



DAILY UPSC NEWSPAPER ANALYSIS

01 OCTOBER 2026 - CORRECTED DETAILED EDITION



UPSC CSE 2027 | Prelims + Mains + Interview

10 concept-first current affairs | actual Places-in-News maps | detailed MCQs | 4 complete model answers

Correction implemented: concepts are now taught from basics and then linked to the current issue; current affairs are expanded with mechanism, causes, institutions, impact, critical analysis and solutions; map pages contain actual plotted political/geographical outlines rather than text-only placeholders.





1. UPSC AT 100: FROM COLONIAL PUBLIC SERVICE COMMISSION TO CONSTITUTIONAL GUARDIAN OF MERIT

Syllabus / PYQ linkage: GS-II: Constitutional bodies, civil services and governance | GS-IV: impartiality, integrity and public service

WHY IN NEWS

The Union Public Service Commission began its centenary celebrations as India's public-service recruitment institution completed 100 years from the establishment of the first Public Service Commission on 1 October 1926. The centenary is important for UPSC not merely as institutional history but as a debate about merit, fairness, equal opportunity and a future-ready civil service.

BACKGROUND

The demand for an independent recruitment body grew because a professional civil service could not remain dependent on executive patronage. The Lee Commission (Royal Commission on the Superior Civil Services in India, 1924) recommended a Public Service Commission, leading to the first PSC in 1926. The Government of India Act, 1935 provided for a Federal Public Service Commission and provincial commissions. After the Constitution came into force, UPSC received direct constitutional status under Articles 315-323.

KEY CONCEPTS FROM BASICS

Article 315 provides for Union and State Public Service Commissions. Article 316 concerns appointment and term; Article 317 provides a protected removal/suspension framework; Article 320 enumerates major functions; Article 322 charges Commission expenditure on the Consolidated Fund; Article 323 concerns reports. UPSC conducts examinations and is consulted on specified recruitment, appointment, promotion, transfer and disciplinary matters. Its advice is generally advisory: independence in recruitment does not make UPSC a parallel executive.

EDITORIAL / CRITICAL ANALYSIS

The constitutional design reconciles two democratic needs. First, the permanent executive requires competence, continuity and political neutrality. Second, elected governments must remain accountable for policy and administration. UPSC therefore receives institutional insulation but not executive sovereignty. Its credibility also gives substantive meaning to equality of opportunity in public employment. In the second century, the idea of merit itself must evolve beyond memory-based knowledge toward analytical reasoning, ethics, domain competence, communication, adaptability and digital literacy.

ISSUES & CHALLENGES

Mass-scale examinations face impersonation, cyberattacks, paper-security risks and litigation. Candidates require predictable calendars, accessible examination centres and disability/language accommodation. Government also needs specialists in cyber security, climate, AI, finance and health, creating tension between generalist recruitment and domain expertise. Algorithmic tools may improve efficiency but can create opaque bias if they are not auditable.

SOLUTIONS / WAY FORWARD

Protect the constitutional core while modernising processes: end-to-end cybersecure examinations; transparent and predictable calendars; competency-based testing; accessible design; carefully structured specialist/lateral recruitment; auditable technology; stronger post-entry training; and public reporting on examination integrity and grievance handling.

KEY POINTS FOR UPSC

Articles 315-323 are the constitutional cluster. UPSC is constitutional, not statutory. Article 322 protects financial independence. Its advice is generally advisory. The historical 1926 Commission should not be assumed to possess the same constitutional status as today's UPSC.

INTEGRATED CONTENT-HEAVY INFOGRAPHIC | STATIC + DATA + MECHANISM + TRAPS

HISTORY	INDEPENDENCE	ACCOUNTABILITY
Lee Commission 1924 -> PSC 1926 -> Federal PSC under 1935 Act -> UPSC under Constitution 1950.	Constitutional status + tenure/removal safeguards + charged expenditure reduce day-to-day executive leverage.	Rules + annual reporting + judicial review + elected executive's responsibility prevent independence becoming unaccountable power.
MERIT 2.0	REFORM TEST	PRELIMS TRAP
Knowledge reasoning integrity communication adaptability data/digital literacy domain competence.	Technology should increase trust, transparency and access; it should not create black-box selection.	Art 320 = functions; Art 322 = expenses. UPSC is not a court and does not govern civil servants after recruitment.

2. RABI MSP 2027-28: PRICE SUPPORT, CROP DIVERSIFICATION AND RESOURCE SECURITY

Syllabus / PYQ linkage: GS-III: Agriculture, MSP, food security | GS-I: agricultural geography and resources

WHY IN NEWS

The Cabinet Committee on Economic Affairs approved higher MSPs for all six mandated rabi crops for marketing season 2027-28. The pattern matters: wheat receives only a Rs 25 increase while safflower receives Rs 675, rapeseed-mustard Rs 413 and lentil Rs 390. The relative signal favours pulses and oilseeds at a time when diversification, edible-oil imports and water stress are major policy concerns.

BACKGROUND

MSP is announced before the marketing season to provide a price signal and a degree of downside protection. Recommendations are made by the Commission for Agricultural Costs and Prices after considering costs, demand-supply, inter-crop parity, domestic/international prices and broader economic effects. But MSP announcement and actual procurement are different: procurement intensity varies sharply by crop and geography.

KEY CONCEPTS FROM BASICS

The official cost used for the 1.5-times policy includes paid-out expenses and imputed family labour. In standard CACP terminology, A2 captures paid-out costs; A2+FL adds imputed family labour; C2 is a broader economic cost including imputed rental value of owned land and interest on owned fixed capital. A farmer's real incentive is expected market return = price x yield x probability of sale minus costs and risk, not MSP alone.

EDITORIAL / CRITICAL ANALYSIS

The spatial concentration of rice-wheat procurement in Punjab, Haryana and western Uttar Pradesh shows how price policy can reshape agricultural geography. Assured procurement, irrigation and mandi networks made cereals economically reliable even where paddy imposes groundwater costs. Higher relative support for mustard, safflower and lentil can encourage diversification, but only where procurement, processing, seeds, agronomy and markets support the shift. Thus MSP can serve income, food-security, import-substitution and ecological goals, but these objectives may conflict.

ISSUES & CHALLENGES

Procurement remains uneven; pulse/oilseed yields are volatile; storage and processing are weaker than for cereals; excessive support can add fiscal/stock costs; consumer prices matter; and crop shifts made without agro-climatic suitability can create new ecological problems.

SOLUTIONS / WAY FORWARD

Combine differentiated price signals with decentralised procurement/price-deficiency support, improved pulse-oilseed varieties, FPO aggregation, processing clusters, warehouses, crop insurance, micro-irrigation and district water budgets. The long-term metric should move toward farm income and nutrition per unit of scarce water.

KEY POINTS FOR UPSC

MSP 2027-28 (Rs/qlt): wheat 2610; barley 2286; gram 5958; lentil 7390; rapeseed-mustard 6613; safflower 7215. Official margins over cost: 106%, 58%, 59%, 92%, 96%, 50% respectively. MSP announcement is not universal procurement.

INTEGRATED CONTENT-HEAVY INFOGRAPHIC | STATIC + DATA + MECHANISM + TRAPS

PRICE TABLE	COST TABLE	DECISION TREE
Wheat 2610 (+25) Barley 2286 (+136) Gram 5958 (+83) Lentil 7390 (+390) Mustard 6613 (+413) Safflower 7215 (+675).	Official cost Rs/qlt: Wheat 1264 Barley 1447 Gram 3751 Lentil 3854 Mustard 3367 Safflower 4810.	MSP signal -> procurement access -> expected yield -> water/input cost -> local processing -> market risk -> acreage response.
ECONOMIC LINK	ECOLOGY LINK	PRELIMS TRAP
Oilseed/pulse diversification can reduce import dependence; cereal procurement supports food security but may reinforce stock/fiscal burdens.	Crop choice alters groundwater, fertiliser demand, soil rotation and energy use. Price policy is therefore also resource policy.	MSP != universal legal purchase guarantee. A2+FL != C2. Rabi MSP basket includes cereals, pulses and oilseeds.

3. GREEN ENERGY CORRIDOR PHASE-III: TRANSMISSION AND STORAGE AS THE NEXT ENERGY BOTTLENECK

Syllabus / PYQ linkage: GS-III: Energy, infrastructure, climate change and technology

WHY IN NEWS

Green Energy Corridor Phase-III has been approved with an outlay of Rs 1,86,405 crore. It aims to create intra-state transmission infrastructure capable of evacuating up to 135 GW of renewable energy and deploy 50 GWh of Battery Energy Storage Systems, with completion targeted by FY 2032-33.

BACKGROUND

India's early renewable transition focused on adding solar and wind generation capacity. As variable renewable energy rises, the constraint increasingly shifts to the network: power must be evacuated from resource-rich regions, moved to demand centres, balanced in real time and stored when generation and demand do not coincide.

KEY CONCEPTS FROM BASICS

GW is power - the instantaneous rate at which energy is generated or delivered. GWh is energy - power multiplied by time. A BESS therefore has both a power rating and an energy/duration rating. Transmission solves spatial mismatch; storage helps solve temporal mismatch. Intra-State Transmission Systems connect generation and loads within a State and interface with the wider national grid.

EDITORIAL / CRITICAL ANALYSIS

Solar generation can surge around midday while demand peaks later, creating the well-known net-load 'duck curve'. Without flexibility, the system may curtail renewable generation and then ramp conventional plants rapidly after sunset. Batteries can charge during surplus periods and discharge later; pumped hydro, demand response, flexible generation and inter-regional transfer provide complementary flexibility. Thus the energy transition is becoming a system-design challenge, not simply a capacity-addition exercise.

ISSUES & CHALLENGES

Transmission corridors require land/right-of-way and ecological clearances. Batteries create mineral-supply, cost, recycling and fire-safety issues. Forecasting errors and weak distribution-company finances can reduce efficient dispatch. Generation projects can be commissioned faster than transmission.

SOLUTIONS / WAY FORWARD

Plan transmission anticipatorily; improve weather/load forecasting; expand time-of-day pricing and demand response; use diversified storage including pumped hydro; develop battery manufacturing and recycling; deploy grid-forming technologies; and coordinate State and national resource-adequacy planning.

KEY POINTS FOR UPSC

Total outlay Rs 1,86,405 crore; central support Rs 54,082 crore; up to 135 GW RE evacuation; 50 GWh BESS; target FY 2032-33. State Transmission Utilities are overall implementing agencies. Greenfield InSTS uses competitive bidding/BOOM architecture; brownfield strengthening can use cost-plus.

INTEGRATED CONTENT-HEAVY INFOGRAPHIC | STATIC + DATA + MECHANISM + TRAPS

SCHEME MATH	SPACE PROBLEM	TIME PROBLEM
Rs 1,36,378 cr transmission + Rs 50,000 cr BESS ≈ Rs 1,86,405 cr total Central support Rs 54,082 cr.	Wind/solar resource zone -> transmission corridor -> load centre. Grid moves electricity across geography.	Midday solar surplus -> charge storage -> evening solar fall + high demand -> discharge storage.
FLEXIBILITY STACK	IMPLEMENTATION	PRELIMS TRAP
BESS + pumped storage + demand response + flexible hydro/thermal + forecasting + power markets + stronger inter-regional grid.	STU = overall implementing agency greenfield: TBCB/BOOM brownfield strengthening: cost-plus.	GW = power; GWh = energy. BESS stores electricity; it is not a primary energy source.

4. EXTERNAL DEBT AND INTERNATIONAL INVESTMENT POSITION: READING INDIA'S EXTERNAL BALANCE SHEET

Syllabus / PYQ linkage: GS-III: Indian economy, balance of payments, external sector

WHY IN NEWS

India's external-debt stock stood at about \$778.2 billion at end-June 2026, with the debt-to-GDP ratio around 20.8%. The numbers are useful only when read with maturity, currency, borrower composition, reserves and external earnings.

BACKGROUND

Countries borrow abroad through government borrowing, external commercial borrowings, trade credit, deposits and other instruments. Borrowing can finance productive investment, but foreign-currency and short-maturity liabilities expose borrowers to exchange-rate and refinancing shocks.

KEY CONCEPTS FROM BASICS

External debt is a stock at a point in time. The current account is a flow during a period. The International Investment Position is the stock of residents' external financial assets minus/against liabilities. Debt/GDP is a ratio: absolute debt may rise while the ratio falls if nominal GDP grows faster. Valuation effects can change the dollar value of liabilities when currencies move.

EDITORIAL / CRITICAL ANALYSIS

External vulnerability is therefore multidimensional. A country with larger debt but long maturities, high reserves and strong export earnings may be safer than one with smaller debt but large near-term foreign-currency obligations. Currency mismatch is critical: if revenue is in rupees but debt service is in dollars, depreciation increases the domestic-currency burden. India also benefits from services exports and remittances, which create recurring foreign-exchange earnings.

ISSUES & CHALLENGES

Global interest-rate increases raise refinancing costs; sudden risk aversion can restrict capital access; unhedged corporate borrowing creates balance-sheet risk; and excessive reliance on short-term debt can create rollover pressure.

SOLUTIONS / WAY FORWARD

Maintain adequate reserve buffers; monitor short-term debt and debt service; encourage hedging; deepen rupee-denominated bond markets; strengthen export competitiveness; and maintain transparent, frequent external-sector statistics.

KEY POINTS FOR UPSC

Do not treat external debt as sovereign debt alone. Separate stock, flow, ratio and valuation effect. Debt sustainability depends on repayment capacity, maturity and currency composition, not a single headline number.

INTEGRATED CONTENT-HEAVY INFOGRAPHIC | STATIC + DATA + MECHANISM + TRAPS

DIAGNOSTIC 1	DIAGNOSTIC 2	DIAGNOSTIC 3
SIZE: external debt stock and debt/GDP.	MATURITY: short-term obligations and rollover needs.	CURRENCY: dollar/other FX exposure and hedging.
SHOCK CHAIN	BUFFERS	PRELIMS TRAP
Global rates $\uparrow$ $\rightarrow$ refinancing cost $\uparrow$ $\rightarrow$ FX demand/risk premium $\uparrow$ $\rightarrow$ unhedged borrower stress.	Forex reserves + exports + services receipts + remittances + longer maturity + domestic-currency finance.	Current account = flow. IIP/external debt = stocks. Valuation change can occur without fresh borrowing.

5. SCO AND INDIA'S EURASIAN CONNECTIVITY: GEOGRAPHY, SECURITY AND STRATEGIC AUTONOMY

Syllabus / PYQ linkage: GS-II: Regional organisations and India's neighbourhood | GS-III: security/connectivity

WHY IN NEWS

India's participation in SCO processes in Islamabad has renewed focus on Eurasian connectivity, transit and security cooperation. The deeper issue is geographical: India has limited direct overland access to landlocked Central Asia.

BACKGROUND

The SCO evolved from the Shanghai Five process and today brings together major Eurasian states. Its agenda spans security, economic cooperation and regional dialogue. The Regional Anti-Terrorist Structure (RATS) supports cooperation against terrorism, separatism and extremism.

KEY CONCEPTS FROM BASICS

Connectivity is not merely road construction. A functional corridor requires ports/rail/road links, customs harmonisation, finance, insurance, predictable transit and political acceptance. Chabahar in Iran and the International North-South Transport Corridor offer India alternative routes toward Iran, the Caspian region, Russia and Central Asia.

EDITORIAL / CRITICAL ANALYSIS

Central Asia matters for energy, critical minerals, markets, Afghanistan-related security and geopolitical location between Russia, China, West Asia and South Asia. India uses the SCO to maintain a continental diplomatic presence even while expanding Indo-Pacific partnerships. This is consistent with strategic autonomy: participation in different groupings can serve different issue-specific interests.

ISSUES & CHALLENGES

Pakistan transit constraints, instability in Afghanistan, sanctions/geopolitical frictions around Iran/Russia, competing Chinese corridors and consensus-based decision-making can reduce implementation speed.

SOLUTIONS / WAY FORWARD

Improve Chabahar/INSTC logistics; build customs and digital trade connectivity; deepen Central Asian education, technology and energy links; cooperate on terror finance/narcotics; and assess corridors for commercial viability and sovereignty implications.

KEY POINTS FOR UPSC

SCO is not a NATO-style mutual-defence alliance. RATS is an SCO security body, not FATF. The landlocked geography of Central Asia is a core static linkage.

INTEGRATED CONTENT-HEAVY INFOGRAPHIC | STATIC + DATA + MECHANISM + TRAPS

MAP CHAIN	CENTRAL ASIA	SECURITY
India -> Arabian Sea -> Chabahar/Iran -> inland Iran -> Caspian/continental routes -> Central Asia/Russia.	Kazakhstan Kyrgyzstan Tajikistan Turkmenistan Uzbekistan: landlocked continental geography.	Terrorism + radicalisation + narcotics + Afghanistan instability + border security.
ECONOMY	STRATEGIC LOGIC	PRELIMS TRAP
Energy/minerals + trade diversification + logistics + digital/education links.	SCO = continental engagement; Indo-Pacific groupings = maritime engagement. They need not be mutually exclusive.	Chabahar is Iran; RATS ≠ FATF; SCO ≠ military alliance.

6. AFSPA EXTENSION: EXTRAORDINARY SECURITY POWERS, RIGHTS AND THE PATH BACK TO NORMALCY

Syllabus / PYQ linkage: GS-III: Internal security | GS-II: fundamental rights/federalism | GS-IV: ethics of coercive power

WHY IN NEWS

The Ministry of Home Affairs extended AFSPA for six months from 1 October 2026 in designated disturbed areas of Manipur, Nagaland and Arunachal Pradesh. The notification is geographically selective rather than a blanket application to the entire North-East.

BACKGROUND

AFSPA 1958 emerged in the context of insurgency in the North-East and has historical antecedents in a colonial 1942 ordinance. A separate Armed Forces (Jammu and Kashmir) Special Powers Act applies in J&K.; The Supreme Court upheld the 1958 Act's constitutional validity with safeguards in Naga People's Movement of Human Rights v. Union of India (1997).

KEY CONCEPTS FROM BASICS

Section 3 enables a disturbed-area declaration by the competent authority. Section 4 provides specified operational powers, including use of force subject to statutory conditions, arrest without warrant, search and action against specified hideouts/arms dumps. Section 6 requires prior Central Government sanction for prosecution/legal proceedings for acts purportedly done under the Act. These powers operate in aid of civil power; they do not suspend the Constitution.

EDITORIAL / CRITICAL ANALYSIS

The case for AFSPA is that armed insurgency may exceed ordinary policing capacity, requiring rapid military operations. The counter-concern is that prolonged exceptional power can weaken accountability and public trust. This is not only a rights question but also a security question: counter-insurgency depends on local intelligence and legitimacy. The ethical standard should therefore be necessity, proportionality, non-discrimination, accountability and remedy.

ISSUES & CHALLENGES

Manipur's ethnic conflict, difficult border terrain, illicit arms/narcotics networks and weak civilian capacity complicate withdrawal. At the same time, indefinite disturbed-area status risks normalising emergency governance.

SOLUTIONS / WAY FORWARD

Use granular security indicators for six-month reviews; strengthen State police, intelligence and forensics; investigate serious allegations promptly; expand victim support, dialogue and rehabilitation; improve border management; and define measurable exit conditions for restoring ordinary policing.

KEY POINTS FOR UPSC

Current coverage: Manipur broadly except 13 police-station jurisdictions in five valley districts; Nagaland in nine districts plus specified police-station areas in five others; Arunachal Pradesh in Tirap, Changlang, Longding and specified Namsai police-station areas. AFSPA does not suspend constitutional rights.

INTEGRATED CONTENT-HEAVY INFOGRAPHIC | STATIC + DATA + MECHANISM + TRAPS

LEGAL MAP	JUDICIAL LINK	ETHICS TEST
Sec 3: disturbed area -> Sec 4: special operational powers -> Sec 6: prior sanction provision.	Naga People's Movement (1997): validity upheld with safeguards; extraordinary power remains subject to constitutional/legal limits.	Necessity -> proportionality -> minimum harm -> accountability -> remedy -> periodic review.
SECURITY PARADOX	EXIT LADDER	MAP TRAP
Tactical force without legitimacy can reduce citizen cooperation and intelligence, weakening long-term security.	Violence declines -> police/justice capacity rises -> political dialogue/rehabilitation -> notification shrinks -> normal policing.	Do not shade entire North-East. Coverage is notification-specific and can differ by district/police-station jurisdiction.

7. PLANETARY BOUNDARIES: SEVEN TRANSGRESSIONS AND THE LOGIC OF EARTH-SYSTEM RISK

Syllabus / PYQ linkage: GS-III: Environment, biodiversity and climate change | GS-I: physical geography

WHY IN NEWS

The 2026 Planetary Health Check assesses seven of nine planetary boundaries as outside the safe operating space. Ocean acidification has joined the set of transgressed boundaries, emphasising that environmental crises interact rather than operate in isolation.

BACKGROUND

The planetary-boundaries framework was developed to identify critical Earth-system processes whose stability helped support Holocene-like conditions. It uses control variables and risk zones to describe a safe operating space; it is a scientific framework, not an international treaty.

KEY CONCEPTS FROM BASICS

The nine processes cover climate change, biosphere integrity, biogeochemical nitrogen/phosphorus flows, land-system change, freshwater change, ocean acidification, stratospheric ozone depletion, atmospheric aerosol loading and novel entities such as synthetic chemicals/plastics. Boundary transgression means rising risk of large-scale or non-linear change, not an immediate global collapse.

EDITORIAL / CRITICAL ANALYSIS

The framework is valuable because environmental problems cascade. Deforestation releases carbon, reduces biodiversity, changes evapotranspiration and can alter rainfall. Excess nitrogen/phosphorus damages freshwater/coastal ecosystems and can contribute to oxygen depletion. CO₂ simultaneously warms climate and acidifies oceans. Sector-by-sector governance can therefore miss systemic feedbacks.

ISSUES & CHALLENGES

Global thresholds do not translate mechanically into fair national quotas; data uncertainty differs by process; aerosol effects are highly regional; and policy institutions remain fragmented across climate, water, agriculture, chemicals and biodiversity.

SOLUTIONS / WAY FORWARD

Rapid decarbonisation; ecosystem restoration; nutrient-use efficiency; regenerative/precision agriculture; freshwater protection; circular economy; chemical/plastic controls; ocean protection; and integrated Earth-system indicators in national planning.

KEY POINTS FOR UPSC

Seven assessed as transgressed in 2026: climate change, biosphere integrity, biogeochemical flows, land-system change, freshwater change, novel entities and ocean acidification. Ozone depletion and aerosol loading remain within the global boundary assessment.

INTEGRATED CONTENT-HEAVY INFOGRAPHIC | STATIC + DATA + MECHANISM + TRAPS

CLIMATE	BIOSPHERE + LAND	NUTRIENTS + WATER
CO ₂ /radiative forcing -> warming, extremes, ice/ocean impacts.	Species/ecosystem-function loss + land conversion -> weaker resilience/carbon-water regulation.	N/P overload + altered blue/green water -> eutrophication, soil/freshwater stress.
OCEAN	NOVEL ENTITIES	PRELIMS TRAP
CO ₂ uptake -> carbonate chemistry changes -> acidification -> coral/shell-former risk.	Synthetic chemicals, plastics and other human-made substances can exceed assessment/control capacity.	Scientific risk framework ≠ treaty; transgression ≠ instant tipping point.

8. CHIME AND 21-CM HYDROGEN: HOW RADIO ASTRONOMY MAPS COSMIC STRUCTURE

Syllabus / PYQ linkage: GS-III: Science & Technology, astronomy and frontier research

WHY IN NEWS

An international collaboration using the Canadian Hydrogen Intensity Mapping Experiment (CHIME), including Raman Research Institute participation, has reported a standalone cosmological neutral-hydrogen detection. It demonstrates the potential of 21-cm intensity mapping for studying large-scale cosmic structure.

BACKGROUND

Hydrogen is the most abundant element in the universe. Neutral atomic hydrogen produces a characteristic radio line through a hyperfine transition. Because radio wavelength/frequency changes with cosmological redshift, observations can encode both sky position and line-of-sight distance.

KEY CONCEPTS FROM BASICS

The rest wavelength is about 21 cm, corresponding to roughly 1420 MHz. Cosmic expansion stretches the wavelength, so distant hydrogen is observed at lower frequencies. Intensity mapping does not need to resolve every individual galaxy; it measures aggregate radio brightness across sky pixels and frequency channels and statistically reconstructs the distribution of matter.

EDITORIAL / CRITICAL ANALYSIS

This technique can survey enormous cosmic volumes efficiently. Large-scale structure carries signatures of the universe's expansion history and baryon acoustic oscillations, helping constrain cosmological models and dark-energy behaviour. The difficulty is that the desired cosmological signal is extremely faint relative to Milky Way emission, extragalactic foregrounds and human radio-frequency interference.

ISSUES & CHALLENGES

Calibration errors, foreground subtraction, radio interference, instrument systematics and very large computational datasets can mimic or obscure the signal.

SOLUTIONS / WAY FORWARD

Protect radio-quiet spectrum; invest in precision receivers and calibration; expand high-performance computing and statistical methods; deepen RRI/GMRT/SKA participation; and train interdisciplinary radio-data scientists.

KEY POINTS FOR UPSC

21-cm radiation comes from neutral hydrogen's hyperfine transition and lies in the radio spectrum. Redshift lowers the observed frequency. CHIME is in British Columbia, Canada; RRI is in Bengaluru.

INTEGRATED CONTENT-HEAVY INFOGRAPHIC | STATIC + DATA + MECHANISM + TRAPS

ATOM	REDSHIFT	3-D MAPPING
Neutral H proton/electron spin configuration -> hyperfine transition -> 21-cm photon.	Universe expands -> wavelength stretches -> observed frequency falls below rest 1420 MHz.	Angle on sky = transverse position frequency/redshift = line-of-sight distance.
INTENSITY MAPPING	SCIENCE PAYOFF	PRELIMS TRAP
Aggregate unresolved emission -> statistical hydrogen map, rather than cataloguing every galaxy.	Large-scale structure + BAO + expansion history -> tests of cosmological parameters/dark energy.	21 cm = radio neutral hydrogen; not optical oxygen, helium fission or gravitational waves.

9. AIME-2026 AT SUBIC BAY: ASEAN CENTRALITY AND PRACTICAL MARITIME INTEROPERABILITY

Syllabus / PYQ linkage: GS-II: India-ASEAN relations | GS-III: maritime security

WHY IN NEWS

The second ASEAN-India Maritime Exercise (AIME-2026) is being held around Subic Bay in the Philippines with Indian naval participation including INS Sahyadri and INS Kulish. The exercise demonstrates the practical security dimension of India's Act East and Indo-Pacific engagement.

BACKGROUND

ASEAN-led defence and maritime mechanisms seek cooperation among states with different strategic alignments. Exercises are useful because interoperability is built through repeated procedures rather than political declarations alone.

KEY CONCEPTS FROM BASICS

Interoperability means forces can communicate, share procedures and operate safely together. Maritime Domain Awareness combines vessel reports/AIS, coastal radar, aircraft, satellites and intelligence to create a common operational picture. HADR and Search and Rescue are politically less contentious areas where cooperation yields immediate public goods.

EDITORIAL / CRITICAL ANALYSIS

For India, ASEAN maritime cooperation supports sea-lane security, disaster response, anti-piracy capacity and diplomatic trust. For ASEAN, engagement with multiple partners can strengthen capacity while preserving centrality. Such exercises are not equivalent to a collective-defence alliance and should be understood as operational cooperation.

ISSUES & CHALLENGES

Strategic competition in the South China Sea, illegal fishing, trafficking, piracy, disasters and differing national threat perceptions can constrain common positions.

SOLUTIONS / WAY FORWARD

Institutionalise regular exercises; expand white-shipping information exchange; develop common HADR/SAR protocols; strengthen coast-guard and marine-pollution cooperation; and maintain navigation/security cooperation consistent with international law.

KEY POINTS FOR UPSC

Subic Bay is on western Luzon, Philippines, facing the South China Sea region. AIME is ASEAN-India cooperation, not an alliance commitment.

INTEGRATED CONTENT-HEAVY INFOGRAPHIC | STATIC + DATA + MECHANISM + TRAPS

LOCATION	INTEROPERABILITY	MDA STACK
Subic Bay -> western Luzon -> Philippines -> South China Sea approaches.	Common terminology -> communications -> tactical procedures -> coordinated manoeuvres -> joint response.	AIS + coastal radar + aircraft + satellites + intelligence -> common maritime picture.
PUBLIC GOODS	INDIA LINK	MAP TRAP
HADR SAR anti-piracy navigation safety pollution response capacity building.	Act East + Indo-Pacific + SAGAR/MAHASAGAR-style maritime cooperation + defence diplomacy.	Revise Luzon, South China Sea, Malacca, Sunda and Lombok; Subic Bay is not in Indonesia/Vietnam/Thailand.

10. MARITIME NARCOTICS INTERDICTION: COASTAL SECURITY, EEZ AND TRANSNATIONAL ORGANISED CRIME

Syllabus / PYQ linkage: GS-III: Organised crime, coastal security, money laundering and maritime domain awareness

WHY IN NEWS

A joint Indian Coast Guard-Gujarat ATS operation intercepted an Iranian dhow in India's western maritime approaches with roughly 526 kg of methamphetamine and heroin valued at more than Rs 3,000 crore, highlighting the Arabian Sea as a transnational trafficking route.

BACKGROUND

Large maritime consignments may move through mother vessels or dhows and then be transferred to smaller craft or coastal receivers. A seizure is therefore only the visible node of a larger network involving suppliers, financiers, handlers, distributors and money-laundering channels.

KEY CONCEPTS FROM BASICS

Under UNCLOS, the territorial sea generally extends to 12 nautical miles and involves sovereignty subject to international-law rules. The contiguous zone may extend to 24 nm for specified enforcement purposes. The EEZ may extend to 200 nm, where the coastal State has sovereign rights over natural resources and specified jurisdiction; it is not identical to territorial sovereignty.

EDITORIAL / CRITICAL ANALYSIS

Effective interdiction requires intelligence fusion. Coastal radar, vessel/AIS analytics, aircraft, satellites, fisher-community inputs and financial intelligence can identify anomalous behaviour. After boarding, investigators must preserve evidence, establish nationality/jurisdiction, trace communications and follow the money. Financial forensics is essential because organisers may never be physically present on the vessel.

ISSUES & CHALLENGES

The Arabian Sea is vast and commercially busy; traffickers can manipulate identity/tracking, use multinational crews and conduct ship-to-ship transfers. Cross-border evidence, prosecution and domestic demand further complicate enforcement.

SOLUTIONS / WAY FORWARD

Integrate sea-air surveillance; improve vessel risk scoring; deepen coastal-community intelligence; link narcotics investigations with financial/asset tracing; strengthen port/container profiling and international cooperation; and combine supply reduction with prevention and treatment.

KEY POINTS FOR UPSC

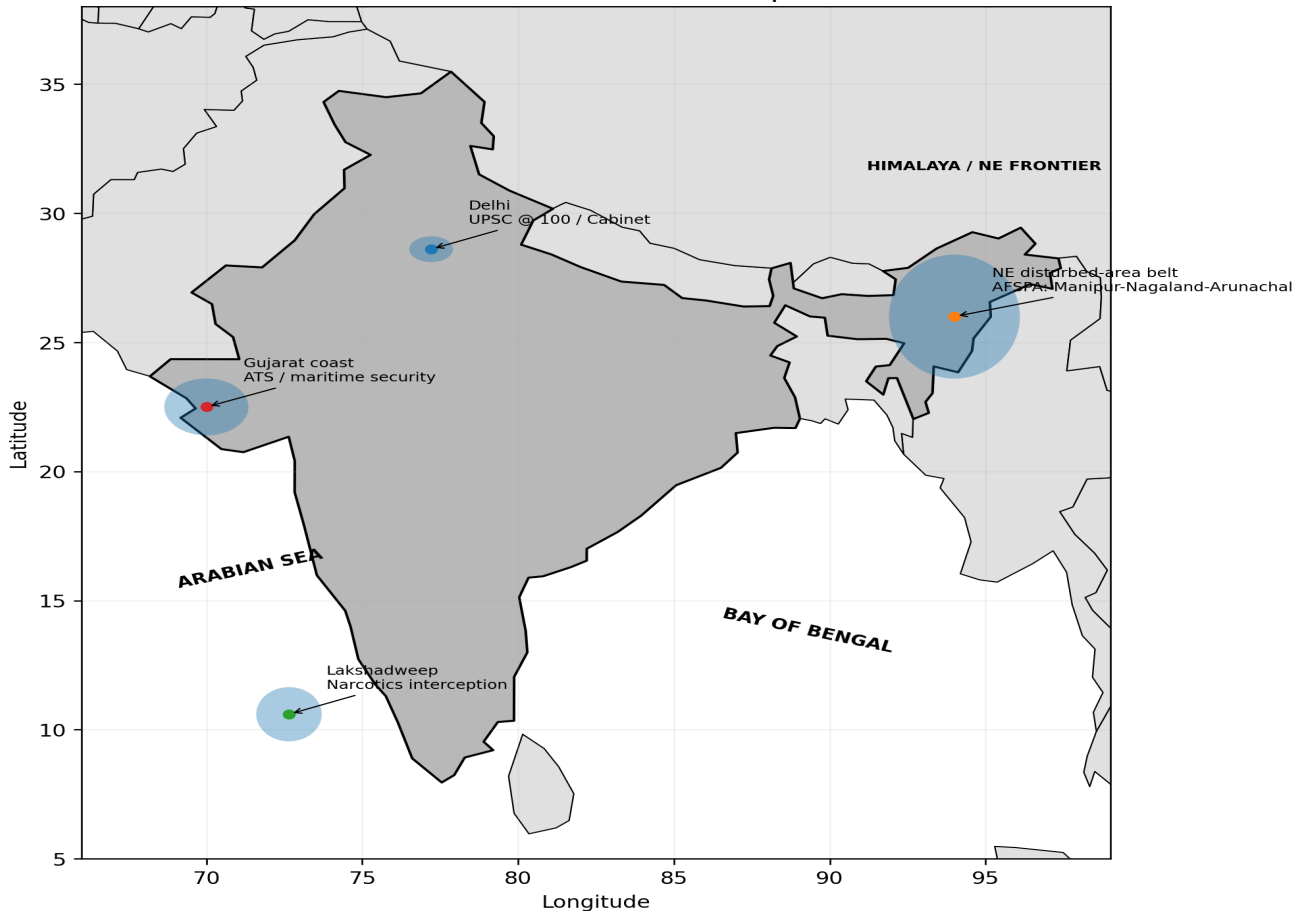
The Indian Coast Guard functions under the Ministry of Defence and is distinct from the Navy. EEZ does not mean full territorial sovereignty. Map Lakshadweep, Gujarat/Mumbai coast and western Arabian Sea approaches.

INTEGRATED CONTENT-HEAVY INFOGRAPHIC | STATIC + DATA + MECHANISM + TRAPS

SUPPLY CHAIN Producer/supplier -> financier -> mother/dhow vessel -> sea transfer -> coastal receiver -> wholesaler -> retail.	SEA-AIR CHAIN Intelligence -> aircraft/satellite/radar cue -> ship tracking -> boarding -> escort -> forensic/legal investigation.	MARITIME ZONES Territorial sea 12 nm contiguous zone 24 nm EEZ up to 200 nm: different legal rights/powers.
FOLLOW MONEY Accounts + hawala + crypto + property/assets + communications can identify organisers beyond arrested crew.	SECURITY NEXUS Drugs -> organised crime profits -> corruption/violence; investigate possible links rather than automatically assuming terror financing.	PRELIMS TRAP ICG under MoD; Coast Guard ≠ Navy; EEZ ≠ territorial sea; nautical mile ≠ kilometre.

MAP 1 - INDIA POLITICAL + GEOGRAPHICAL OVERVIEW

INDIA POLITICAL + GEOGRAPHICAL MAP | AREAS IN NEWS

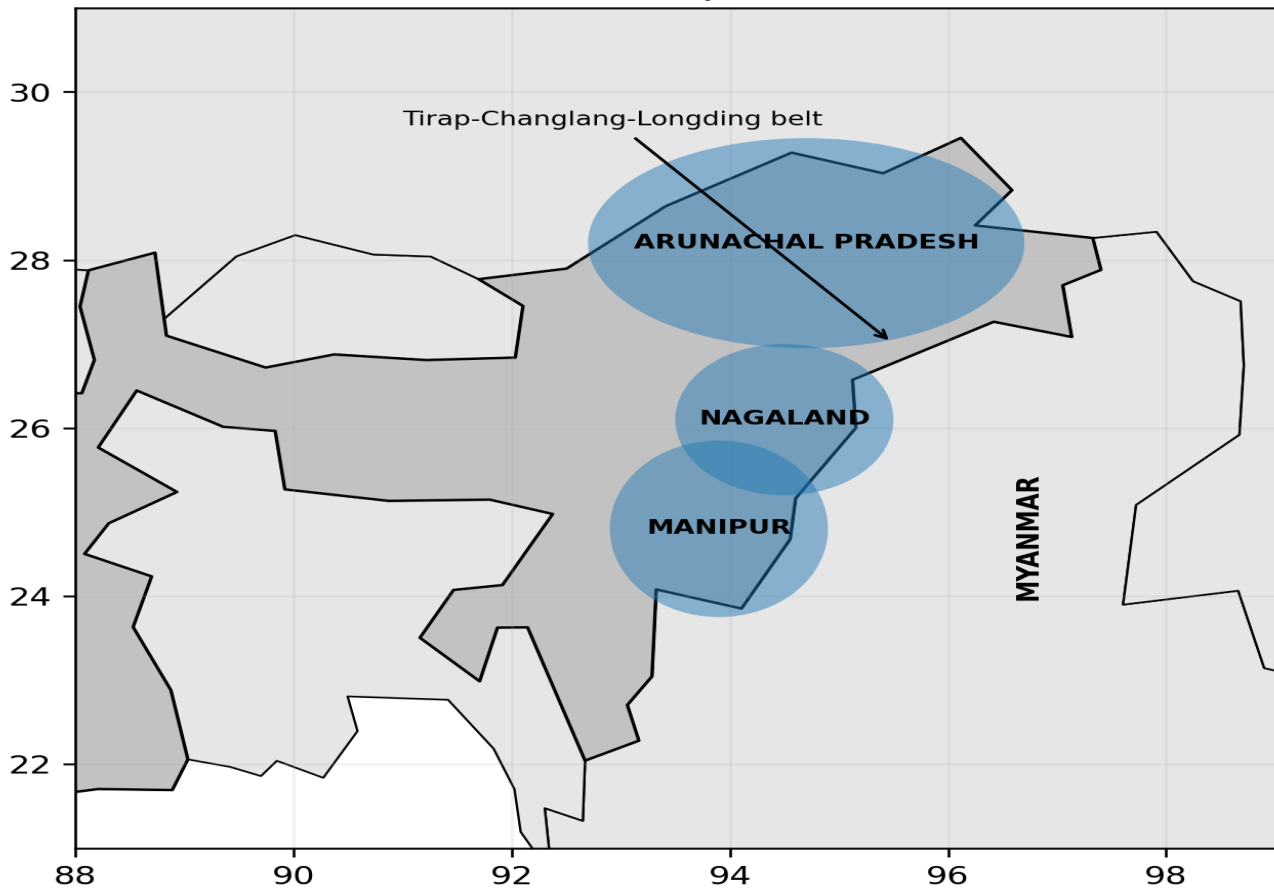


Coloured news zones: Delhi (UPSC centenary/Cabinet decisions); the North-East disturbed-area belt (AFSPA); Lakshadweep-Arabian Sea (narcotics interception); Gujarat coast (ATS/maritime security). Revise Arabian Sea, Bay of Bengal, Himalayan/North-East frontier and India's western/eastern maritime approaches.

UPSC map drill: Locate the place, identify adjoining country/sea/strait/border, connect one physical-geography feature, and write one current-affairs implication.

MAP 2 - NORTH-EAST INDIA ZOOM: AFSPA GEOGRAPHY

NORTH-EAST INDIA ZOOM | AFSPA AREAS IN NEWS

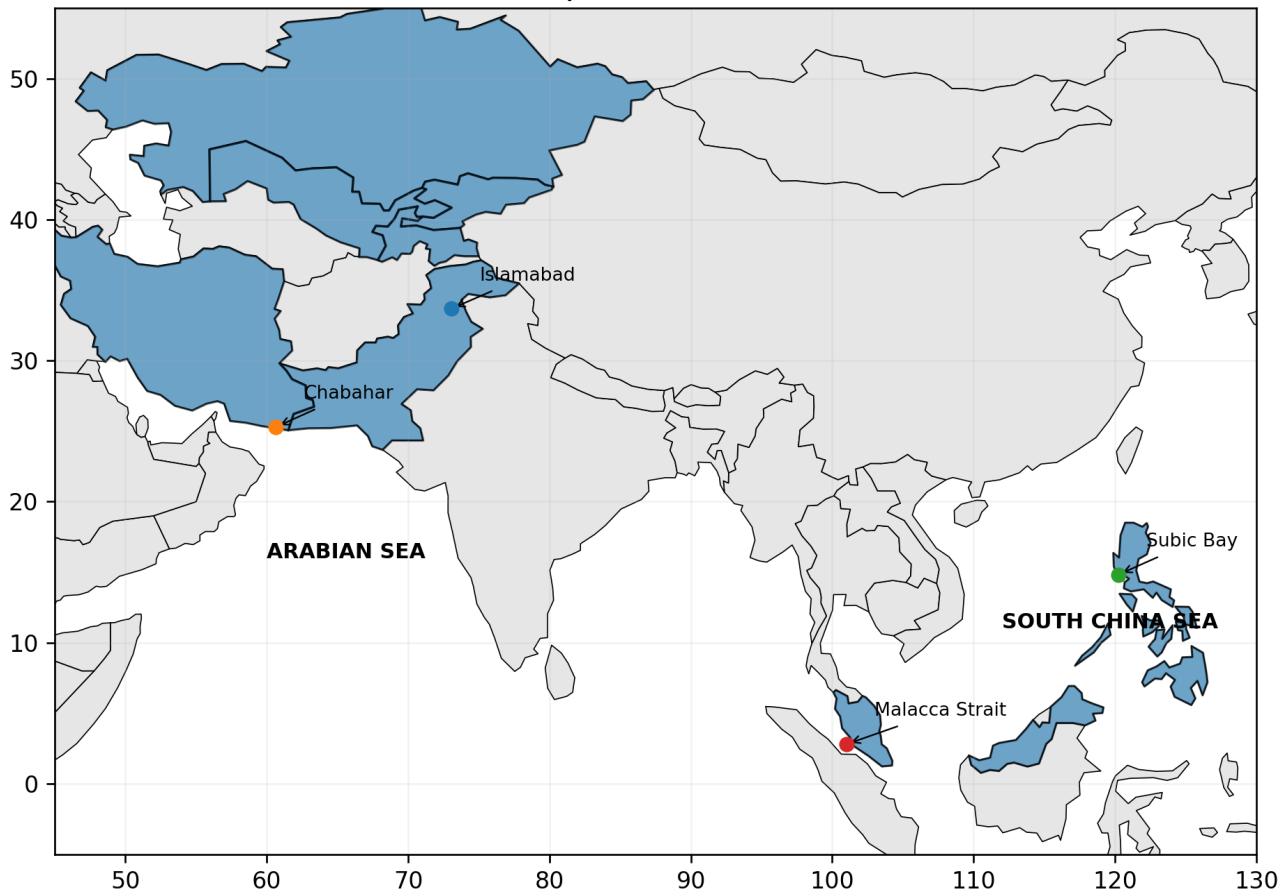


Zoom focus: Manipur, Nagaland and Arunachal Pradesh. In Arunachal Pradesh, revise the Tirap-Changlang-Longding belt and the Myanmar boundary. In Manipur, connect hill-valley geography, border management and the selective disturbed-area notification. Map practice should always pair the political unit with terrain and international boundary.

UPSC map drill: Locate the place, identify adjoining country/sea/strait/border, connect one physical-geography feature, and write one current-affairs implication.

MAP 3 - EURASIA + ASEAN: SCO AND AIME-2026

EURASIA + ASEAN POLITICAL MAP | CONNECTIVITY & MARITIME PLACES IN NEWS

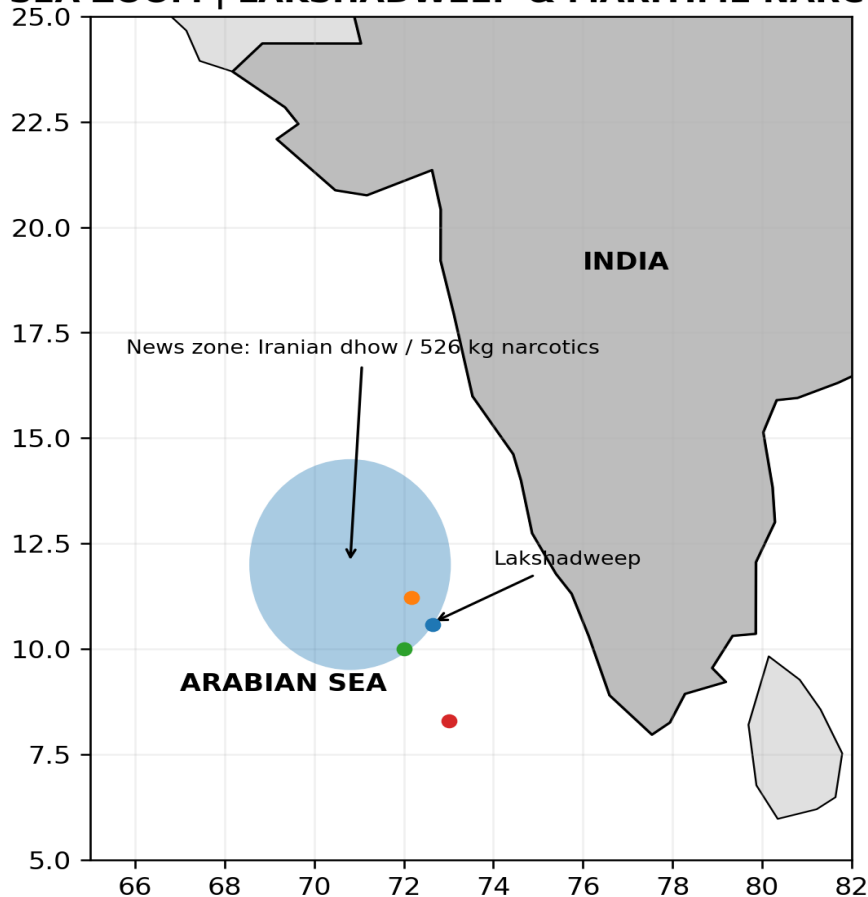


Coloured political context: Pakistan/Islamabad for SCO; Iran/Chabahar and Central Asia for continental connectivity; Philippines/Subic Bay and the Malacca-South China Sea system for AIME-2026. Revise landlocked Central Asia, Arabian Sea access, Luzon and Indo-Pacific chokepoints.

UPSC map drill: Locate the place, identify adjoining country/sea/strait/border, connect one physical-geography feature, and write one current-affairs implication.

MAP 4 - ARABIAN SEA ZOOM: LAKSHADWEEP NARCOTICS OPERATION

ARABIAN SEA ZOOM | LAKSHADWEEP & MARITIME NARCOTICS ROUTE



Zoom focus: Lakshadweep island chain, India's western coast and the Arabian Sea. The operation involved an Iranian dhow carrying heroin and methamphetamine intercepted west of Lakshadweep. Revise territorial sea (12 nm), contiguous zone (24 nm) and EEZ (up to 200 nm) as distinct maritime zones.

UPSC map drill: Locate the place, identify adjoining country/sea/strait/border, connect one physical-geography feature, and write one current-affairs implication.

PRELIMS PRACTICE - DETAILED OPTION-BY-OPTION SOLUTIONS

1. With reference to the Union Public Service Commission (UPSC), consider the following statements:

1. It is a constitutional body.
2. Article 320 deals with important functions of Public Service Commissions.
3. Expenditure of UPSC is ordinary voted expenditure of Parliament.

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Correct Answer: (b)

Detailed explanation

Statement 1 - Correct. UPSC derives its status directly from the Constitution; Articles 315-323 deal with Union and State Public Service Commissions.

Statement 2 - Correct. Article 320 covers functions such as conducting examinations and consultation on specified recruitment/personnel matters.

Statement 3 - Incorrect. UPSC expenditure is charged on the Consolidated Fund of India. This reduces the possibility of routine financial pressure through annual voting.

Option analysis: (a) is incomplete because Statement 2 is also correct. (b) correctly combines Statements 1 and 2. (c) and (d) fail because Statement 3 is false.

Static linkage / UPSC trap: Remember the independence safeguards together: constitutional status + protected tenure/removal framework + charged expenditure.

2. Consider the following crops: 1. Wheat 2. Gram 3. Rapeseed and Mustard 4. Safflower. Which are among the mandated rabi crops for which MSP is announced?

- (a) 1 and 2 only
- (b) 1, 2 and 3 only
- (c) 2, 3 and 4 only
- (d) 1, 2, 3 and 4

Correct Answer: (d)

Detailed explanation

All four listed crops are mandated rabi MSP crops. The complete set in the current decision is wheat, barley, gram, lentil (masur), rapeseed-mustard and safflower.

Wheat is a cereal; gram and lentil are pulses; rapeseed-mustard and safflower are oilseeds. This diversity is important because MSP is not confined to foodgrains.

Current figures worth revising: wheat Rs 2,610/qlt and safflower Rs 7,215/qlt; safflower received the largest absolute increase.

Option analysis: Options (a), (b) and (c) each exclude at least one valid crop. Option (d) includes all four correctly.

Static linkage / UPSC trap: UPSC may test season + crop category together. Do not confuse rabi crops with only wheat/barley.

3. The figure '50 GWh of BESS' in Green Energy Corridor Phase-III primarily refers to:

- (a) Maximum instantaneous power capacity
- (b) Amount of electrical energy that can be stored/delivered over time
- (c) Grid frequency support measured in hertz
- (d) Transmission voltage rating

Correct Answer: (b)

Detailed explanation

A watt is a unit of power; a watt-hour is a unit of energy. Therefore GWh measures an energy quantity.

A battery may separately have a power rating in MW/GW and an energy rating in MWh/GWh. For example, the same energy capacity can be discharged quickly at high power or more slowly at lower power depending on design.

GEC-III provides 50 GWh BESS to help with intermittency, congestion, peak curtailment and non-solar-hour demand.

Option analysis: (a) would normally be expressed in MW or GW. (b) is correct. (c) uses hertz, while (d) uses volts/kV.

Static linkage / UPSC trap: Do not treat GW and GWh as interchangeable; this is a classic energy Prelims trap.

4. Consider the following statements: 1. External debt is a stock variable. 2. The current account is a flow variable. 3. Absolute external debt may rise even while the external-debt-to-GDP ratio falls.

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Correct Answer: (d)

Detailed explanation

Statement 1 is correct because external debt is measured at a point in time.

Statement 2 is correct because the current account records transactions over a period.

Statement 3 is also correct: if nominal GDP grows faster than debt, the debt/GDP ratio can decline even when the debt stock rises. Valuation effects can also change dollar values.

Option analysis: All three statements are correct, so (a), (b) and (c) omit valid statements. (d) is the only complete combination.

Static linkage / UPSC trap: Always distinguish stock, flow, ratio and valuation effect before judging external vulnerability.

5. SCO-RATS is best described as:

- (a) A renewable-energy trading platform
- (b) The SCO's Regional Anti-Terrorist Structure
- (c) An agricultural price-support mechanism
- (d) A maritime boundary tribunal

Correct Answer: (b)

Detailed explanation

RATS is a permanent SCO mechanism concerned with cooperation against terrorism, separatism and extremism.

It supports information exchange and coordination among member states; it is not a military alliance command.

India's SCO engagement therefore has a security dimension alongside connectivity, diplomacy and economic cooperation.

Option analysis: (a), (c) and (d) belong to unrelated policy fields. (b) correctly expands the institutional role.

Static linkage / UPSC trap: Do not confuse SCO-RATS with FATF: FATF sets global AML/CFT standards; RATS is an SCO regional security mechanism.

6. Which statement about AFSPA is most accurate?

- (a) It automatically applies to every North-Eastern state
- (b) It operates in areas formally declared 'disturbed' under the relevant legal framework
- (c) It suspends the Constitution in notified areas
- (d) Only the Supreme Court can bring it into force

Correct Answer: (b)

Detailed explanation

AFSPA's special powers operate where a disturbed-area notification is in force; territorial coverage can be partial and periodically reviewed.

Current coverage in Manipur, Nagaland and Arunachal Pradesh is selective rather than a blanket covering of every police-station area.

Constitutional rights and judicial scrutiny do not disappear merely because AFSPA applies.

Option analysis: (a) wrongly assumes automatic blanket coverage. (b) is correct. (c) falsely equates special powers with constitutional suspension. (d) assigns the function to the wrong institution.

Static linkage / UPSC trap: Separate two questions: what powers the Act provides, and where the disturbed-area notification makes those powers operational.

7. The 21-cm line used in cosmology is associated with:

- (a) Neutral hydrogen hyperfine transition
- (b) Visible-light emission of oxygen
- (c) Nuclear fission of helium
- (d) Gravitational waves from black-hole mergers

Correct Answer: (a)

Detailed explanation

Neutral atomic hydrogen has a hyperfine transition involving the relative spin orientation of the proton and electron. It produces radio emission with rest wavelength about 21 cm and frequency about 1,420 MHz.

Cosmological expansion redshifts this radiation to longer wavelengths/lower observed frequencies.

Intensity mapping statistically measures aggregate hydrogen emission across large cosmic volumes instead of resolving each galaxy.

Option analysis: (a) is correct. (b) is an optical process, (c) is unrelated nuclear physics, and (d) concerns spacetime waves rather than radio photons.

Static linkage / UPSC trap: 21 cm = neutral H + radio astronomy + redshift. These three associations should be recalled together.

8. Subic Bay, the location connected with AIME-2026, is situated in:

- (a) Philippines
- (b) Indonesia
- (c) Vietnam
- (d) Thailand

Correct Answer: (a)

Detailed explanation

Subic Bay is on the western side of Luzon in the Philippines and opens toward the South China Sea region.

AIME-2026 brings Indian and ASEAN maritime forces together for harbour and sea phases aimed at interoperability.

For map questions, revise Luzon, Manila, Subic Bay, South China Sea and nearby maritime chokepoints.

Option analysis: Only (a) is geographically correct. The other three are Southeast Asian states but do not contain Subic Bay.

Static linkage / UPSC trap: UPSC often uses plausible neighbouring countries as distractors; map-based revision prevents such errors.

9. Under UNCLOS, an Exclusive Economic Zone may generally extend up to:

- (a) 12 nautical miles
- (b) 24 nautical miles
- (c) 200 nautical miles
- (d) 500 nautical miles

Correct Answer: (c)

Detailed explanation

The territorial sea generally extends up to 12 nautical miles; the coastal state exercises sovereignty subject to international-law rules such as innocent passage.

The contiguous zone may extend up to 24 nautical miles from the baselines for specified enforcement purposes.

The EEZ may extend up to 200 nautical miles, giving sovereign rights over natural resources and specified jurisdiction. It is not equivalent to full territorial sovereignty.

Option analysis: (a) corresponds to territorial sea; (b) to the outer limit of the contiguous zone; (c) is the standard EEZ limit; (d) is not the standard EEZ rule.

Static linkage / UPSC trap: Territorial sea = sovereignty; EEZ = sovereign rights/jurisdiction in specified fields. The wording matters.

10. Which statement best describes the planetary-boundaries framework?

- (a) A legally binding UN allocation of national environmental quotas
- (b) A prediction that crossing any boundary causes immediate global collapse
- (c) A scientific framework identifying Earth-system processes and a safer operating space for humanity
- (d) A framework dealing only with greenhouse-gas emissions

Correct Answer: (c)

Detailed explanation

The framework examines multiple interacting Earth-system processes, including climate, biosphere integrity, freshwater, land systems, nutrients, ocean acidification, novel entities, ozone and aerosols.

Crossing an assessed boundary indicates movement into a higher-risk zone; it does not mean immediate collapse on that date.

It is a scientific risk framework, not itself a treaty that imposes country quotas.

Option analysis: (a) confuses science with treaty law; (b) exaggerates the meaning of transgression; (c) is correct; (d) is too narrow.

Static linkage / UPSC trap: Use the phrase 'higher systemic risk outside the safe operating space', not 'instant tipping point'.



GS-I MODEL ANSWER

Syllabus / PYQ linkage: GS-I: Indian Geography - agriculture, resources and regional patterns | PYQ linkage: cropping pattern, irrigation and resource use

Question: Price policy can influence the geography of agriculture as much as climate and soil. Discuss with reference to MSP and crop diversification in India. (15 marks, 250 words)

Introduction

India's cropping map is not determined by nature alone. Climate, soil and water create the agro-ecological possibilities, but prices, procurement, irrigation, electricity subsidies, roads and market infrastructure decide which crop becomes economically attractive. Minimum Support Price (MSP), particularly when combined with reliable procurement, therefore acts as a powerful spatial incentive.

How MSP changes agricultural geography

The rice-wheat concentration of Punjab, Haryana and western Uttar Pradesh illustrates this interaction. These regions possess irrigation and fertile alluvial soils, but the persistence of the cereal system also reflects assured procurement, mandi infrastructure and input support. Consequently, paddy expanded even in areas where groundwater conditions make it ecologically costly.

The 2027-28 rabi MSP decision attempts a different signal. While wheat MSP rises only modestly to Rs 2,610 per quintal, larger absolute increases have been given to safflower, rapeseed-mustard and lentil. This can improve the relative attractiveness of oilseeds and pulses. Such diversification has three advantages: it can reduce edible-oil/pulse import dependence, improve crop rotations and, where locally suitable, lower irrigation pressure compared with water-intensive cereal systems.

However, price signals have limits

MSP announcement is not the same as procurement. A farmer will not shift acreage merely because an MSP exists if local mandis do not buy the crop, yields are low, processing is absent or price risk remains high. Moreover, replacing one distorted incentive with another without considering soil, rainfall and aquifer conditions can simply relocate ecological stress.

Way forward

India should combine differentiated MSP signals with decentralised procurement, PM-AASHA-type price support, high-yielding pulse/oilseed varieties, micro-irrigation, FPOs, storage and processing clusters, crop insurance and district water budgets. Procurement planning should increasingly use the principle of *farm income per unit of scarce water*, not output per hectare alone.

Conclusion

Thus, MSP is not merely an income instrument; it is also a land-use and resource-allocation policy. When aligned with agro-ecology and markets, it can help shift India from historically locked-in cropping patterns toward a diversified, climate-resilient agricultural geography.



GS-II MODEL ANSWER

Syllabus / PYQ linkage: GS-II: Constitutional bodies, civil services and governance | PYQ linkage: independence and accountability of constitutional institutions

Question: On the centenary of India's Public Service Commission, examine how the constitutional design of UPSC reconciles administrative competence with democratic accountability. (15 marks, 250 words)

Introduction

A parliamentary democracy requires two forms of legitimacy: elected governments must control policy, while the permanent executive must provide continuity, expertise and politically neutral implementation. The Constitution therefore placed the Union Public Service Commission (UPSC) under Articles 315-323, giving recruitment institutional autonomy without transferring executive power to the Commission.

How the Constitution protects competence and neutrality

Article 315 provides for Public Service Commissions, Article 316 deals with appointment and tenure, Article 317 creates a protected removal framework, and Article 320 sets out important functions. Article 322 strengthens financial independence because Commission expenditure is charged on the Consolidated Fund. Together, these provisions reduce the possibility that recruitment standards will change with partisan preference.

UPSC's competitive examinations create a common national merit framework, while its consultative role in recruitment methods, appointments, promotions and disciplinary matters contributes to procedural fairness. This is particularly important because civil servants may serve governments led by different parties during their careers.

Where democratic accountability enters

UPSC is independent, but it is not a parallel executive. Its advice is generally advisory; elected governments remain responsible for personnel policy and administration. Reports under the constitutional framework enable legislative scrutiny, while courts can review illegality, arbitrariness or violation of equality. Thus autonomy is balanced by transparency, reporting and constitutional review.

Contemporary challenge

The second century requires recruitment for a state dealing with AI, cyber security, climate risk, public health and complex finance. Examinations must assess reasoning, integrity and adaptability rather than rote memory. At the same time, digital systems create risks of impersonation, cyberattack, privacy breaches and opaque algorithmic screening.

Way forward

UPSC should retain constitutional insulation while strengthening exam cybersecurity, predictable calendars, disability and linguistic accessibility, competency-based assessment, transparent specialist recruitment and high-quality post-entry training. Technology should assist, not replace, accountable human judgment.

Conclusion

UPSC's century-long institutional significance lies in public trust that entry into state power is based on fair competition rather than patronage. Preserving that trust while modernising recruitment is the central task of its second century.



GS-III MODEL ANSWER

Syllabus / PYQ linkage: GS-III: Energy, infrastructure and climate change | PYQ linkage: renewable energy integration and energy security

Question: India's renewable-energy challenge is shifting from adding megawatts to integrating electrons. Analyse in the context of Green Energy Corridor Phase-III. (15 marks, 250 words)

Introduction

India can install solar panels and wind turbines rapidly, but renewable capacity contributes to energy security only when the electricity can be transmitted, balanced and delivered when consumers need it. Green Energy Corridor Phase-III (GEC-III) therefore marks a transition from a generation-centric approach to a system-integration approach.

Why integration has become the binding constraint

Renewable resources are geographically concentrated: high-quality solar and wind sites are often far from large load centres. Transmission lines take longer to plan because of land, right-of-way and environmental clearances. Consequently, renewable plants may face curtailment even when they are capable of generating. Variability creates a second challenge: solar output peaks during the day but falls at sunset, while demand often remains high in the evening.

What GEC-III provides

The scheme has an outlay of Rs 1,86,405 crore. It seeks to strengthen intra-state transmission for evacuation of up to 135 GW of renewable power and deploy 50 GWh of Battery Energy Storage Systems. The central support component is Rs 54,082 crore and the target is FY 2032-33. BESS can absorb surplus electricity, discharge during non-solar hours, provide fast balancing and reduce congestion/curtailment.

The design also matters institutionally. State Transmission Utilities are overall implementing agencies. Greenfield transmission is to use Tariff Based Competitive Bidding and BOOM arrangements, while brownfield strengthening can follow cost-plus mechanisms.

Critical concerns

Batteries are not a complete solution. Mineral dependence, recycling, fire safety and cost must be addressed. India also needs pumped storage, demand response, flexible hydro/thermal assets, stronger inter-regional links and financially healthier discoms. Transmission corridors themselves require ecological and social safeguards.

Way forward

Build transmission ahead of generation; improve renewable forecasting; introduce stronger time-of-day pricing and demand response; diversify storage; develop domestic battery/recycling chains; deploy grid-forming technologies; and coordinate state and national resource-adequacy planning.

Conclusion

The success of India's energy transition will increasingly be measured not by installed renewable GW, but by how reliably and affordably clean electrons reach consumers. GEC-III addresses precisely this missing grid-and-storage layer.

GS-IV MODEL ANSWER

Syllabus / PYQ linkage: GS-IV: Ethics, integrity and aptitude - ethics of state power | PYQ linkage: accountability, proportionality and public trust

Question: Security laws may be legally valid yet ethically deficient in implementation. Discuss the principles that should guide the use of extraordinary powers in disturbed areas. (15 marks, 250 words)

Introduction

The first ethical obligation of the State is to protect citizens from violence. In insurgency-affected areas, ordinary policing may at times be insufficient and extraordinary legal powers may be considered necessary. However, legality is only the minimum threshold of ethical governance. The manner in which coercive power is used determines whether security strengthens or weakens constitutional legitimacy.

1. Necessity

Exceptional powers should exist only where there is a demonstrable security need. A disturbed-area notification should therefore be geographically precise, time-bound in review and supported by objective indicators. Administrative convenience cannot justify indefinite exceptionalism.

2. Proportionality

The means used must be proportionate to the threat. Search, arrest and use of force should cause the minimum harm compatible with the legitimate objective. Indiscriminate force or collective suspicion may produce short-term control but long-term alienation.

3. Rule of law and accountability

Uniformed personnel do not operate outside the Constitution. Serious allegations require prompt, impartial investigation; operational records and command responsibility are necessary. Accountability protects innocent citizens and also protects professional personnel from collective blame.

4. Dignity, equality and non-discrimination

Residents of disturbed areas remain rights-bearing citizens. Ethnic, tribal or geographic profiling can convert a security operation into a perceived conflict between the State and a community. Humane treatment of detainees, victims and displaced persons is therefore both a moral duty and a security necessity.

5. Public trust as strategic capital

Counter-insurgency ultimately depends on information and cooperation from society. Fair policing, justice delivery, compensation, development and political dialogue build voluntary cooperation; abuse creates grievances that violent groups can exploit.

Way forward

Extraordinary powers should be accompanied by periodic independent review, rights-based training, transparent investigation of serious incidents, stronger civilian police and forensics, victim support, rehabilitation/surrender programmes and measurable criteria for progressively restoring ordinary policing.

Conclusion

A constitutional democracy proves its strength not merely by defeating violence, but by doing so without normalising exceptional coercion. The ethical purpose of extraordinary power must therefore be to make itself unnecessary by restoring secure, rights-respecting and normal constitutional governance.