of-life of their products.

4. A

3rd option is related to e-waste leads air pollution. Open burning, a dangerous method that releases toxic substances into the air and contaminates the surrounding environment. Other major air pollution due to e-waste are Methane and Carbon Dioxide when e-waste in landfills decomposes, producing greenhouse gases like methane and carbon dioxide, which contribute to climate change.

5. D

6. B

The Permanent Indus Commission (PIC) is a bilateral body established under the Indus Waters Treaty (IWT) between India and Pakistan. Its primary purpose is to implement and manage the provisions of the treaty, which governs the sharing of Indus River waters. The commission facilitates cooperation, addresses issues concerning water use, and ensures the treaty's objectives are met. The Indus Waters Treaty was signed in 1960, brokered by the World Bank, and has been a cornerstone of cooperation between India and Pakistan despite periods of strained relations.

The treaty allocates the western rivers (Indus, Jhelum, and Chenab) to Pakistan and the eastern rivers (Ravi, Beas, and Sutlej) to India.

However, India also has some rights to use the western rivers for specific purposes, and Pakistan has similar rights regarding the eastern rivers. Such as small run-off river hydro project, limited use for agriculture and domestic purpose.

7.c

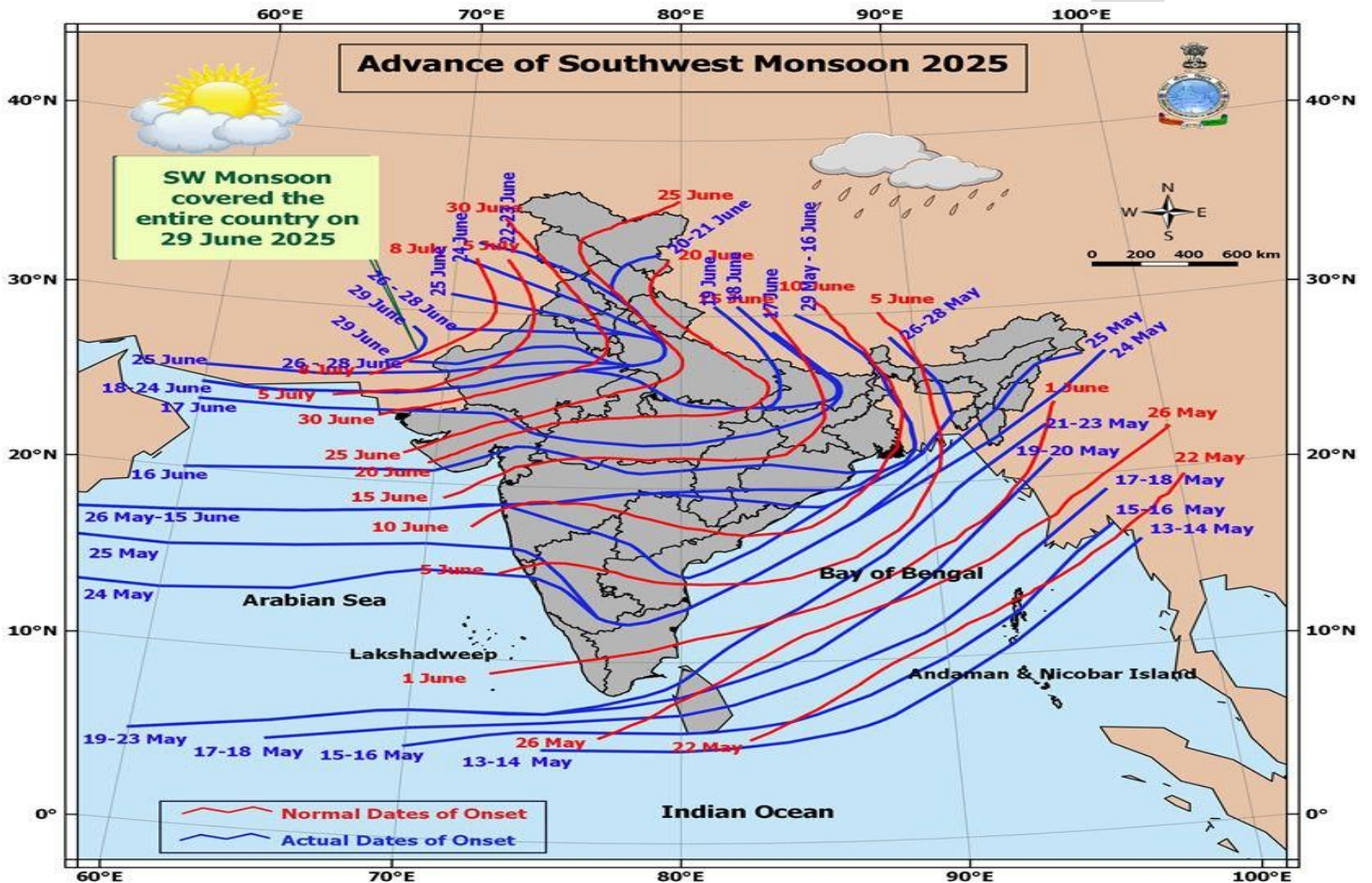
The Beas River has several tributaries, both major and minor. Key tributaries include the Parbati, Uhl, Tirthan, Sainj, and Chakki rivers. In addition to these, other notable tributaries include Banganga, Gaj, Luni, and Suketi rivers. The Beas also receives water from smaller streams like Solang, Manalsu, Sujoin, Phojal, and Sarvati streams. It is a river in Himachal Pradesh and Punjab states, northwestern India. It is one of the five rivers that give the Punjab ("Five Rivers") its name. The Beas River was the approximate eastern limit of Alexander the Great's invasion of India in 326 BC.

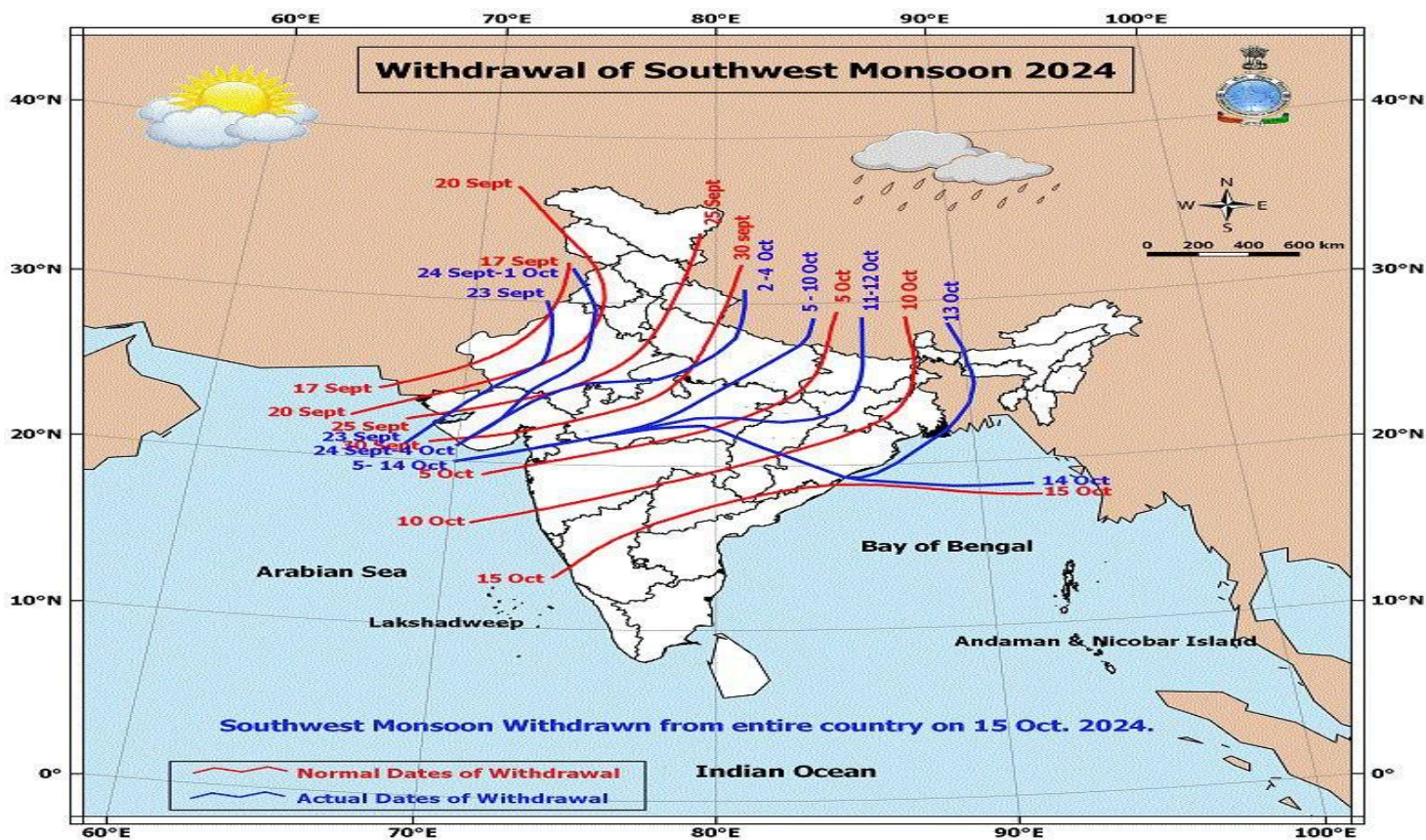


It rises at an elevation of 14,308 feet (4,361 metres) at Rohtang Pass in the western Himalayas, in central Himachal Pradesh.

From there it flows south through the Kullu Valley, receiving tributaries from the flanking mountains, and then turns west to flow past Mandi into the Kangra Valley. After crossing the valley, the Beas enters Punjab state and veers south and then southwest to its confluence with the Sutlej River at Harike. Its total length is 470 kilometres.

8. A





Generally, across the world, the monsoons are experienced in the tropical area roughly between 20° N and 20° S. The climate of India is described as the 'monsoon' type. In Asia, this type of climate is found mainly in the south and the southeast. Out of a total of 4 seasonal divisions of India, monsoon occupy 2 divisions, namely, the southwest monsoon season and retreating monsoon season

Factors Influencing South-West Monsoon are the differential heating and cooling of land and water, the shift of the position of Inter Tropical Convergence Zone (ITCZ), the presence of the high-pressure area i.e., Mascaren high (east of Madagascar, approximately at 20° S over the Indian Ocean.), the Tibetan plateau gets intensely heated during summer and Southern Oscillation.

9. B

The United Nations Economic Commission for Europe (UNECE) has three main agreements for harmonizing vehicle regulations: the 1958, 1997, and 1998 agreements. India joined the UNECE 1998 agreement (World Forum for Harmonization of Vehicle Regulations Working Party 29 (WP.29)) in 2006 and is committed to incorporating Global Technical Regulations (GTRs- India is actively involved in the formulation of GTRs under the 1998 agreement, demonstrating its commitment to global harmonization of vehicle standards) into its national regulations, after assessing their relevance and suitability for the Indian context. India participates in the UNECE World Forum for Harmonization of Vehicle Regulations (WP.29), which administers these three agreements. While not a signatory to the 1958 agreement, India's participation in WP.29 and the use of UN Regulations as a basis for its automotive standards mean it is influenced by the 1958 agreement.



10. C

Recommendation from the Chief Wildlife Warden (CWLW) is not mandatory for declaring a protected area. While the CWLW plays a crucial role in managing and protecting sanctuaries and other protected areas, the power to declare them rests with the State Government. The State Government can declare areas with ecological, faunal, floral, or geomorphological significance as sanctuaries. The Central Government can also declare protected areas, particularly when it involves transferring authority from the state to the center. They can also declare areas as conservation reserves under certain conditions.

11. C

The World Bank publishes data on the Gini coefficient annually, derived from household survey data provided by government statistical agencies and World Bank country departments. The Gini coefficient measures income or consumption inequality within a country.

A Gini coefficient of 0 indicates perfect equality, while a coefficient of 100 indicates perfect inequality. The World Bank uses a threshold of 40 to classify countries with high inequality. The Gini coefficient data from the World Bank may not be strictly comparable across countries or over time, due to differing methodologies in underlying household surveys (some use income data while others use consumption expenditure). Data for high-income economies are often sourced from the Luxembourg Income Study database. Other organizations also provide data and analysis on inequality, including the World Inequality Database (WID), Eurostat, and the Organisation for Economic Co-operation and Development (OECD).

The World Bank is a primary publisher of Gini coefficient data, but it's not the only source. Other organizations like the CIA, World Economics, and Our World in Data also publish Gini coefficients, often using data from the World Bank or their own calculations based on household surveys.

Central Intelligence Agency (CIA): The CIA publishes Gini coefficients as part of its world factbook, often using data that aligns with the World Bank's. The World Bank publishes the Gini Coefficient annually, providing data based on household surveys and World Bank country departments. For high-income economies, data is sourced primarily from the Luxembourg Income Study database.

The United States Census Bureau: The U.S. Census Bureau publishes information related to the Gini index for the United States.

The Organisation for Economic Co-operation and Development (OECD): The OECD compiles Gini index information for its member nations, according to EBSCO. They also maintain databases on income and wealth distribution.

The United Nations Development Programme (UNDP): The UNDP includes Gini index data in its comprehensive overview of income inequality globally.

12. B

Not with UNESCO

The Government of India has been implementing a programme of sample based National Achievement Survey (NAS) aimed at classes III, V, VIII and X with a cycle period of three years. The last round of NAS was held on November 12, 2021 across India covering students of grades 3, 5, 8 and 10.

The aim and objective of NAS is to evaluate children's progress and learning competencies as an indicator of the health of the education system, so as to take appropriate steps for remedial actions at different levels.



13. B

In the QS World University Rankings 2026, Indian universities have achieved their best-ever performance, with 54 institutions featured, placing India as the fourth most represented country globally after the United States, the United Kingdom, and China.

Top-ranked Indian universities in the QS World University Rankings 2026:

Indian Institute of Technology Delhi (IITD): Ranked 123rd globally, climbing from 150th in 2025. IIT Delhi's performance is attributed to strong results in Employer Reputation, Citations, Sustainability, and Academic Reputation.

Indian Institute of Technology Bombay (IITB): Ranked 129th globally, falling slightly from its 118th rank in 2025. IIT Bombay maintains a strong Employer Reputation score.

Indian Institute of Technology Madras (IITM): Ranked 180th globally, a significant leap of 47 places from its 227th rank in 2025.

Indian Institute of Technology Kharagpur (IITKGP): Ranked 215th globally, improving its rank from 222 in 2025.

Indian Institute of Science (IISc) Bangalore: Ranked 219th globally, a slight drop from 211 in 2025.

Indian Institute of Technology Kanpur (IITK): Ranked 222nd globally, moving up from 263 in 2025.

University of Delhi: Ranked 328th globally, maintaining its position from 2025.

Indian Institute of Technology Guwahati (IITG): Ranked 334th globally, rising from 344 in 2025.

Indian Institute of Technology Roorkee (IITR): Ranked 339th globally, a slight decrease from 335 in 2025.

Anna University: Ranked 465th globally, falling from 383 in 2025.

Other notable Indian universities in the rankings

Shoolini University of Biotechnology and Management Sciences: Ranked 503rd, climbing from 587 in 2025.

Jawaharlal Nehru University (JNU): Ranked 558th, improving from 580 in 2025.

Birla Institute of Technology and Science (BITS Pilani): Ranked 668th, rising from the 801-850 band in 2025.

O.P. Jindal Global University (JGU): Placed in the 851-900 band, an improvement from 1001-1200 in 2025.

India's presence in the QS World University Rankings has seen a significant rise, with 54 institutions ranked in 2026, compared to just 11 in 2015. This five-fold increase reflects the country's growing academic footprint and the positive impact of initiatives like the National Education Policy (NEP) 2020. Eight Indian universities, including IIT Gandhinagar, Lovely Professional University, Kalinga Institute of Industrial Technology, Ashoka University, Galgotias University, Shiv Nadar University, Christ (Deemed to be University) Bengaluru, and Manav Rachna International Institute of Research and Studies (MRIIRS), have entered the rankings for the first time in 2026, marking the highest number of new entrants from any country this year.

14. B

NIPUN Bharat, which stands for National Initiative for Proficiency in Reading with Understanding and Numeracy, is a program launched by the Indian government. Its goal is to ensure that every child in India achieves foundational literacy and numeracy by the end of Grade 3, with a target year of 2026-27.



Core objectives

The mission aims to help children aged 3 to 9 years develop essential reading, writing, and arithmetic skills. The program promotes an inclusive classroom environment where learning is enjoyable and connected to children's daily lives and home languages through play, discovery, and activity-based methods. NIPUN Bharat also focuses on training teachers and providing them with culturally responsive teaching-learning materials in multiple languages.

The Department of School Education and Literacy (DoSE&L) under the Ministry of Education (MoE) is responsible for implementing the NIPUN Bharat Mission. The mission is implemented through a five-tier mechanism involving national, state, district, block/cluster, and school levels, with clear roles for all involved.

Oral language development: Enhancing communication skills through activities. Reading comprehension: Helping children read with understanding at a specific rate by the end of Grade 3. Numeracy skills: Enabling children to understand numbers, measurement, shapes, and solve problems. Teacher capacity building: Providing specific training to teachers on foundational literacy and numeracy methods. Development of quality learning materials: Creating culturally responsive materials in children's familiar languages. Tracking student progress: Monitoring each child's progress using various assessment tools. Successful implementation of NIPUN Bharat is expected to lead to: Reduced drop-out rates: Children with strong foundational skills are more likely to remain in school. Improved quality of education: Activity-based and innovative teaching methods are expected to make learning more engaging according to the Press Information Bureau. Empowered teachers: Teachers are expected to gain greater autonomy through training. Holistic child development: The mission aims to address various aspects of child development. Equitable and inclusive education: The focus on the foundational stage aims to benefit disadvantaged children and ensure access to quality education for all. NIPUN Bharat is a comprehensive initiative designed to address the need for foundational literacy and numeracy, aiming for a stronger and more equitable education system in India.

15. D

India plays a significant role in the global wheat landscape as the world's second-largest wheat producer after China, accounting for approximately 12% of total world production. Despite this substantial production, India's contribution to global wheat exports is comparatively small, typically less than 1%. This is primarily due to the country's large domestic population and food security priorities, which drive high consumption levels.

1. Second-largest producer: India consistently ranks as the world's second-largest wheat producer, producing about 70 million tons of wheat per year according to the Indian Institute of Management Ahmedabad.

Significant consumption: India is also a major wheat consumer, second only to China, with a large and growing domestic demand driven by population growth and changing dietary habits towards processed foods. Meeting domestic needs first: The Indian government prioritizes ensuring a sufficient supply of wheat for its large population, including providing subsidized food for the poor through programs like the National Food Security Act. This often leads to restrictions on exports to manage domestic prices and ensure food security.

2. Historically a marginal exporter: Despite its large production, India has traditionally been a relatively marginal player in the global wheat export market, with its share historically remaining under 1%. Potential for increased exports: However, India has the potential to become a more significant wheat exporter, especially given its increasing production and the disruptions caused by events like the Russia-Ukraine conflict, which impacted traditional wheat suppliers.

In May 2022, India imposed a ban on wheat exports, a decision that garnered significant international attention. Reasons for the ban: This move was prompted by concerns about rising domestic prices due to a heatwave affecting production and the need to



ensure food security for its own population. Global consequences: The ban contributed to a further surge in global wheat prices, as other nations were relying on India to help fill supply gaps created by the Russia-Ukraine war. It's important to note that the ban was not absolute; exports were allowed to continue under government-to-government agreements and to vulnerable countries facing food shortages, according to a PIB statement.

16. B

Not second, it is first

The Chenab Rail Bridge, a remarkable feat of engineering, is part of the Udhampur-Srinagar-Baramulla Rail Link (USBRL) project in India. This bridge is located in the Reasi district of Jammu and Kashmir, spanning the Chenab River between Bakkal and Kauri railway stations. It holds the distinction of being the world's highest railway arch bridge, rising 359 meters (1,178 feet) above the riverbed – making it 35 meters taller than the Eiffel Tower.

Katra rail link: Magnitude of Chenab Railway Bridge hits when .Chenab Bridge - World's highest rail bridge by Indian .Know all about the iconic Chenab Bridge, World's Highest . Height 359 meters (1,178 feet) above the Chenab River. total length of the bridge is 1,315 meters (4,314 feet), comprising a 530-meter approach bridge and a 785-meter deck arch bridge. Main Arch Span: 467 meters (1,532 feet). Materials: Constructed using steel and concrete, including high-strength steel capable of withstanding extreme temperatures. Design: Deck arch bridge designed to last 120 years, according to Dwelllo. Resilience: Engineered to withstand wind speeds up to 266 km/h, earthquakes up to magnitude 8, and high-intensity blasts equivalent to 40 tonnes of TNT. Construction: The project, led by Konkan Railway Corporation Limited, involved a joint venture with Ultra Construction & Engineering Company, VSL India, and Afcons Infrastructure. It also drew expertise from Indian institutions like IISc Bangalore (foundation protection) and IITs Delhi & Roorkee (seismic analysis), as well as international consultants such as WSP Group (Finland) for the viaduct and foundations and Leonhardt Andra (Germany) for the arch design. Cost: Constructed at a cost of ₹14.86 billion (US\$180 million). Timeline: Construction started in 2017, the arch was completed by April 2021, and the bridge was fully finished in August 2022. Trial runs were conducted in June 2024, and the bridge was inaugurated for rail traffic on June 6, 2025.

The Chenab Rail Bridge is a vital part of the USBRL project, connecting the Kashmir Valley with the rest of India. This connectivity is particularly significant as it provides an all-weather rail link, unlike the frequently disrupted Jammu-Srinagar highway. The bridge's completion offers numerous benefits: Reduced Travel Time: Travel time between Katra (Jammu) and Srinagar (Kashmir) is reduced to approximately 3 hours by train, compared to 6-8 hours by road, says Dwelllo. Enhanced Connectivity: Improves accessibility to remote areas of Jammu and Kashmir, boosting tourism and local businesses like fruit farming and handicrafts. Economic Development: Expected to stimulate the region's industrial and agricultural sectors, facilitate trade, and generate employment opportunities for locals. Strategic Military Movement: Enables faster movement of troops and supplies to the border areas, enhancing national security and defense logistics. Symbolic Unity: Represents a major step towards integrating Jammu and Kashmir with the rest of India, according to Firstpost. The Chenab Rail Bridge stands as a testament to engineering excellence, overcoming challenging terrain and demonstrating India's commitment to infrastructure development and connectivity.

17. C

The Vanbandhu Kalyan Yojana (VKY) is an important government scheme launched by the Ministry of Tribal Affairs in India to improve the welfare of tribal communities across the country .It aims to create an enabling environment for the needs-based and outcome-oriented holistic development of the tribal people.It covers all tribal people and areas with tribal populations throughout India.



The VKY functions as a strategic process to ensure tribal populations receive benefits from various government schemes. This is achieved through the convergence of resources from programs under the Tribal Sub-Plan (TSP). Funding for tribal development through TSP comes from State Plans, Central Ministries/Departments' TSP components, Special Area Programs (like SCA to TSP and Grant under Article 275 (1)), and Institutional Finances.

PMVKY is a more recently approved for implementation from 2021-22 to 2025-26 with a significant allocated cost. It focuses on the holistic development of tribal communities and areas through integrated village development and capacity building in education and livelihood, utilizing State and Central TSP funds. PMVKY includes components for the development of Particularly Vulnerable Tribal Groups (PVTGs). The Pradhan Mantri PVTG Development Mission, under PMVKY, aims to improve living conditions and provide essential facilities to PVTG families.

18. C

Alcohol can exacerbate the condition and increase the risk of progression to more severe liver diseases, but it's not the root cause of MAFLD. Epidemiological studies show the prevalence of MAFLD in the Indian population to range from approximately 9% to 32%, according to Nature. A large cross-sectional study in Delhi found the prevalence to be 56.4% in the general population. A study in Hyderabad found an alarming 84.06% prevalence of MAFLD among IT employees, likely linked to sedentary lifestyles, unhealthy diets, and metabolic risk factors prevalent in this profession.

Metabolic Risk Factors: These include obesity, overweight, insulin resistance, type 2 diabetes, high levels of triglycerides, and metabolic syndrome.

Lifestyle Factors: Sedentary behavior (prolonged sitting), unhealthy dietary patterns (high intake of refined carbohydrates, processed foods, sugary drinks, and unhealthy fats), inadequate sleep, and high stress levels contribute significantly to MAFLD development.

Genetic Predisposition: Genetic factors are also believed to play a role in the development and progression of MAFLD in the Indian population.

Vitamin D Deficiency: Studies have established a connection between low vitamin D levels and liver fat buildup.

Regional Variation: The prevalence of MAFLD varies across different regions in India, potentially influenced by genetic, dietary, and socioeconomic factors.

Metabolic dysfunction-associated fatty liver disease (MAFLD) is a condition characterized by excessive fat accumulation in the liver, driven by metabolic dysfunction. It is considered the hepatic manifestation of metabolic syndrome. MAFLD has replaced the previous term non-alcoholic fatty liver disease (NAFLD) to emphasize the metabolic factors contributing to the condition and improve diagnostic accuracy.

Key features and characteristics

MAFLD is characterized by hepatic steatosis, meaning fat accumulation in the liver cells exceeding 5% of the liver's weight. It is associated with metabolic risk factors such as obesity, type 2 diabetes mellitus, or at least two metabolic dysregulation factors like high blood pressure, high plasma triglycerides, low HDL cholesterol, prediabetes, or high insulin resistance scores.

Causes



MAFLD is linked to several factors, including obesity, Type 2 diabetes mellitus, and metabolic syndrome. Dyslipidemia (abnormal blood lipid levels), diets high in processed foods and sugars, and physical inactivity are also associated with increased risk. Genetic predisposition, environmental toxins, and changes in the gut microbiome can also contribute to MAFLD.

Complications

MAFLD can lead to serious complications such as metabolic dysfunction-associated steatohepatitis (MASH), which involves inflammation and liver cell damage. It can progress to liver fibrosis (scar tissue) and cirrhosis (severe scarring), increasing the risk of hepatocellular carcinoma (liver cancer). MAFLD also increases the risk of cardiovascular disease and chronic kidney disease, as well as the development of Type 2 diabetes.

Diagnosis

Diagnosis of MAFLD often involves imaging tests like ultrasound, FibroScan®, MRE-PDFF, and CT scans to assess liver fat and fibrosis. Laboratory tests may show elevated liver enzymes. While invasive, a liver biopsy remains the standard for definitive diagnosis and staging of fibrosis and inflammation.

Treatment

Treatment for MAFLD primarily focuses on lifestyle changes. Weight loss, even modest amounts, can reduce liver fat and potentially resolve steatohepatitis. Dietary modifications, such as adopting a healthy diet like the Mediterranean diet, and regular exercise are also beneficial. Addressing underlying metabolic disorders like diabetes and high cholesterol is essential. While pharmacological interventions are being investigated, specific treatments for MAFLD itself, beyond managing associated metabolic disorders, are not yet widely available, and clinical trials are ongoing. Early diagnosis and treatment are crucial to prevent MAFLD from progressing to more severe forms of liver disease like cirrhosis and liver cancer.

19.B

20. A

India's maternal mortality rate of 93 is measured under the Maternal Mortality Ratio (MMR). MMR is defined as the number of maternal deaths per 100,000 live births. It serves as a key indicator of a country's maternal healthcare system and overall health quality.

India's MMR Performance

According to the Sample Registration System (SRS) Report 2021, India's MMR declined to 93 in 2019-21, a significant improvement from 130 in 2014-16. While this represents a positive trend, India still needs to further reduce its MMR to meet the Sustainable Development Goal (SDG) target of less than 70 by 2030.

Key Findings from SRS Report 2021

Significant Decline in MMR: India's MMR has shown a marked reduction, declining from 130 per lakh live births in 2014–16 to 93 in 2019–21. **Improvement in Child Mortality Indicators:** The Infant Mortality Rate (IMR) declined from 39 to 27 per 1000 live births, Neonatal Mortality Rate (NMR) from 26 to 19, and Under-Five Mortality Rate (U5MR) from 45 to 31 between 2014 and 2021. **Improved Sex Ratio at Birth and Stable Fertility Rate:** The Sex Ratio at Birth improved from 899 in 2014 to 913 in 2021, and the Total Fertility Rate remained consistent at 2.0 in 2021.



Government Initiatives and Strategies : The Indian government's flagship health schemes, such as Ayushman Bharat and the Janani Suraksha Yojana, have played a crucial role in reducing maternal mortality. These schemes focus on providing free and accessible maternal healthcare services, including institutional deliveries, antenatal care, and postnatal care. Additionally, efforts to strengthen healthcare infrastructure, train healthcare workers, and promote awareness about maternal health services have contributed to the decline in MMR. Ayushman Bharat and Janani Suraksha Yojana are two significant healthcare schemes implemented by the Government of India, each targeting different aspects of healthcare and providing crucial benefits to specific segments of the population.

Ayushman Bharat (PMJAY)

Focus: Aims to provide financial protection and accessible healthcare to economically disadvantaged sections. It is the world's largest government-funded health assurance scheme, according to the National Health Authority.

Coverage: Provides health coverage of ₹5 lakh per family per year for secondary and tertiary care hospitalization to approximately 55 crore beneficiaries across 12 crore families. These families belong to the bottom 40% of the Indian population based on Socio-Economic Caste Census (SECC) 2011 deprivation and occupational criteria.

Benefits: Offers cashless treatment at empanelled public and private hospitals across India. It covers pre and post-hospitalization expenses, daycare surgeries, follow-up care, and newborn child/children services. All pre-existing conditions are covered from day one.

Implementation: Implemented by the National Health Authority of India.

Janani Suraksha Yojana (JSY)

Focus: Aims to reduce maternal and infant mortality by promoting institutional deliveries and providing financial assistance to pregnant women, according to PolicyX.

Coverage: Primarily targets pregnant women from economically disadvantaged backgrounds, particularly those residing in rural areas. It also extends benefits to all pregnant women delivering in government health centers in Low Performing States (LPS), and BPL, SC/ST women in High Performing States (HPS) delivering in government health centers or accredited private institutions.

Benefits: Provides cash assistance for institutional deliveries and incentivizes them. It offers free antenatal and postnatal care services, according to Bajaj Finserv. Under the Janani Shishu Suraksha Karyakram (JSSK), pregnant women and newborns accessing public healthcare are entitled to free drugs, diagnostics, blood, referral transport, and diet (up to 3 days for normal delivery and 7 days for C-section delivery).

Implementation: Launched under the National Rural Health Mission (NRHM) in 2005.

Key Differences

Target Beneficiaries: PMJAY has a broader scope, covering a larger population for general healthcare needs, while JSY specifically focuses on pregnant women for maternal and child health benefits.

Nature of Benefits: PMJAY provides health insurance coverage for hospitalization, while JSY offers financial incentives for institutional deliveries and free maternal and child health services.



Objective: PMJAY aims to reduce the burden of out-of-pocket expenses for healthcare, while JSY focuses on reducing maternal and infant mortality rates.

Similarities

Both are government-funded initiatives aimed at improving healthcare access and outcomes for vulnerable populations in India.

Both schemes involve a network of healthcare providers for service delivery.

In essence, while Ayushman Bharat provides comprehensive health insurance for a wide range of illnesses and treatments, Janani Suraksha Yojana is a targeted initiative focused on promoting safe deliveries and improving maternal and child health outcomes. They complement each other in addressing different aspects of healthcare needs for the vulnerable population in India.

21.B

Unsettled disputes of Bhopal case tragedy 1984.

In India, the Extended Producer Responsibility (EPR) certificate for e-waste is issued by the Central Pollution Control Board (CPCB) under the Ministry of Environment, Forest and Climate Change (MoEFCC). According to the E-Waste (Management) Rules, 2022, producers, manufacturers, refurbishers, and recyclers of electrical and electronic equipment (EEE) are required to register through a centralized online EPR portal developed by the CPCB to comply with Extended Producer Responsibility guidelines. This EPR authorization is crucial for ensuring that e-waste is managed in an environmentally sound manner, promoting recycling and resource recovery, and establishing a circular economy.

It's important to note that EPR authorization is mandatory for selling or importing electronic products in India, and non-compliance can lead to penalties and other legal consequences.

22. B

Methyl isocyanide (CH_3NC) is a volatile and highly reactive organic compound used in various applications, primarily in organic synthesis and the production of specific compounds.

1. Organic synthesis and chemical intermediate

Building block for heterocyclic compounds: Methyl isocyanide is a valuable reagent for synthesizing diverse heterocyclic compounds, particularly 5-membered rings.

Transition metal complexes: It's frequently employed in the creation of transition metal isocyanide complexes due to its strong coordinating nature.

Ugi-type reactions: Methyl isocyanide serves as a key component in Ugi-type multicomponent reactions, enabling the efficient synthesis of complex molecules like spirocyclic oxindole γ -lactams and their analogs.

2. Chemical analysis and research

NMR Spectroscopy Probe: Methyl isocyanide, especially the ^{13}C -labeled version, serves as a probe in Nuclear Magnetic Resonance (NMR) spectroscopy for studying protein binding and structural changes in heme proteins like cytochrome P450 enzymes.



3. Carbamate pesticides production (Methyl Isocyanate)

Methyl Isocyanate (MIC), a related compound, is used as an intermediate in the production of carbamate pesticides such as carbaryl, carbofuran, methomyl, and aldicarb.

4. Other uses

Polyurethane Foams and Plastics: Methyl isocyanate finds occasional application in the production of polyurethane foams and plastics.

Rubbers and Adhesives: It's also utilized in the manufacture of certain types of rubbers and adhesives.

5. Potential extraterrestrial occurrence

Scientists have discovered methyl isocyanide around young Sun-like stars and on the surface of comet 67/P, leading to speculation about its potential role in the origin of life.

Important Note: While methyl isocyanide has various applications, it's crucial to acknowledge its extremely high toxicity and handle it with extreme caution and appropriate safety measures.

methyl isocyanide is not designed or marketed as an explosive, but its inherent chemical instability and endothermic nature make it prone to explosive decomposition under specific conditions, particularly when exposed to heat or contamination. It's crucial to distinguish it from methyl isocyanate (MIC), a related but different compound, known for its role in the Bhopal disaster and its extreme toxicity, flammability, and potential for explosive reactions when mixed with air and water, according to the U.S. Environmental Protection Agency.

23. A

Forest Stewardship Council (FSC)

The Forest Stewardship Council (FSC) is an international non-profit organization established in 1993 to promote the responsible management of the world's forests through a timber certification system.

Here's a closer look at the FSC:

1. The FSC sets standards for certifying forests and companies in the timber and paper industries. It operates a global certification system with two main parts: Forest Management and Chain of Custody. The organization uses a market-based approach to encourage sustainable production and consumption of timber and paper products. The FSC also addresses issues such as illegal logging, deforestation, and human rights within the forest industry.
2. The FSC was founded in 1993 due to global concerns about deforestation, following discussions with environmental groups and wood product users. The first national standard was approved in Sweden in 1997, and the first product received certification in 1999.
3. The FSC system is based on 10 principles and 56 criteria that apply to various types of forests. These principles cover areas such as legal compliance, worker well-being, indigenous peoples' rights, community benefits, economic viability, ecosystem conservation, management planning, monitoring, high conservation values, and appropriate management activities.



4. The FSC offers different types of certification: Forest Management Certification: Confirms responsible forestry practices. Chain of Custody Certification: Tracks certified material from the forest to the consumer. Controlled Wood Certification: Allows mixing certified and uncertified wood under controlled conditions to avoid unacceptable sources. Project Certification: Certifies the origin of timber used in construction projects. Certification is carried out by independent, FSC-accredited bodies, not the FSC itself.

5. Certification can improve brand recognition and reputation. It provides access to markets that prefer or require FSC-certified products. Certification also helps ensure high environmental standards, protect workers' rights, and promote community involvement and indigenous rights.

6. The FSC has faced criticism regarding its credibility and effectiveness. Concerns have been raised about controversial certificates and alleged violations of indigenous rights. Some critics argue that the certification process may favor larger companies due to costs and complexity. There are also concerns about potential conflicts of interest since certification bodies are paid by the companies they audit. The FSC has been accused of "greenwashing," where certification is seen as improving image without significant improvements in forest management. In response, the FSC has taken steps to enhance stakeholder engagement, quality assurance, and dispute resolution.

In summary, the Forest Stewardship Council plays a significant role in promoting responsible forest management and providing a credible certification system. Despite challenges, the FSC continues to work towards its goal of healthy forests through its standards, certification, and collaboration with stakeholders.

24. A

All reports are published by CPCB but the Polluted river stretches report- not annually.

25.C

The Air Quality Index (AQI) is a scale used to assess air quality and its potential impact on health.

The main pollutants factored into the AQI calculation include:

Particulate Matter (PM₁₀ and PM_{2.5}): These are tiny solid particles or liquid droplets found in the air. PM₁₀ refers to particles with a diameter of 10 micrometers or smaller, while PM_{2.5} refers to fine particles with a diameter of 2.5 micrometers or smaller. Fine particles pose the greatest health risks because they can travel deeply into the lungs and potentially enter the bloodstream. PM can originate from construction sites, unpaved roads, fields, fires, smokestacks, and industrial emissions.

Ground-level Ozone (O₃): This harmful air pollutant is the main ingredient in smog. It's not directly emitted but forms through chemical reactions between pollutants like nitrogen oxides (NO_x) and volatile organic compounds (VOCs) in the presence of sunlight. Emissions from cars, power plants, industrial boilers, refineries, chemical plants, and other sources are the primary contributors to ozone formation.

Carbon Monoxide (CO): This colorless, odorless gas is produced by the incomplete burning of fuels such as natural gas, gasoline, and wood. It can be emitted by motor vehicles, power plants, wildfires, incinerators, and household appliances like gas stoves and furnaces. CO reduces the blood's ability to carry oxygen, which can affect the brain and heart.



Nitrogen Dioxide (NO₂): NO₂ is a highly reactive gas that is part of a group called nitrogen oxides (NO_x). It primarily enters the air from the burning of fuel in sources like cars, trucks, buses, power plants, and industrial processes. Breathing air with a high concentration of NO₂ can irritate airways, worsen asthma, and contribute to the development of asthma in children.

Sulfur Dioxide (SO₂): This colorless, reactive gas with a strong odor is primarily emitted from the burning of fossil fuels like coal and oil. It can cause respiratory problems like bronchitis, irritate the eyes, nose, throat, and lungs, and worsen asthma attacks and existing heart disease.

Ammonia (NH₃): India's AQI also includes ammonia in its calculation.

Lead (Pb): India's AQI also includes lead in its calculation.

Air quality monitoring systems track these pollutants, along with other environmental factors, to provide real-time data and inform the public about air quality conditions.

UPSC OLD QS:

26. B

27.B

28.C

29.A

30.A

31.A

32.D

33.A

34.C

35.D

36.B

37.A

38.D

39.B

40.B

41.C

42.C

43.D



44.D

45.C

46.A

47.B

48.B

49.A

50.A

51. A

India maintains a Free Movement Regime (FMR) with Myanmar.

This bilateral arrangement allows unrestricted movement for people residing within 16 km on either side of the 1,643 km Indo-Myanmar border. Eligible individuals from hill tribes (whether Indian or Myanmar citizens) can cross the border using a border pass valid for one year and stay for up to two weeks per visit. However, it's important to note that India announced plans to scrap the FMR with Myanmar in February 2024, citing concerns about national security, drug trafficking, and demographic changes. Although this announcement was made, the FMR is currently still in effect as of July 2025, awaiting formal suspension by the Ministry of External Affairs and a bilateral agreement with Myanmar. Some border gates are still operating under the revised FMR guidelines, which now limit free movement to within 10 km of the border and require QR code-enabled passes.

52 D

53. B

Only Tamil Nadu, not Karnataka

Heat Action Plans (HAPs) are India's primary policy response to mitigate the adverse impacts of heatwaves, which are becoming increasingly frequent and intense due to climate change. These plans outline strategies and measures to be undertaken before, during, and after heatwave events at the state, district, and city levels.

Key components and recommendations

HAPs typically include early warning systems, public awareness campaigns, establishing cooling centers, healthcare preparedness, promoting sustainable urban planning with measures like tree planting, ensuring access to water, and coordinating response efforts among various agencies.

Challenges facing HAPs include issues with localized definitions and vulnerability assessments, difficulty in implementing targeted interventions, funding constraints, lack of integration with broader climate plans, limited emphasis on nature-based solutions, weak legal foundations, and insufficient transparency in their accessibility and updates.

Recommendations for improving HAPs include expanding heatwave definitions, conducting robust climate risk assessments, designing tailored interventions for vulnerable groups, allocating dedicated funding, integrating HAPs with broader resilience plans, prioritizing nature-based solutions, enhancing community engagement and awareness, and improving monitoring and



evaluation systems. By addressing these challenges and incorporating a more comprehensive and localized approach, India can strengthen the effectiveness of Heat Action Plans and enhance its resilience against the increasing threat of heatwaves.

Criteria for declaring heatwaves in India (IMD)

Plains:

Maximum temperature $\geq 40^{\circ}\text{C}$.

Departure from normal temperature is 4.5°C to 6.4°C .

Alternatively, a heatwave can be declared if the actual maximum temperature is $\geq 45^{\circ}\text{C}$, regardless of the normal maximum temperature.

Hilly Regions:

Maximum temperature $\geq 30^{\circ}\text{C}$.

Departure from normal temperature is 4.5°C to 6.4°C .

Severe Heatwave:

Departure from normal temperature $> 6.4^{\circ}\text{C}$.

Alternatively, a severe heatwave can be declared if the actual maximum temperature is $\geq 47^{\circ}\text{C}$.

These conditions must be met at a minimum of two stations in a meteorological sub-division for at least two consecutive days, with the declaration made on the second day.

Causes: Several factors contribute to heatwaves in India, including global warming, high-pressure systems, and the El Niño effect. Local factors such as the Loo wind, urbanization leading to urban heat islands, and geographical characteristics like latitude and terrain also play a role. Weak winds and low pre-monsoon rainfall further exacerbate the conditions.

:Heatwaves have significant impacts on human health, increasing the risk of heat-related illnesses. The economy and livelihoods are affected through reduced productivity and damage to the agricultural sector. Water resources are strained, and there is increased demand on the energy sector. Environmental damage, such as forest fires, and social inequities are also consequences.

Government initiatives and mitigation strategies

The Indian government has implemented various initiatives to address heatwaves. These include Heat Action Plans (HAPs) with early warning systems and public awareness campaigns. The IMD issues heatwave warnings. Programs like the Jal Shakti Abhiyan and Smart Cities Mission contribute to water conservation and climate resilience. Initiatives such as cool roofs and urban greening are also being promoted. The National Programme on Climate Change and Human Health provides health advisories. There is also discussion about declaring heatwaves as a notified disaster.

54. C

The Arctic Council is an intergovernmental forum that promotes cooperation among Arctic states, Indigenous communities, and other Arctic inhabitants, with a focus on sustainable development and environmental protection. The Council was established in



1996 in Canada with the signing of the Ottawa Declaration, building on the 1991 Arctic Environmental Protection Strategy (AEPS). It comprises eight Member States with Arctic territory: Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States. The Council also includes six Permanent Participants representing Arctic Indigenous Peoples groups. Observer status is available to non-Arctic states and various organizations that can contribute to the Council's work, without voting rights. Examples of observer states include China, Germany, India, Japan, and South Korea. The primary focus areas include Environment and Climate Change, Biodiversity, Oceans, and Indigenous Arctic peoples. The Council operates through several Working Groups responsible for projects and assessments. For a list of these Working Groups, please refer to Wikipedia. The Council also facilitates international agreements on matters such as Maritime Search and Rescue and Arctic Scientific Cooperation.

55. B

The High Seas Treaty, also known as the Agreement on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ Agreement), is an international legal instrument adopted under the United Nations Convention on the Law of the Sea (UNCLOS). It addresses the need for a treaty to protect the high seas, which lie outside any single nation's jurisdiction. While UNCLOS provides a general framework, it lacks specific provisions for biodiversity in these areas. The treaty aims to conserve marine biodiversity, ensure sustainable use of marine genetic resources, build capacity, transfer technology, and mandate environmental impact assessments. It includes provisions for establishing Marine Protected Areas with a goal of protecting at least 30% of the high seas by 2030, outlining rules for sharing benefits from marine genetic resources, requiring environmental impact assessments for potentially harmful activities, and supporting developing countries. The High Seas Treaty is significant for managing a "global commons," enhancing marine environmental protection, promoting international cooperation, and contributing to global biodiversity goals. Adopted in June 2023 and opened for signature in September 2023, the treaty will enter into force 120 days after 60 countries ratify it. As of June 13, 2025, it had 136 signatories and 51 ratifications, according to the World Resources Institute. Challenges include achieving the necessary ratifications, implementing effective mechanisms, and ensuring equity in benefit-sharing and capacity building. The High Seas Treaty is a crucial step towards safeguarding the oceans.

56. D

The Chief of Defence Staff (CDS) in India is appointed by the Appointments Committee of the Cabinet (ACC). This committee is composed of the Prime Minister and the Minister of Defence. The appointment process begins with the Ministry of Defence recommending potential candidates to the ACC. While the Prime Minister plays a key role as the head of the Appointments Committee of the Cabinet, it's important to remember that the President of India is the Supreme Commander of the Indian Armed Forces. However, the actual appointment of the CDS rests with the ACC, not solely the President or the Prime Minister individually.

57.C

58.B

59.D

60.B

61. D. In India, derivative markets are primarily regulated by the Securities and Exchange Board of India (SEBI). Additionally, the Reserve Bank of India (RBI) also plays a role, particularly in regulating currency derivatives and foreign exchange transactions. The Forward Markets Commission (FMC) was also involved, but it has been merged with SEBI.



62. D

63. B. e-rupee (also known as Digital Rupee or CBDC) has a face value but not an intrinsic value in the same way that physical currency might. It represents a digital form of the Indian rupee and is exchangeable one-to-one with physical currency.

Face Value:

The e-rupee, like physical currency, has a face value (e.g., 100 rupees, 500 rupees) printed on it, which is the value it represents for transactions.

Intrinsic Value:

Intrinsic value refers to the value of the material the currency is made of. For example, a silver coin has intrinsic value because of the silver it contains. The e-rupee is digital and doesn't have a material component, so it does not have intrinsic value. Instead, it represents a claim on the Reserve Bank of India's balance sheet, similar to holding physical currency.

The e-rupee, or digital rupee (₹), is currently in a pilot phase in India, with a focus on both retail and wholesale segments. The retail pilot, launched on December 1, 2022, involves a limited number of banks and users in select cities. The wholesale segment is also being tested with a focus on interbank settlements.

Retail e-Rupee:

Pilot Launch: The retail e-rupee pilot was launched on December 1, 2022. Initially, select banks like State Bank of India, ICICI Bank, Yes Bank, and IDFC First Bank were involved in the pilot. The pilot is expanding, with a growing user base and participation from 17 major banks by March 2025. The pilot began in Mumbai, New Delhi, Bengaluru, and Bhubaneswar. Users can hold ₹ in digital wallets provided by participating banks and use it for transactions with merchants and individuals.

Wholesale e-Rupee:

Focus: This segment is primarily focused on interbank settlements and transactions between financial institutions. The foundation of the wholesale e-rupee is built on blockchain technology. It is designed for large-scale transactions involving banks and other financial institutions. The RBI is also exploring cross-border pilots for the digital rupee.

64. A. Debentures are typically issued by companies (both public and private) and governments to raise capital. They are a type of debt instrument, similar to bonds, where the issuer borrows money from investors and promises to repay the principal amount with interest at a later date.

Bonds and debentures lie in whether they are secured by collateral. Bonds are typically backed by assets, making them less risky, while debentures are unsecured and rely on the issuer's creditworthiness. This distinction also impacts the potential returns, with debentures often offering higher interest rates to compensate for the increased risk.

65. D

In India, the Over-the-Counter Exchange of India (OTCEI) was established to facilitate trading for small and medium-sized companies that couldn't be listed on major exchanges like the BSE or NSE. However, it was shut down in 2015 due to low trading activity. While the OTCEI is no longer active, the term "OTC" in India still refers to the trading of securities not listed on formal exchanges, including stocks of smaller companies and various derivative products.

66.B



I. NASDAQ - US

II. BM & FBOVESPA - Brazil

III. FTSE 100 - London

IV. Sensex - India

67. C

Spot exchanges in India are primarily regulated by the Securities and Exchange Board of India (SEBI). While the Reserve Bank of India (RBI) has some oversight, particularly concerning payment systems, SEBI is the main regulatory authority for spot exchanges, especially for commodities like gold. RBI regulates both payment settlement of spot exchange and spots related to foreign exchange transactions.

68. A

New York-based trading firm Jane Street Capital was recently barred from the Indian securities market by markets regulator Sebi which alleged the company used its trading strategies to manipulate stock market, leading to losses for millions of retail investors. The Organisation bought large quantities of constituents in India's Bank Nifty index in the cash and futures markets to artificially support the index in morning trade, while simultaneously building large short positions in index options which were exercised or allowed to expire later in the day. The controversies come at a time when Jane Street Capital is joining the big league. Its net trading revenues hit \$20.5 billion last year, up from \$2.1 billion in 2019.

69.D

Futures contracts are Standardized, exchange-traded, and regulated, with daily marking-to-market and lower counterparty risk. Whereas Forward contracts are Customized, OTC, and less regulated, with settlement at maturity and higher counterparty risk.

70. D

71. D

(Source- SEBI regulation 2012) Alternative Investment Funds (AIFs) regulated by SEBI are not fully owned by the government. AIFs are privately pooled investment vehicles that gather funds from investors, both Indian and foreign, and are managed by entities that may or may not be government-owned. SEBI regulates AIFs to ensure transparency and investor protection, but it does not mean the funds themselves are government property.

What is an Alternate Investment Fund ("AIF")?

Alternative Investment Fund or AIF means any fund established or incorporated in India which is a privately pooled investment vehicle which collects funds from sophisticated investors, whether Indian or foreign, for investing it in accordance with a defined investment policy for the benefit of its investors. AIF does not include funds covered under the SEBI (Mutual Funds) Regulations, 1996, SEBI (Collective Investment Schemes) Regulations, 1999 or any other regulations of the Board to regulate fund management activities. Further, certain exemptions from registration are provided under the AIF Regulations to family trusts set up for the benefit of 'relatives' as defined under Companies Act, 1956, employee welfare trusts or gratuity trusts set up for the benefit of employees, 'holding companies' within the meaning of Section 4 of the Companies Act, 1956 etc. [Ref. Regulation 2(1)(b)]



In what categories can an applicant seek registration as an AIF?

Applicants can seek registration as an AIF in one of the following categories, and in sub-categories thereof, as may be applicable: [Ref. Regulation 3(4)]

☐ Category I AIF:

- o Venture capital funds (Including Angel Funds)
- o SME Funds
- o Social Venture Funds
- o Infrastructure funds

☐ Category II AIF

☐ Category III AIF

What are Category I AIFs?

AIFs which invest in start-up or early stage ventures or social ventures or SMEs or infrastructure or other sectors or areas which the government or regulators consider as socially or economically desirable and shall include venture capital funds, SME Funds, social venture funds, infrastructure funds

and such other Alternative Investment Funds as may be specified. [Ref. Regulation 3(4)(a)]

What are Category II AIFs?

AIFs which do not fall in Category I and III and which do not undertake leverage or borrowing other than to meet day-to-day operational requirements and as permitted in the SEBI (Alternative Investment Funds) Regulations, 2012. [Ref. Regulation 3(4)(b)]. Various types of funds such as real estate funds, private equity funds (PE funds), funds for distressed assets, etc. are registered as Category II AIFs.

What are Category III AIFs?

AIFs which employ diverse or complex trading strategies and may employ leverage including through investment in listed or unlisted derivatives. [Ref. Regulation 3(4)(c)] Various types of funds such as hedge funds, PIPE Funds, etc. are registered as Category III AIFs.

What is 'Angel Fund'?

"Angel fund" is a sub-category of Venture Capital Fund under Category I-Alternative Investment Fund that raises funds from angel investors and invests in accordance with the provisions of Chapter III-A of AIF Regulations. In case of an angel fund, it shall only raise funds by way of issue of units to angel investors. "Angel investor" means any person who proposes to invest in an angel fund and satisfies one of the following conditions, namely,

(a) an individual investor who has net tangible assets of at least two crore rupees excluding value of his principal residence, and who:



(i) has early stage investment experience, or

(ii) has experience as a serial entrepreneur, or

(iii) is a senior management professional with at least ten years of experience; ('Early stage investment experience' shall mean prior experience in investing in start-up or emerging or early-stage ventures and 'serial entrepreneur' shall mean a person who has promoted or co-promoted more than one start-up venture.)

(b) a body corporate with a net worth of at least ten crore rupees; or

(c) an AIF registered under these regulations or a VCF registered under the

SEBI (Venture Capital Funds) Regulations, 1996.

Angel funds shall accept, up to a maximum period of 3 years, an investment of not less than ₹25 lakh from an angel investor.

What is 'debt fund'?

Debt fund is an Alternative Investment Fund (AIF) which invests primarily in debt or debt securities of listed or unlisted investee companies according to the stated objectives of the Fund. [Ref. Regulation 2(1)(i)]. These funds are registered under Category II. In this regard, it is clarified that, since Alternative Investment Fund is a privately pooled investment vehicle, the amount contributed by the investors shall not be utilised for purpose of giving loans.

What is Fund of Funds?

Fund of Funds, in general parlance as gathered from publicly available sources is an investment strategy of holding a portfolio of other investment funds rather than investing directly in stocks, bonds or other securities. In the context of AIFs, a Fund of Fund is an AIF which invest in another AIF.

In which legal forms can an AIF be set up?

An AIF under the SEBI (Alternative Investment Funds) Regulations, 2012 can be established or incorporated in the form of a trust or a company or a limited liability partnership or a body corporate. Most of the AIFs registered with SEBI are in trust form. [Ref. Regulation 2(1)(b)]

What is the corpus of the AIF?

"Corpus" is the total amount of funds committed by investors to the AIF by way of a written contract or any such document as on a particular date. [Ref. Regulation 2(1)(h)]

What is the limit specified under AIF regulations for number of investors?

No scheme of an AIF (other than angel fund) shall have more than 1000 investors. (Please note that the provisions of the Companies Act, 1956 shall apply to the AIF if it is formed as a company). In case of an angel fund, no

scheme shall have more than forty-nine angel investors. However, an AIF cannot make invitation to the public at large to subscribe its units and can raise funds from the sophisticated investors only through private placement.



SEBI has introduced a new framework allowing Category I and II AIFs to offer co-investment opportunities to accredited investors. This allows AIF managers or sponsors, as well as AIF investors, to make direct investments in unlisted companies alongside the AIF. Additionally, Special Situation Funds (SSFs) have been introduced as a new sub-category under Category I AIF, focusing on stressed assets.

SSFs are a sub-category of Category I AIFs that invest specifically in stressed assets. Stressed assets include stressed loans, security receipts issued by asset reconstruction companies, and securities of distressed companies. SSFs are exempt from investment concentration norms and restrictions on investing in unlisted or listed securities of investee companies. SSFs are aimed at addressing the issue of monetizing stressed assets in the economy and providing avenues for distressed companies.

Other changes SEBI brought are:

Category II AIFs and Listed Debt:

SEBI recently clarified that Category II AIFs can invest more than 50% of their investible funds in listed debt securities with a credit rating of 'A' or below. This allows them to cater to investors with a higher risk appetite.

Category III AIFs, specifically Long Only AIFs, are also gaining popularity. These funds focus on long-term investments in various asset classes, primarily aiming for gains from upward price movements

73. A

Revenue deficit = Total Revenue Expenditure - Total Revenue Receipt

Effective revenue deficit = Revenue Deficit - Grant to states for creation of capital assets

74. D

Both terms relate to a government's financial obligations, the debt-to-GDP ratio and total government liabilities are distinct concepts.

Debt-to-GDP ratio: This ratio compares a country's total government debt to its Gross Domestic Product (GDP). GDP represents the total value of goods and services produced by a country in a given period. The ratio indicates a nation's ability to repay its debts and is often expressed as a percentage. A high ratio suggests potential difficulty in repaying debt and higher risk of default.

Total government liabilities: This term encompasses all financial obligations of the government, including not only public debt but also other liabilities such as those in the Public Account. Public debt typically refers to debt contracted against the Consolidated Fund of India and can be further classified as internal and external debt.

Differences: The debt-to-GDP ratio focuses solely on government debt. Total government liabilities, however, offer a broader view, including public debt and other obligations not necessarily secured by the Consolidated Fund. The debt-to-GDP ratio primarily serves as an indicator of a country's ability to pay back its debt. It helps assess the country's economic health and fiscal sustainability. Total liabilities, while also contributing to the overall financial picture, give a more comprehensive overview of all government financial commitments. Debt, within the context of the debt-to-GDP ratio, refers to money owed by the government, often represented by instruments like bonds and loans. Liabilities encompass a wider range of obligations, including debt, and may also involve future payment commitments like pensions, social security, and even contingent liabilities like government guarantees on loans.

75. D



Public debt, also referred to as government debt or national debt, is the total amount of money that a government owes to its creditors. These creditors can include individuals, financial institutions (both domestic and foreign), corporations, and even other governments or international organizations. The government incurs public debt primarily when its expenditures exceed its revenue (taxes and other income), leading to a budget deficit. To finance this shortfall and fund various government activities and projects, the government borrows money from these diverse sources.

Public debt does not include obligations to the Public Account of India. Public debt, as defined in Indian budget documents, specifically refers to internal and external debt, which are liabilities settled using funds from the Consolidated Fund of India. The Public Account, on the other hand, includes various other liabilities like National Small Savings Fund, Provident Funds, and Reserve Funds, and these are classified as "other liabilities" and not part of public debt.

External debt, in turn, includes borrowings from foreign governments, international organizations, and private entities outside the country. ECBs, being loans raised from recognized non-resident entities, are therefore a component of a country's external debt and, consequently, its public debt. ECBs are governed by regulations like the Foreign Exchange Management Act, 1999 and are managed by the Reserve Bank of India.

76.A

Revenue receipts refer to the income earned by the government through its regular operations, such as taxes, fees, and other charges. These receipts neither create liabilities nor reduce government assets, and are crucial for funding day-to-day government activities. (Capital Receipts: These are receipts that either create liabilities (like borrowing) or reduce assets (like selling government property). Seigniorage is not a reduction of assets or a liability, so it's not a capital receipt.)

Seigniorage is considered a revenue receipt for a government. It represents the profit a government makes from issuing currency, specifically the difference between the face value of the money and its production cost. This profit is a recurring income stream for the government, similar to tax revenue.

Other major Revenue Receipts:

Tax revenue

This is the income the Seigniorage is considered a revenue receipt for a government. It represents the profit a government makes from issuing currency, specifically the difference between the face value of the money and its production cost. This profit is a recurring income stream for the government, similar to tax revenue.

Direct taxes: These are levied on the income and property of individuals and companies and are paid directly to the government. Examples include income tax, corporation tax, wealth tax, and gift tax.

Indirect taxes: These are levied on goods and services, with the burden often shifted from the producer to the consumer. Examples include Goods and Services Tax (GST), customs duties, and excise duties.

2. Non-tax revenue

This category comprises the recurring income generated by the government from sources other than taxes.

Interest receipts: Income earned from loans provided by the central government to state governments, union territories, private businesses, and the general public.

Dividends and profits: Income received from public sector undertakings (PSUs) and the Reserve Bank of India.



Fees and fines: Charges for various government services like passports, licenses, educational fees, court fees, fines, and penalties for violating rules and regulations.

Escheats: Income from taking possession of property with no legal claimant or heir.

Grants-in-aid: Funds received from the central government by state governments and union territories, or from international organizations and foreign governments, usually for specific purposes or in response to a national crisis.

Fees for communication services: Primarily license fees from telecom operators for spectrum usage charges.

77. B

Article 113 of the Indian Constitution outlines the procedure for Demands for Grants in Parliament. It stipulates that estimates of expenditure from the Consolidated Fund of India, as presented in the Annual Financial Statement, must be submitted to the Lok Sabha for voting in the form of Demands for Grants. Essentially, these demands are requests for funds by different government ministries to cover their respective expenses.

Article 113 mandates that demands for grants, representing estimated expenditures, are presented to the Lok Sabha for approval. Some expenditures are "charged" upon the Consolidated Fund and are not subject to a vote in the Lok Sabha. However, these "charged" expenditures can still be discussed in both houses of Parliament. No demand for a grant can be made without the President's recommendation. The Lok Sabha has the power to either assent to, refuse to assent to, or assent to a demand subject to a reduction in the amount. Demands for Grants cover various types of expenditures, including revenue expenditure, capital expenditure, grants to states and union territories, and loans and advances. Typically, one demand for a grant is presented for each ministry or department. However, larger ministries may have multiple demands. Notably every demand for grants include both charged and non-charged expenditures

Article 113 requires the President's recommendation for any demand for a grant and mandates that expenditure requiring a Lok Sabha vote is presented as Demands for Grants. Expenditure charged upon the Consolidated Fund, which does not require a vote, can still be discussed.

Article 114 states that no money can be withdrawn from the Consolidated Fund without parliamentary approval through an Appropriation Bill.

Article 115 allows Parliament to approve supplementary, additional, or excess grants if initial budget allocations are insufficient.

Article 116 provides for mechanisms like Vote on Account for government functioning if the budget isn't passed before the financial year begins.

78.B (II and III)

The Government of India, with the approval of the President of India, in pursuance to Article 280(1) of the Constitution, has constituted the Sixteenth Finance Commission on December 31, 2023. It is tasked with recommending the distribution of tax revenues and other financial resources between the Union government and the States for the five-year period commencing April 1, 2026.

The Commission is chaired by Dr. Arvind Panagariya, former Vice-Chairman of NITI Aayog. Shri Ritvik Ranjanam Pandey serves as the Secretary. The terms of reference include recommending the sharing of tax proceeds, establishing principles for grants-in-aid to States, proposing measures to augment resources for Panchayats and Municipalities, and reviewing financing for disaster



management. The Commission is scheduled to submit its report by October 31, 2025. Its recommendations are significant for India's fiscal federalism, impacting resource allocation and governance for the period 2026-27 to 2030-31. For vertical and horizontal tax distribution, every finance commission derives new formula based on the prevailing demands and challenges of the economy.

The Sixteenth Finance Commission shall make recommendations as to the following matters, namely: —

- (i) The distribution between the Union and the States of the net proceeds of taxes which are to be, or may be, divided between them under Chapter I, Part XII of the Constitution and the allocation between the States of the respective shares of such proceeds;
- (ii) The principles which should govern the grants-in-aid of the revenues of the States out of the Consolidated Fund of India and the sums to be paid to the States by way of grants-in-aid of their revenues under article 275 of the Constitution for the purposes other than those specified in the provisos to clause (1) of that article; and
- (iii) The measures needed to augment the Consolidated Fund of a State to supplement the resources of the Panchayats and Municipalities in the State on the basis of the recommendations made by the Finance Commission of the State.

The Sixteenth Finance Commission may review the present arrangements on financing Disaster Management initiatives, with reference to the funds constituted under the Disaster Management Act, 2005 (53 of 2005), and make appropriate recommendations thereon.

The Sixteenth Finance Commission has been requested to make its report available by 31st day of October, 2025 covering a period of five years commencing on the 1st day of April, 2026.

79. D

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) refers to the tax imposed on “Zero Tax Companies”, which escape the Corporate Tax net or pay very low taxes by using the provisions of exemptions, deductions, incentives, etc. Zero Tax Companies are companies that, despite earning significant profits, manage to pay little or no Corporate Tax by making use of various tax deductions, exemptions, credits, and loopholes in the tax system. Such companies, although show book profits and may even declare dividends to the shareholders, they do not pay any tax. In order to bring such companies under the Income Tax net, Minimum Alternate Tax (MAT) was introduced in 1997-98. Now, a company must pay at least either Corporate Tax or Minimum Alternate Tax (MAT), whichever is higher. Generally, Income Tax is computed as per the provisions of the Income Tax Act. However, companies compute their book profit as per provisions of the Companies (Amendment) Act, 2019. But, as the Income Tax Act allows several kinds of exemptions, depreciations, and deductions from gross income or book profit, companies are able to show their taxable income as very low. Thus, the amount of tax comes out to be very low.

Capital Gains Tax (CGT)

Capital Gains Tax (CGT) is a tax levied on the profit one makes from selling a Capital Asset.

In other words, it's a tax on the gains one earns from investments or property sales. A 'Capital Asset' is officially defined as any kind of property held by an assessee, excluding goods held as stock-in-trade, agricultural land, and personal effects. Some examples of Capital Assets include – Land, Buildings, House Property, Vehicles, Patents, Trademarks, Leasehold Rights, Machinery, and Jewellery.



The following are not considered Capital Assets:

Stock in trade. Consumable stores or raw materials held for the purpose of business or profession. Personal effects that are movable except jewelry, archaeological collections, drawings, paintings, sculptures, or any artwork held for personal use.

Agricultural Land: The land must not be located within 8 km from a municipality, Municipal Corporation, notified area committee, town committee, or cantonment board with a minimum population of 10,000.

6.5 percent Gold Bonds, National Defence Gold Bonds, and Special Bearer Bonds. Gold Deposit bonds under the Gold Deposit Scheme. Broadly, there are two types of Capital Assets:

Short-Term Capital Asset Short-Term Capital Asset refers to a capital asset that is held for equal to or less than a specified period (say 36 months). Long-Term Capital Asset

Long-Term Capital Asset refers to a capital asset that is held for more than a specified period (say 36 months).

Securities Transaction Tax (STT)

Securities Transaction Tax (STT) is a tax levied on every purchase or sale of securities listed on recognized stock exchanges such as shares, bonds, mutual funds, etc. It is levied on the value of the transaction of securities. Thus, it is distinct from Capital Gains Tax, which applies to the profit you earn on the sale of securities. STT was introduced in the Budget of 2004. The primary purpose for introducing the Securities Transaction Tax (STT) is to curb tax evasion on capital gains as the STT is taxed at source.

Digital Tax – Google Tax or GAFA Tax or Equalization Levy

Digital Tax, also known as Digital Services Tax (DST), is a levy imposed on the earnings of digital companies from digital services provided in jurisdictions where they do not have a significant physical presence. This tax aims to address the challenges of taxing digital and online activities in the global economy. The rationale behind the tax can be seen as follows. Traditional tax systems rely on a company's physical presence in a country to determine tax liability. However, most digital businesses operate primarily online with minimal physical presence, allowing them to potentially avoid taxes in jurisdictions where they earn a significant portion of their profits. This, ultimately, has the effect of Base Erosion and Profit Shifting and puts a dent in the tax revenue of the countries where such companies make significant earnings. Digital Tax is known by different names in different jurisdictions and assumes shape accordingly. Some of the most prominent forms of Digital Tax are discussed in the sections that follow.

Google Tax is a form of Digital Tax or Digital Services Tax (DST). Though it is named after just one internet giant Google, it aims to levy a Digital Tax on all digital companies.

GAFA Tax is also a form of Digital Tax. GAFA Tax is named after Google, Apple, Facebook, and Amazon – the 4 largest technology and internet companies. Several countries across the world have introduced their own versions of the GAFA Tax.

Equalization Levy is a form of Digital Tax introduced in India in 2016. It is levied on the amount paid to non-resident companies (i.e. without permanent establishment) by Indian companies on 12 digital services, including online advertisement provided by them. It is applicable on payments exceeding ₹1 lakh during a financial year. It is a withholding tax, meaning that the Indian Company making payment to a non-resident digital service provider deducts the amount at the time of payment itself.

Other major direct tax:



Income Tax- It is a type of direct tax that is charged directly on the income of an entity such as Individuals, Hindu Undivided Families (HUFs), Cooperative Societies, Trusts, Partnership Firms, Companies, etc. Income tax is charged on “taxable income”, which depends on the total income and exemptions applicable.

Taxable Income = Total Income – Applicable Deductions and Exemptions.

Income Tax is of two types – Personal Income Tax and Corporate Income Tax. Each of these taxes is discussed in the sections that follow.

Personal Income Tax

It is often referred to as simply Income Tax, though it is a sub-type of Income Tax.

Personal Income Tax is the income tax levied on the incomes of Individuals, Households, Hindu Undivided Families (HUF), Partnership Firms, Sole Proprietorships, etc. Various types of income covered under Personal Income Tax are – salary, profits from business/profession, rental income, income from interest, royalty, etc. It is governed by the Income Tax Act, 1961 (IT Act, 1961).

Corporate Income Tax or Corporate Tax

It is often referred to as simply Corporate Tax. Corporate Income Tax is the income tax levied on profits earned by the incorporated firms or companies. Thus, similar to Personal Income Tax, Corporate Tax is also a type of Income Tax. But, since the contribution of Corporate Tax to the overall tax revenue is significantly high, so it has been made a separate category of income tax. Companies, both public and private, which are registered in India under the Companies (Amendment) Act, 2019 are liable to pay Corporate Tax. It is also governed by the Income Tax Act, 1961 (IT Act, 1961).

Dividend Distribution Tax (DDT) is a tax imposed on dividends paid by a corporation to its shareholders. It is a withholding tax, meaning the company deducted the tax before paying out the dividends to shareholders. In India, only domestic companies as defined under the IT Act had to pay Dividend Distribution Tax (DDT). However, DDT has been abolished in India w.e.f. 1st April, 2020.

Wealth Tax

Wealth Tax is a tax levied on the net wealth or assets of Individuals, Hindu Undivided Families (HUFs), or Companies. Unlike Income Tax, which is based on earnings, Wealth Tax targets the value of owned assets. In India, Wealth Tax was governed by the Wealth Tax Act, 1957. However, it has been abolished w.e.f. 1st April, 2016.

Banking Cash Transaction Tax (BCTT)

Banking Cash Transaction Tax (BCTT) is a tax levied on cash withdrawals exceeding a specified amount (say ₹25,000) in a day by an Individual or HUF from a non-saving bank account (i.e. bank accounts other than savings bank accounts).

In India, it was introduced in 2005. However, later, it was withdrawn in 2009. In 2017, the Committee of Chief Ministers on Digital Payments recommended the re-introduction of BCTT to promote digital payments. However, it has not been re-introduced as of now. BCTT helps the government prevent tax evasion by taxing at the source itself. However, the flip side is that any such tax adds to the burden of the customer and may receive a backlash.

Professional Tax



Professional Tax is a tax levied on individuals earning an income from salary or practicing a profession such as chartered accountants, lawyers, doctors, and other similar professions. Unlike other direct taxes, it is levied and collected by State Governments

80. D

Some key categories of Goods and Services Tax (GST) exempted commodities in India include:

1. Food and Agricultural Products

Fresh fruits and vegetables

Unprocessed cereals and pulses

Fresh milk, eggs, curd, lassi, buttermilk, and unbranded natural honey

Unprocessed tea leaves and coffee beans

Jaggery and salt

Fresh and frozen meat and fish (not in unit containers and bearing a registered brand name)

Live animals (excluding horses)

2. Educational and Cultural Items

Printed books, newspapers, and journals (excluding those with advertising)

Educational services provided by recognized institutions (up to higher secondary)

Children's drawing books, slates, pencils, and chalk

Handmade jute products, khadi fabrics, and clay lamps

3. Healthcare and Medical Products

Blood and its derivatives

Contraceptives, vaccines, and life-saving drugs

Diagnostic services and ambulance services

Healthcare services provided by clinical establishments or authorized medical practitioners (with certain limitations, like daily room charges)

4. Public Utilities and Transportation

Potable water (excluding bottled drinking water)

Electricity transmission or distribution

Non-AC public transport (buses, trains, metro, ferries)



Transportation of agricultural produce and milk

Transportation of goods by road (excluding courier agencies)

Services provided by the government and local authorities related to sovereign functions (like defense, law enforcement)

5. Miscellaneous

Religious items like Prasad, holy books, and Rudraksha beads

Human hair (untreated or unprocessed)

Organic manure

Differences between exempt, nil-rated, and zero-rated supplies under GST

Under the Goods and Services Tax (GST) regime, supplies are categorized based on their tax implications, affecting how businesses handle GST and claim Input Tax Credit (ITC).

Here's a breakdown of the key differences:

1. Exempted supplies

Definition: These are supplies exempted from GST by government notification, often for public interest. No GST is levied. Input Tax Credit (ITC): ITC cannot be claimed.

Examples: Education, healthcare, and some agricultural products.

Reporting: Must be reported in GST returns (GSTR-1).

2. Nil-rated supplies - Supplies with an explicit 0% GST rate. Input Tax Credit (ITC): ITC cannot be claimed.

Examples: Essential commodities like grains, salt, and some fruits and vegetables.

3. Zero-rated supplies

Defined under the IGST Act, primarily to promote exports and international trade. **GST Rate:** 0% GST applies. **Input Tax Credit (ITC):** ITC can be claimed and refunded or used against other liabilities.

Examples: Exports and supplies to Special Economic Zones (SEZs).

4. Non-taxable supplies

Meaning: These supplies are outside the scope of GST and are not taxed.

Input Tax Credit (ITC) eligibility: Not applicable as they are outside GST.

Examples: Alcohol for human consumption and petroleum products. Certain services like funeral services are also included.

Reporting: Must be reported separately in GST returns for clear records.



Purpose: Exempt and nil-rated supplies aim to make essential goods affordable, while zero-rated supplies promote exports and trade. Non-taxable supplies as defined under Section 2(78) – supplies that are not taxable under the Act (For Example Alcoholic liquor for human consumption)

81.D

Fiscal spillovers refer to the cross-border impact of one country's fiscal policy on the economic activity of other countries. Essentially, a change in government spending or taxation in one nation can create ripple effects across the globe, affecting trade, finance, and overall economic performance in other countries. According to the IMF, spillovers may be stronger among countries with fixed exchange rate regimes. An increase in government spending in a major economy like the US can have a global impact, particularly on connected economies like Canada and those in Latin America.

82. B

Under the Goods and Services Tax (GST) regime in India, states have the power to levy and collect State Goods and Services Tax (SGST). This is one of the four types of GST in India, with the others being:

Central Goods and Services Tax (CGST) Collected by the central government on intra-state (within the same state or Union Territory) supplies.

Integrated Goods and Services Tax (IGST) Levied on interstate transactions, including imports and exports, by the Central Government.

Union Territory Goods and Services Tax (UTGST) Similar to SGST, it applies in Union Territories without a legislature (e.g., Andaman and Nicobar Islands, Chandigarh).

SGST is levied on the intra-state supply of goods and services. The revenue generated through SGST is collected by the State Government.

Taxes replaced by SGST Before the implementation of GST, states had the authority to levy various indirect taxes. SGST replaced or subsumed a number of state-level taxes, including:

State Value Added Tax (VAT)

Central Sales Tax (CST)

Luxury Tax

Entry Tax (all forms, including Octroi)

Entertainment and Amusement Tax (except when levied by local bodies)

Taxes on Advertisements

Purchase Tax

Taxes on Lotteries, Betting, and Gambling

State Surcharges and Cesses (insofar as they relate to the supply of goods and services)



Taxes not subsumed under SGST (and thus remaining with the states)

While SGST significantly streamlined the tax structure by replacing a multitude of state-level taxes, certain taxes remain outside the purview of SGST and continue to be levied and collected by the respective state governments, including:

Taxes on Petroleum Products These products, such as petrol, diesel, Aviation Turbine Fuel (ATF), and natural gas, are currently outside the GST regime and continue to be taxed under the previous tax system (e.g., excise duty, VAT, and other state taxes).

State Excise Duty on Alcoholic Liquor for Human Consumption This remains a state subject, meaning states can levy and collect taxes on alcohol as per their discretion.

Electricity Duty Levied by states on the consumption of electricity.

Stamp Duty and Registration Fees on Immovable Property These are levied by states on property transactions.

Motor Vehicle Tax Levied by states at the time of vehicle registration.

It is important to note that the GST Council, a joint forum of the Central and State governments, decides the GST rates and related policies. This collaborative approach ensures that both the Central and State governments have a say in the indirect tax structure.

83.B

84.D

85.B

86.A



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