Topics - MINDS MAPS included (Daily current affairs)-- 30th October 2024

SAURABH PANDEY

CSE

WOOD HANCE HELLIANCE

FROM RANCE TO UPSC BELLIANCE

- Ayushman Bharat Scheme.
- Immunity and Vaccine Efficacy
- Sea Foam: An Oceanic Phenomenon
- Tica Vent:
- Economic Disparities in Indian States: A Comprehensive Analysis
- Exit polls and missed predictions
- Venture Capital Investment
- Global Oil Market Dynamics
- Dabke Dance





By saurabh Pandey



Target Mains -2025/26 -

Q "Economic Disparity among states bring more challenges in indian federalism". Discuss

Connect with sir 9057921649

send your answer - Saurabh pandey upsc telegram channel

DIWALI SPECIAL OFFER

50 PER OFF IN ALL COURSES

Connect with sir 9057921649(msg only)

Courses to b focused

visit -

saurabhpandeyupsc.com

Download saurabh pandey cse app

- NEW BATCH ON CURRENT AFFAIRS
- ESSAY COURSE
- PRELIMS TEST SERIES
- Agriculture optional
- ETHICS AND INTEGRITY
- · COURSE ON SOCIETY
- COURSE ON CYBERSECURITY AND DISASTER MANAGEMENT



Valid for All UPSC CSE Prelims and MAINS COURSES + Agriculture optional

Download saurabh pandey cse app visit - saurabhpandeyupsc.con and click all courses

Comprehensive course on ADVANCE CURRENT AFFAIRS BOTH FOR PRELIMS AND MAINS 2025

Includes

- The Hindu Newspaper subjectwise coverage
- Yojana magazine
- Down to earth PIB
- Physics.org
- Mains qs
- **Prelims Practice set**



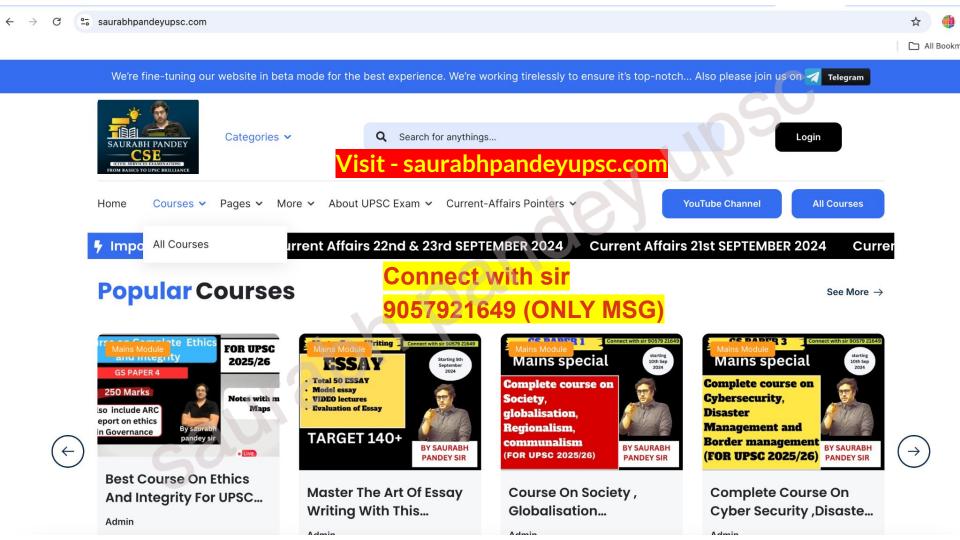
PANDEY SIR

FOR UPSC 2025/26

NEW BATCH LAUNCHED

Connect with sir 9057921649





PM expands health cover scheme to people aged 70 and over; no income bar

Bindu Shajan Perappadan NEW DELHI

In a major expansion of the Union government's flagship scheme, the Avushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY), Prime Minister Narendra Modi on Tuesday announced that health coverage under the scheme will now be available to all senior citizens aged 70 and above, regardless of their income.

The scheme was introduced to "overcome the despair of the poor when illness strikes", Mr. Modi said, noting that the government bears the cost of hospitalisation for beneficiaries up to ₹5 lakh.

"With the expansion now, every elderly person above 70 years of age in the country will get free treatment in the hospital with the Ayushman Vaya Vandana Card. With an Ayushman Vava Vandana card for the elderly in the house, the out-of-pocket expenditure will be reduced to a great extent," he said.

Other projects

Mr. Modi also launched other health sector projects worth around ₹12,850 crore on the occasion of Dhanvantari Iavanti and the ninth Avurveda Day, at the All India Institute of Ayurveda (AIIA).

Ayurveda Diwas is being celebrated in more than 150 countries today, Mr. Modi said, offering this as proof of the growing attraction of Avuryeda.

The PM slammed the governments of Delhi and West Bengal for not implementing the scheme, expressing his concern that



Narendra Modi at the event to launch projects at AllA, New Delhi, PTI

senior citizens in these States cannot avail themsevles of free treatment unthe expanded programme.

"I apologise to all the elderly aged 70 and above in Delhi and West Bengal that I cannot serve them. I know about your pains and sufferings, but I won't be able to help you," he said. "The reason is that the governments in Delhi and West Bengal are not joining the scheme due to their political interests," he added.

The Prime Minister inaugurated and laid the foundation stones for proiects worth more than ₹13,000 crore, including the creation of four centres of excellence under the Avush Health scheme, expansion of health services with the use of drones, helicopter services at AIIMS, Rishikesh, new infrastructure at AIIMS, New Delhi and AI-IMS, Bilaspur, expansion of services in five other AIIMS in the country, establishment of medical colleges, the launch of nursing colleges, and other projects related to the health sector.

Mr. Modi said that the

government is leveraging technology to enhance healthcare and save citizens' money under the e-Sanjeevani through which over 30 crore people have consulted doctors online.

Five pillars

Stating that the progress of a nation is directly proportional to the health of its citizens, Mr. Modi listed the five pillars of his government's policy: preventive healthcare, early detection of ailments, free and low-cost treatment and medicines, availability of doctors in small towns, and the expansion of technology in health services.

There are 7.5 lakh registered AYUSH practitioners already contributing to the nation's healthcare, the PM said.

The Prime Minister inaugurated the second phase of India's first All India Institute of Ayurveda, and three medical colleges at Mandsaur, Neemuch and Seoni in Madhya Pradesh, and laid the foundation stones for five nursing colleges, and 21 critical

care blocks.



Topic → **Ayushman Bharat Scheme**



Overview

Objective: Provide health coverage to economically disadvantaged citizens.

Target Group: Primarily focuses on low-income families and senior citizens.

Key Features:

Health Insurance: Offers up to ₹5 lakh per year for secondary and tertiary care hospitalization.

Eligibility: Based on the Socio-Economic Caste Census (SECC) data.

Cashless Access: Beneficiaries can access cashless healthcare services at empaneled hospitals.



Expansion of Coverage: The Ayushman Bharat PM-JAY scheme now includes all senior citizens aged 70 and above, irrespective of income.

• Target Group: The scheme specifically aims to support elderly individuals, enhancing their access to healthcare

© Government Initiative: This expansion is part of the government's effort to alleviate the financial burden of illness on the poor.

Study offers clues to why COVID-19 vaccine protection wanes quickly



Why mRNA vaccines for COVID-19 fail to generate long-lasting plasma cells in the bone marrow is now a crucial question. The answer likely lies in the unique surface structure of the SARS-CoV-2 virus, which features spikes that serve as the primary target for most COVID-19 vaccines

Puneet Kumar Vipin M. Vashishtha

he ideal vaccine offers nearly complete protection against infection and mild disease in just one dose. It is simple to administer and doesn't have any adverse effects. The protective immunity lasts a lifetime.

Are these expectations too idealistic? In practical scenarios, no single vaccine provides such advantages. The key challenges vaccine developers face are the vaccines' durability, the lack of immune correlates of protection, and the inability to protect against infection and transmission. But the greatest challenge among these three bottlenecks is the inability of vaccines to confer long-lasting protection.

Recently, the authors reviewed 34 licensed vaccines for the duration of protection against different infectious diseases. Only five offer long-lasting protection.

Vaccines and lasting protection
The immunity that follows an infection –
natural or vaccine-induced – is mainly
the result of the body generating
antibodies. A specific type of immune cell

antibodies. A specific type of immune cell known as a plasma cell, which comes from B-cells in the lymph nodes, secretes these antibodies. Not all B-cells and plasma cells are of

the same type. Most of them have a short life span; they produce antibodies for a few weeks and die. As a result, the concentration of antibodies in the body declines after a few weeks. But in the lymph nodes, a key lymphatic region, a germinal centre (GC), undergoes a long selection and maturation process known as affinity maturation to produce memory B-cells, GCs are the engines of antibody evolution and the mainstay of immune cells that provide lasting immunity. The name memory B-cells refers to these cells' capacity to memorise the antigen's characteristics over an extended period of time. When the antigen or microbe reenters the body, the memory B-cells swiftly identify it and start producing antigen-specific plasma cells. This rapidly boosts the antibody concentration and protects the individual against the

Some plasma cells, known as long-lasting plasma cells (LLPCs), also migrate to the bone marrow and survive for an extended duration, promoting the production of antibodies in this time. A vaccine's ability to confer long-term protection thus depends on its ability to induce the production of LLPCs. The goal of all vaccine developers is for their



A health worker prepares a dose of a Moderna COVID-19 vaccine in Barboursville, in the U.S. SHOLTEN SINGEPURE

vaccines to generate these cells in the bone marrow.

But while most vaccines generate memory B-cells, not all of them turn into LLPCs. Special signals from the B-cell receptors are required for this to happen. Cross-linking between these receptors (called BCR cross-linking) and the antigen present in the vaccine triggers the release of T-cells. Thus the type of antigen in the vaccine, which is also capable of triggering cross-linking, dictates the creation of LLPCs.

New evidence on LLPCs
A new study in Nature Medicine provided
further evidence of the significance of
LLPCs. Researchers studied the presence
of different subsets of antibody-secreting
cells (ASCs): LLPCs and short-lived ASCs
(which include non-LLPCs) in the bone

marrows of 19 healthy volunteers aged 20-65 years, within 2.5-33 months of receiving a COVID-19 mRNA shot.

They compared this data with the presence of LLPCs and non-LLPCs

specific to tetanus and influenza.

All 19 individuals had received a quadrivalent influenza vaccine within 1-12 months of the time of each bone marrow aspirate. All had also received

The immunity that follows an infection — natural or vaccine-induced — is mainly the result of the body generating antibodies. A specific type of immune cell known as a plasma cell, which comes from B-cells in the lymph nodes, secretes these antibodies

childhood vaccinations against tetanus, with recent boosters ranging from one month to 24 years from the time of bone marrow aspirates. (Aspirate refers to a way to extract semi-liquid bone marrow.)

marrow.)
The results were striking. While the aspirates demonstrated high and relatively comparable frequencies of non-LLPCs specific to the COVID-19, influenza, and tetanus vaccines, there were hardly any LLPCs specific to COVID-19, even as LLPCs specific to influenza and tetanus were present.

In other words, LLPCs are responsible for durable immunity. Their absence in the bone marrow is responsible for the rapid waning of both vaccine- and infection-induced protection against COVID-19. The results were similar for ASCs secreting different immunoglobulins (IgG and IgA).

The results echo a previous study of bone marrow aspirates from 20 unvaccinated people infected with COVID-19. It revealed they were "deficient" LLPCs specific to the SARS-CO-2 virus compared to LLPCs produced by a tetan

Why mRNA vaccines for COVID-19 failed to generate LLPCs in the bone marrow is now a crucial question. The answer likely lies in the unique surface structure of the SARS-CoV2 virus, which features spikes that serve as the primary target for most COVID-19 vaccines. The researchers have expressed the belief that widely spaced spikes of SARS-CoV2 (around 20-25 nanometres apart) prevent BCR crosslinking and the production of LLPCs.

The most popular COVID-19 vaccines during the pandemic were mRNA vaccines. Some other vaccines, including that against the human papillomavirus, utilise the virus-like particle (VLP) platform. Here, the vaccine presents the virus's spikes more effectively to the body's cells, facilitating better BCR cross-linking.

Thus, the distance between spike proteins on the surface of SARS-GOV-2 viral particles may prevent the production of LLPCs after an infection or a vaccine dose. This could then explain why the protection conferred by COVID-19 vaccines, whose effect is based on the spike proteins, wanes rapidly.

Some other researchers are quite sceptical of this explanation and don't believe the spacing of spikes has anything to do with the durability of vaccines, however.

The way forward

The generation of LLPCs along with memory B- and T-cells is crucial for the long-term effectiveness of any vaccine. Understanding how the release of these key immune cells can be triggered in different populations and how their effects can be modulated in animal models and humans is essential to

designing better vaccines.
Therefore, the future of vaccines
protecting against challenging or
emerging infectious diseases lies in the
design of new immunogens, their release
mechanisms, and the mechanisms of
action of various adiuvants.

(Puneet Kumar is a clinician, Kumar Child Clinic, New Delhi. Vipin M. Vashishtha is director and paediatrician, Mangla Hospital and Research Center, Bijnor. kumarchildclinic@gmail.com, vipinipsita@gmail.com

THE GIST

I HE

The challenges developers face are vaccines' durability, lack of immune correlates of protection, and inability to protect against infection and transmission. But the greatest challenge is the inability to confer long-lasting protection

,

Long-lasting plasma cells migrate to the bone marrow and survive for an extended duration, promoting the production of antibodies. The goal of all vaccine developers is for vaccines to generate these cells in the marrow

-

The future of vaccines protecting against challenging or emerging infectious diseases lies in the design of new immunogens, their release mechanisms, and the mechanisms of action of various adjuvants

Topic → **Immunity and Vaccine Efficacy**



Immunity Mechanism

Manual Immunity from infections or vaccines is primarily due to the generation of antibodies by plasma cells derived from B-cells in lymph nodes.

B-cell Lifespan

Most B-cells and plasma cells have a short lifespan, producing antibodies for a few weeks before dying, leading to a decline in antibody concentration.

Germinal Centres

Germinal centres (GCs) in lymph nodes are crucial for affinity maturation, producing memory B-cells that provide long-lasting immunity by memorizing antigens.

Memory B-cells



→ Memory B-cells quickly recognize previously encountered antigens, rapidly producing antigen-specific plasma cells to boost antibody levels upon re-exposure.

Long-lasting Plasma Cells

Some plasma cells, known as long-lasting plasma cells (LLPCs), migrate to the bone marrow and survive for extended periods, contributing to sustained antibody production.

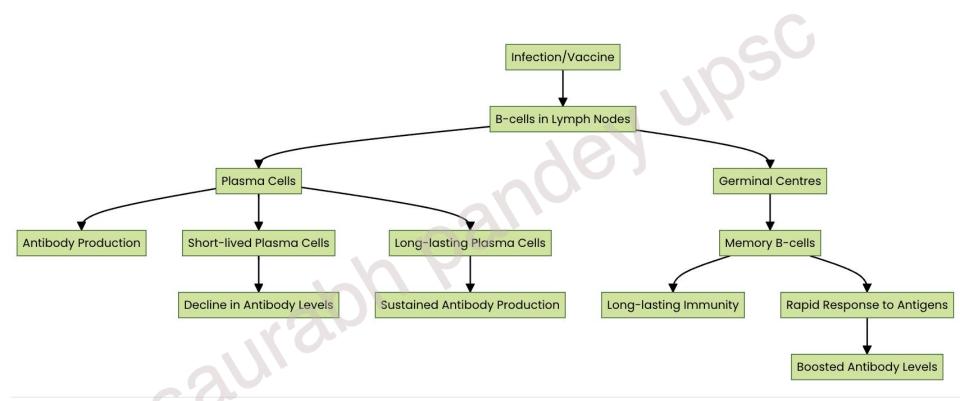
Vaccine Efficacy

The effectiveness of vaccines in providing long-term protection is linked to their ability to induce LLPCs in the bone marrow.

BCR Cross-linking

The formation of LLPCs requires specific signals from B-cell receptors, with BCR cross-linking and the vaccine's antigen type playing a critical role in T-cell activation.







LLPCs and Immunity: Long-lived plasma cells (LLPCs) are crucial formaintaining durable immunity against COVID-19.

Waning Protection: The absence of LLPCs in bone marrow leads to rapid waning of immunity from both vaccines and natural infections.

Study Findings: A study of 20 unvaccinated COVID-19 patients showed a deficiency in LLPCs specific to SARS-CoV-2 compared to those generated by a tetanus vaccine.

mRNA Vaccine Limitations: mRNA vaccines for COVID-19 have not been effective in generating LLPCs, raising questions about their design.

Spike Protein Structure: The unique spacing of spike proteins on the SARS-CoV-2 virus may hinder B cell receptor (BCR) crosslinking, affecting LLPC production.

Alternative Vaccine Platforms: Other vaccines, like the HPV vaccine, use virus-like particle (VLP) platforms that present spike proteins more effectively, potentially enhancing immune response.

Skepticism in Research: Some researchers doubt the correlation between spike spacing and vaccine durability, suggesting further investigation is needed.

Summary: LLPCs are essential for long-lasting immunity against COVID-19, and their absence in mRNA vaccine responses may explain the rapid decline in protection.

QUESTION CORNER



Fizz in the sea



Q: What causes the seas to foam?

A: Sea foam needs two ingredients: something to increase the surface tension of the

water, like a bubble bath, and something to froth it up, like water running into a tub.

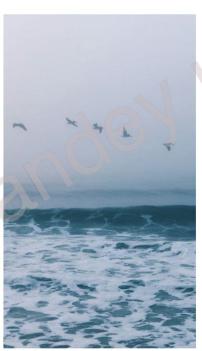
In the ocean or sea, the bubble bath is usually dissolved organic material, and strong surface winds or the breaking of waves on the beach stir up the water with air to make bubbles.

The organic material comes from a number of sources, usually a concentration of biomass such as the phytoplankton bloom that causes a red tide or a fish kill. A bloom is an increase in the numbers of some species or complex of species that then die or are eaten, releasing organic material.

The material can also come from sewer spills and other terrestrial runoff.

In addition, there are a number of mechanisms that concentrate the foam, which is commonly blown up on the beach, for example.

Seafoam is seldom seen in the open ocean as most areas do not support high concentrations of plankton, though there are spots where the right conditions for an organic bloom occur.



A flock of pelicans flies over a frothy sea. AARON BURDEN



For feedback and suggestions

for 'Science', please write to science@thehindu.co.in with the subject 'Daily page'

Topic → **Sea Foam: An Oceanic Phenomenon**



Ingredients for Sea Foam

Components: Requires a substance to increase water's surface tension and a frothing mechanism.

Role of Organic Material

Function: Acts as the "bubble bath" in the ocean, often from phytoplankton blooms or fish kills.

Wind and Waves

Contribution: Strong winds and breaking waves mix air into the water, forming bubbles that create foam.

Sources of Organic Material

Origins: Can come from natural events like phytoplankton blooms or human activities such as sewer spills.



Concentration Mechanisms



Process: Various mechanisms concentrate sea foam, often resulting in it being blown onto beaches.

Occurrence in the Ocean

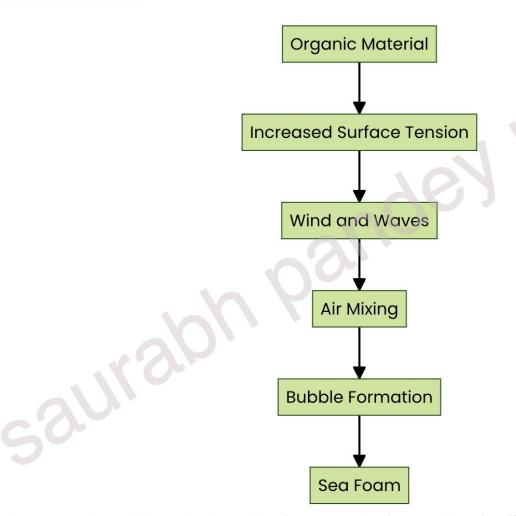
Distribution: Rarely found in the open ocean due to low plankton concentrations, but appears in areas with favorable conditions for blooms.

Environmental Indicators

Significance: Indicates ecological events like algal blooms or pollution.

Summary: Sea foam forms from dissolved organic materials and air mixing, often influenced by wind and waves, and is typically concentrated near beaches.





BIG SHOT





This handout photograph released by the Schmidt Ocean Institute shows an eelpout swimming by tubeworms at a depth of 2,500 metres at the Tica Vent, a site on the East Pacific Rise. Scientists have discovered giant worms on the seabed, suggesting the presence of a larger ecosystem in these hostile environments than initially believed. AFP

Mapping → Tica Vent: A Site on the East Pacific Rise <



Overview

- Tica Vent is a notable site on the East Pacific Rise, renowned for its distinct hydrothermal vent ecosystems.
- These vents harbor a wide variety of marine life and enhance our comprehension of deep-sea habitats

A picture of a growing economic divide in India

SAURABH PANDEY

CSE

HIM BUT THE HEALTH OF T

n September this year, the Economic
Advisory Council to the Prime Minister
(EAC-PM) released a paper titled, 'Relative
Economic Performance of Indian States:
1960-61 to 2023-24'. It presents the share of each
State in the country's income and the per capita
income compared to the all-India average.

The data tell us the importance of each State in the country's economy and the average welfare of the citizens of each State relative to the all-India level. The average hides the inequality. For instance, Maharashtra, which is the highest contributor to the nation's economy, has a per capita income of about 150% of the national average. But, it consists of Mumbai, which is rich, and Vidharba, which is known for farmers' suicides due to poverty. Mumbai's rich contribute the largest amount of direct taxes and the city's municipality is the richest in the country. But it has huge slums with uncivilised living conditions.

Regional differentials

The report points to the consistently better performance of the western and southern regions of india and the weak performance of the eastern States. The northern States have done poorly with the exception of Haryana and Delhi. Overall, the picture is of a growing divide in the country, which is not good for a federal and diverse nation such as India.

This growing gap is leading to the questioning of federalism. Representatives of the richer States recently held a conclave in Kerala and argued that they are not receiving their fair share of resources from the Centre. They say that they contribute much more to the national kitry than what the Centre gives back to them. In the year 2000 also there was a 'Conclave of the successful' to protest the devolution by the Eleventh Finance Commission. So, slowly, the spirit of federalism is weakening.

The report lists liberalisation (1991) as a marker of when the southern States began to perform better. But it does not go into the causes. It also points to the coastal areas doing better, which includes Odisha in the east. But, could it be that the poorer performance of some States is linked to the better performance of some others?

Investment is the most important determinant of output. The higher the level of investment, the larger the size of the economy. So, for a more complete analysis, the level and the rate of investment in each State needs to be studied. The better-off States typically have a higher rate of investment than the poorer States, and, therefore, perform better.

Investment comes from the public and the



Arun Kumar

a retired professor of economics, Jawaharlal Nehru University and the author of the book, 'Indian Economy's Greatest Crisis: Impact of the Coronavirus and the Road Ahead' (2020)

Data from the paper titled, 'Relative Economic Performance of Indian States: 1960-61 to 2023-24', show a growing gap that is leading to a

questioning of

federalism

private sectors. The first is based on policy decisions while the second is determined by profitability considerations. Government may invest in a backward area to develop it even if no profit accrues in the short run. The private sector will not do so unless the government gives it concessions such as tax breaks and electricity at concessional rates.

On its own, private investment goes to developed areas where a large market ensures profits. So, urban conglomerates such as Mumbai, Delhi, Chennai, Bengaluru and Hyderabad are preferred investment destinations. Haryana which is contiguous with Delhi (with the highest per capita income) has also benefited. Kolkata is not preferred for other reasons. Coastal regions are preferred since they enable cheaper access to external markets through exports. Also, cheap imported inputs may be available.

Infrastructure availability and quality of governance in a State are important determinants of profits. Richer States are better in both and attract more investments. Better governance is also linked to better quality of education and health. This leads to the availability of more productive labour. But this is not critical since there is huge migration from the poorer to the richer States.

Private investment is 75% of the total investment. After the launch of the New Economic Policies (NEP) in 1991, the public sector's role as the leading sector shifted to the markets. Therefore, more investment has been going to the richer States where profits are higher. Further, the financial sector which guides investments became more important after 1991. The considerable household savings increasingly got diverted from the poorer States to the richer ones which offered higher profits. This is reflected in the low credit-deposit ratio of the poorer States when compared to the richer States. This diversion of investment leads to growing disparity.

Finally, the poorer States have a larger share of the unorganised sector working at low productivity and low incomes. Under the NEP, policy has favoured the organised sector. This has been aided by the construction of freight corridors and highways which enables this sector to penetrate into the hinterland. So, the organised sector has grown at the expense of the unorganised sector and fuelled the faster growth of the richer States.

In brief, the NEP has played a major role in the growing divide across States since 'liberalization', as the EAC-PM paper points out.

West Bengal and Kerala are special cases. Both

States have had strong Left movements and labour militancy. So, the private sector has invested little in these States. The border States of India have received less public investment for strategic reasons. It is also because many of them suffered from insurgency which scared the private sector.

Opposition-ruled States have accused the Centre of playing politics with public investment. The often flaunted slogan of 'Double Engine ki Sarkar' captures this idea. Further, growing cronyism in India impacts investment decisions since political signals are important. This spoils the investment climate by lowering the risk for the cronies while raising it for others. The result is a decline in the overall investment rate which impacts the poorer States more.

The black economy is also proportionately more in the poorer States. This vitiates the investment climate due to policy failure and weak governance and reduces the investment they receive. Therefore, it reduces their growth potential.

Threat to federalism

The persisting differentials in the economic performance of different States are threatening federalism. Thus, policy needs to reverse this trend. Even keeping differentials at the present level is no more an option. This requires a reversal of the trend of private investment, weak governance and poor infrastructure in the States that are lagging.

Both the Centre and the States need to act. The States need to improve governance and reduce the levels of corruption in their jurisdiction. Public expenditures on social sectors need to be raised substantially. Private investment in the poorer States cannot be raised by fait in the market-driven economy. It requires a change in the Centre's strategy of favouring the organised sector at the expense of the unorganised sector, the incomes of the marginalised would rise and that would boost demand and production in the poorer States. As demand rises in these States, it would attract more private investment.

The organised sector, which is constrained by shortage of demand, would also benefit. More concessions from the government are not what they need since they have enough resources to increase their investment. These policy changes will not mean that the richer States would not grow; only disparities would decline. This would be development from below which would strengthen federalism and help preserve the nation's unitv.

Topic → Economic Disparities in Indian States: A Comprehensive

Analysis



III Economic Report Released

The Economic Advisory Council to the Prime Minister published a paper in September 2023.

Analyzed the economic performance of Indian states from 1960-61 to 2023-24.

Income Disparities

Significant disparities in per capita income.

Maharashtra has a per capita income of about 150% of the national average. Notable regional inequalities within the state.



Regional Performance

Western and southern states are economically stronger.

Eastern states are lagging behind.

Northern states show poor performance, except for Haryana and Delhi.



M Federalism Concerns

Economic divide raises questions about federalism in India.

Wealthier states feel they are not receiving a fair share of resources from the central government



m Historical Context

References a similar protest in 2000 regarding resource allocation. Indicates a long-standing issue with the devolution of funds from the central government.

Impact of Liberalization

Liberalization of 1991 marked a turning point for southern states.

The report does not explore the underlying causes of this improvement.

Coastal Advantage

Coastal areas, including Odisha, show better economic performance. Suggests a potential link between geography and economic success.

Key Determinants of Economic Output_



Investment as Key Determinant: Investment is the primary factor influencing economic output; higher investment correlates with a larger economy.

Public vs. Private Investment

Public vs. Private Investment: Investment originates from both public (policy-driven) and private (profit-driven) sectors, with private investment favoring developed areas.

Geographical Preferences

© Geographical Preferences: Coastal regions and urban centers like Mumbai and Delhi attract more investment due to market size and access to external markets.

Impact of New Economic Policies (NEP)

Impact of NEP: The New Economic Policies (NEP) of 1991 shifted investment focus from public to private sectors, exacerbating disparities between richer and poorer states.

Disparity in Investment

Disparity in Investment: Poorer states experience lower investment rates, reflected in their low credit-deposit ratios, leading to growing economic inequality.

Organized vs. Unorganized Sector

Organized vs. Unorganized Sector: The organized sector has expanded at the expense of the unorganized sector, particularly in richer states, due to favorable policies and infrastructure development.



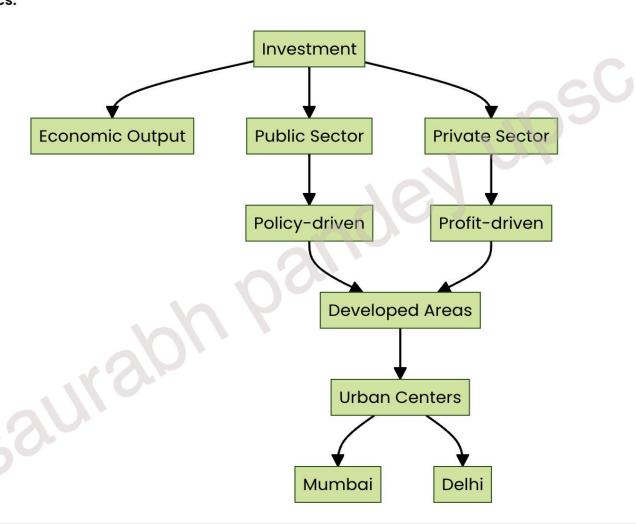
Political Influence on Investment

Political Influence on Investment: Political dynamics, including cronyism and governance quality, significantly affect investment climates, particularly in opposition-ruled states.

Summary: Investment levels, influenced by public policy and private profitability, significantly determine economic disparities across Indian states, with the NEP contributing to a widening gap.

Investment Dynamics:





Economic Disparities: Persistent economic performance differences among



States are threatening federalism.

Need for Policy Change: A reversal of current trends in private investment, governance, and infrastructure is essential.

m Role of States: States must enhance governance and reduce corruption to improve their economic conditions.

Focus on Unorganised Sector: Shifting focus from the organised to the unorganised sector can elevate incomes and boost demand in poorer States.



Investment Attraction: Rising demand in poorer States will attract—more private investment, benefiting the overall economy.

Strengthening Federalism: These changes aim to reduce disparities while allowing richer States to continue growing, thereby strengthening federalism and national unity.

Summary: Addressing economic disparities among States through policy changes and a focus on the unorganised sector is crucial for strengthening federalism and national unity.

Conceptual Flow: Economic Disparities Threat to Federalism Policy Change Needed Improved Governance Increased Public Expenditure Focus on Unorganised Sector Boost in Incomes and Demand Attraction of Private Investment Strengthened Federalism

Exit polls and missed predictions

Recent election polling discrepancies, particularly in Harvana and Jammu and Kashmir, have raised questions about exit poll reliability, while no model can capture elections perfectly, refining polling methods and recognising socio-political influences on voters is essential for accurate forecasting

Sanjay Kumar Devesh Kumar



s the dust settles on the Haryana and Jammu and Kashmir elections, doubts have been raised about the reliability of exit polls, many of which failed to predict the election outcomes accurately. The discrepancy between predictions and results has cast doubt on polling models. This recent episode follows similar polling inaccuracies in Chhattisgarh and Madhya Pradesh over the past eight months. While it is easy to lump all polling agencies together, the approach adopted by CSDS-Lokniti distinguishes it from others. In this article, we highlight how our election surveys differ significantly from typical exit polls while offering insights into what may have gone wrong while estimating vote shares for leading parties in the

Methodological rigour

Unlike standard exit polls, which rely on quick post-voting surveys, CSDS-Lokniti has always adopted a more nuanced approach. Trained field investigators visit sampled voter's homes the day after they cast their vote, and conduct face-to-face interviews. This method enhances the depth and accuracy of responses and is considerably better than quick surveys either by telephone or in some cases even outside the polling station. Second. to ensure that the sample accurately represents the electorate, CSDS-Lokniti adopts a multi-stage random sampling

electoral race in respective States.

Constituencies are randomly chosen using the probability proportional to size (PPS) method (adjusting the probability of choosing a particular constituency according to the size of its electorate). Then, polling stations within these constituencies are selected through systematic random sampling (SRS). The respondents are further drawn from updated electoral rolls through the SRS method, ensuring that a cross-section of voters is selected mirroring the demographic diversity of each State

This rigorous methodology has ensured a close match between the demographics of the sample of the survey and actual demographic trends for major groups and communities - such as women, Dalits, Muslims, other minorities, and urban-rural populations. In fact, the demographic profile of our sampled voters in Madhya Pradesh and Chhattisgarh is a close match to the actual profile of the voters in these States. lowever, deviations arise, and wherever they do, weights are applied to different social groups to align the sample with the electorate (Table 1). While many exit polls do not share their methodologies. publicly, CSDS-Lokniti prides itself on transparency.

Misleading euphoria

There was a common thread among all three elections - Chhattisgarh, Madhya Pradesh, and Haryana. There was a shared perception in all three States that a Congress wave was sweeping through. This sentiment appeared to envelop the media and many pollsters, leading to exaggerated predictions of Congress victories. While CSDS-Lokniti does project vote share, we largely refrain from making seat-by-seat predictions. Our survey estimates were remarkably close to actual outcomes, staving well within the margin of error - at -2.91 percentage points for Haryana and less than -0.6 nercentage points for Madhya Pradesh

Getting close to the mark

Exit polls in recent elections have faced criticism for their inaccuracies, resulting in their failure to predict the final results correctly. Here is a look at



• 1: Demographic profile of the sample compared with that of demographic profile of voters in respective	Sta
----------------------------------------------------------------------------------------------------------	-----

	Census	CSDS -Survey	Deviation	Census	CSDS -Survey	Deviation	Census	CSDS - Survey	Deviation
Female	49.8	47.7	-2.1	48.2	49.5	1.3	46.8	40	-6.8
Muslim	2	2.7	0.7	6.6	6.3	-0.3	7	5	-2
Urban	23.2	24.9	1.7	27.6	27.6	0	34.9	31	-3.9
sc	12.8	13.2	0.4	15.6	16.4	0.8	20.2	23	2.8
ST	30.6	23	-7.6	21.1	19.5	-1.6		4	
Sikh							4.9	4	-0.9

Note: All figures in percent. The deviation show how much Lokniti-CSDS survey differ from Consus data for respective States

Parties	CSUS -Projecti	rd Actual	Deviation
Congress	42	42.23	0.23
BJP	38	46.27	8.27
BSP+GGP	5	3.44	-1.56
Others	15	8.06	-6.94
Note: All figu	ires in %.	Deviati	on in % points
Table 3: Mac	dhya Pradesh Asseml	oly elections	
Vote share	comparison for Mad	lhya Pradesh (2)	023)
Parties			
Congress	41	40.4	-0.6
BJP	43	48.55	5.55
BSP	5	3.4	-1.6
Others	12	7,65	-4.35
Note: All figu	ires in %.	Deviati	on in % points
Table 4: Har	yana Assembly elect	ions	
Vote share	comparison for Har	yana (2024)	
Parties			
Congress	42	39.09	-2.91

When voters feel overwhelmed by constant questioning from different pollsters, they might disengage, further affecting responses to the questions

5.96 1.96

1.79 -0.21

0.9 -0.1

12.32 -1.68

Vote share comparison for Chhattisgarh (2023)

and 0.23 percentage points for Chhattisgarh. The real gap was not in Congress's predicted performance but in underestimating the BJP's ability to secure votes (Tables 2, 3, and 4).

BJP's winning formula

Nate: All figures in 9

Two important reasons may help explain how the BIP may have out-maneuvered expectations. First, the BJP effectively counter-mobilised voters in response to perceived anti-incumbency (Madhya Pradesh and Harvana). Party workers worked quietly and efficiently in all States at the grassroots level, bypassing media narratives and building voter coalitions away from the limelight. This disciplined organisation gave the BIP an unexpected

edge. Second, differential voter turnout may have complicated assessment of vote shares. For example, in Harvana, where the Jat vote was expected to favour Congress, it remained unclear how many voters from this group actually showed up at the polls. Similarly, while communities might express lovalty to certain parties. their turnout could vary - impacting the outcomes in constituencies with close

Are voters lying to pollsters?

contests.

Lastly, an interesting, if not compelling, theory is floating around: voters lie to pollsters. This assertion seems far-fetched: if voters were indeed misleading surveyors, pollsters would not have so accurately assessed vote share estimates in other elections, such as the recent one in Jammu and Kashmir. However, it seems there are chances of voters being affected by factors such as social desirability bias, particularly among marginalised communities, who may offer "socially acceptable" answers

during surveys done in public. It also seems possible that an increasing number of polling agencies contributes to voter fatigue, leading to skewed responses. When voters feel overwhelmed by constant questioning from different pollsters, they might disengage, further affecting responses to the questions

including the vote choice question. In summary, the divergence between vote share estimates and actual vote shares in recent elections indicates the greater need for caution in election polling and forecasting. We must not only refine our methodologies but also remain aware of the social and political dynamics that can influence voting behaviour. Ultimately, elections are complex, and while models may fall short in predicting exact outcomes, they remain essential tools for understanding the pulse of democracy.

Sanjay Kumar is a Professor at Centre for the Study of Developing Societies. Devesh Kumar is a Researcher at Lokniti-CSDS, a



THE GIST

CSDS-Lokniti employs a

detailed approach involving face-to-face interviews and multi-stage random sampling ensuring a representative and accurate demographic match with actual voter profiles.

Various factors, such as social dynamics, media narratives, and voter turnout, can significantly affect how individuals respond to polls

and ultimately how they vote.

Exit polls and forecasts are often subject to error due to inherent uncertainties in voter behavior, making it essential to

Topic → **Exit polls and missed predictions**



@ Random Selection: Constituencies are chosen using the probability proportional to size (PPS) method, which adjusts selection based on electorate size.

Systematic Sampling: Polling stations within selected constituencies are chosen through systematic random sampling (SRS).

Diverse Respondents: Respondents are drawn from updated electoral rolls using SRS, ensuring a representative cross-section of voters reflecting demographic diversity.

Demographic Accuracy: The methodology closely matches the demographics of the survey sample with actual demographic trends for major groups, including women, Dalits, Muslims, and urban-rural populations.

- State-Specific Profiles: The demographic profile of sampled voters in Madhya Pradesh and Chhattisgarh aligns closely with the actual voter profiles in these states.
 - Weight Adjustments: Deviations in demographics are corrected by applying weights to different social groups to align the sample with the electorate.
 - Transparency in Methodology: CSDS-Lokniti emphasizes transparency by publicly sharing its methodologies, unlike many other exit polls.

Summary: The survey employs a rigorous and transparent methodology to ensure demographic representation and accuracy in voter sampling

Venture capital investments into India may rise in 2025: KPMG



The Hindu Bureau

BENGALURU

Global venture capital (VC) investments have dropped from \$95.5 billion in the second quarter of calendar 2024 to \$70.1 billion in Q324. The number of VC deals, too, slid from 9,270 to 7,227 over the same period, reported KPMG.

However, the consulting firm said India bucked the global trend. Despite a decline in Q3, VC investments in the country 'remained solid at \$3.6 billion', aided by several significant fund raises by consumer-focused businesses.

The large fundraises by B2C businesses in India was an incredibly unique trend, opposite to trends seen in most other Asian jurisdictions and other re-

gions of the world where B2B firms attracted the greatest levels of VC investment, KPMG said.

Nitish Poddar, partner and national leader, private equity, KPMG in India said, "As expected, there has been a bounce back in activity led by consumer-focussed consumption sectors. This trend is expected to continue."

While fintech businesses continued to attract a lot of attention in India, VC investors in the space have become more cautious in recent quarters as traditional banks have increasingly introduced their own fintech products.

Investors were expected to back businesses which align with two key themes – path to profitability and/ or strong growth trajectory with high level of customer engagement. This coupled with robust capital markets was what was driving this renewed VC interest.

In India, there was a very strong optimism that the VC market was recovering and the next few quarters could see the level of investments really start to climb, the report reckoned. With the U.S. election looming on the global stage heading into the last quarter of 2024, VC investments would likely remain subdued over most of this period as investors adopt a wait-and-watch approach till the poll outcomes.

According to KPMG's analysis, AI will likely remain a hot investment area, along with defence technology given the ongoing geopolitical tensions.

Topic→ **Venture Capital Investment**



Overview of Venture Capital Investment

Definition: Funding provided to startups and small businesses with high growth potential.

Key Players: Venture capitalists, angel investors, and investment firms.

Importance: Drives innovation and economic growth.

Types of Venture Capital

Seed Capital: Initial funding for startups.

Early Stage: Funding for companies in their growth phase.

Late Stage: Investment in companies that are further along in development.

Investment Strategies



Sector Focus: Technology, healthcare, renewable energy.

Geographical Focus: Local, national, or international markets.

Investment Size: Small (under

1M),Medium(

1*M*),*Medium*(1M-\$10M), Large (over \$10M).

Trends in Venture Capital

Corporate Venture Capital: Corporations investing directly in startups.

Impact Investing: Investments aiming for social/environmental impact.

Diversity in Investment: Increasing focus on women and minority-led startups.



Oil prices fall as weak global demand overtakes risk of war

Associated Press

Global oil prices are falling sharply after a retaliatory strike by Israel over the weekend targeted Iranian military sites rather than its energy infrastructure as had been feared.

Prices for crude spiked globally on Oct. 2 after Iran fired nearly 200 missiles into Israel, part of a series of rapidly escalating attacks between Israel and Iran and its Arab allies threatened to push the Middle East closer to a region-wide war.

Iran is the world's seventh largest oil producer, but a wider conflict in the Middle East could have an impact for some of the world's largest energy producers in the region.

With many seeing that

threat diminishing, at least in the near term, the price of benchmark U.S. crude and Brent crude, the international benchmark, tumbled 6% Monday. U.S. crude fell well below \$70 per barrel.

The Israeli military said its aircraft targeted facilities that Iran used to make the missiles fired at Israel as well as surface-to-air missile sites.

Focus has returned to the fundamentals of global energy markets, which this year has been a story of ample supply and falling demand. A chief driver is slowing economic growth in China, a massive energy consumer.

Beijing said this month that China's economy expanded at an annual rate of 4.6% in the July-September



Fuel glut: The global oil market has witnessed ample supply and falling demand this year. REUTERS

quarter, down from 4.7% annual growth in the previous quarter and short of the official target of "about 5%" growth for 2024.

And the OPEC+ alliance,

made up of members of the producers cartel and allied countries including Russia, have less sway over global prices than say the 1970s, when an oil embargo that followed the start of the Yom Kippur war in 1973 quadrupled oil prices.

The global supply of oil has been altered radically since then, with the U.S.

becoming the world's largest oil producer. Months of war between Israel and Hamas and Hezbollah, two Iranian proxies, did little to boost prices for OPEC and its 12 oil-producing nations. Only the possibility of a direct confrontation between Israel and Iran moved the needle.

New reality

The long-term expectation is for oil prices to move lower, not higher. That's because the balance between supply and demand has tilted toward supply, a dynamic that typically deflates oil prices.

In its most recent update on the energy markets, the International Energy Agency said demand for oil in the first half of this year rose by the

smallest amount since 2020. Meanwhile, supplies have continued to increase and the OPEC+ alliance has said it plans to release more oil into the market starting in December.

OPEC has tried to establish a floor for oil prices this year with little success.

Saudi Arabia and allied oil producing countries in June extended production cuts into next year hoping to support slack prices that haven't rebounded even amid turmoil in the Middle East and this year's summer travel season.

At the same time, the U.S. is pumping unprecedented volumes of crude. The U.S. Energy Information Administration expects average daily crude oil production in the U.S. this year will be 13.2 mil-

lion barrels per day, and it only expects that production to grow in 2025.

A number of energy experts believe that oil prices have peaked this year and will continue to erode.

"The limited nature of Israeli strikes against Iran should diminish fears of wider war and shave some of the geopolitical premium on crude oil," said Tom Kloza, global head of energy analysis with the Oil Price Information Service. "Today's U.S. retail gas avg is \$3.13/gal with 55% of sites priced at less than \$3/gal."

Mr. Kloza told the AP this month that 2025 looks even worse for oil producers, "with supply almost certainly outpacing demand by 500,000 to 1 million barrels a day."

Topic → **Global Oil Market Dynamics**



M Global Oil Prices Decline

Sharp decline in oil prices following Israel's targeted strikes on Iranian military sites. Reduced fears of a wider conflict in the region.

Escalating Tensions

Iran launched nearly 200 missiles into Israel. Increased concerns about a potential regional war.



Impact of Supply and Demand

Ample supply and falling demand characterize the global oil market. Slowing economic growth in China contributes to reduced demand.



OPEC+ Influence Diminished

OPEC+ has less influence over global oil prices than in the past. Current dynamics favor supply over demand.



Long-term Price Expectations_



Experts predict a continued decline in oil prices due to oversupply.

The International Energy Agency notes the smallest demand increase since 2020.

U.S. Production Surge

The U.S. is expected to maintain high levels of crude oil production.

Projections of 13.2 million barrels per day in 2023, with growth anticipated in 2025.

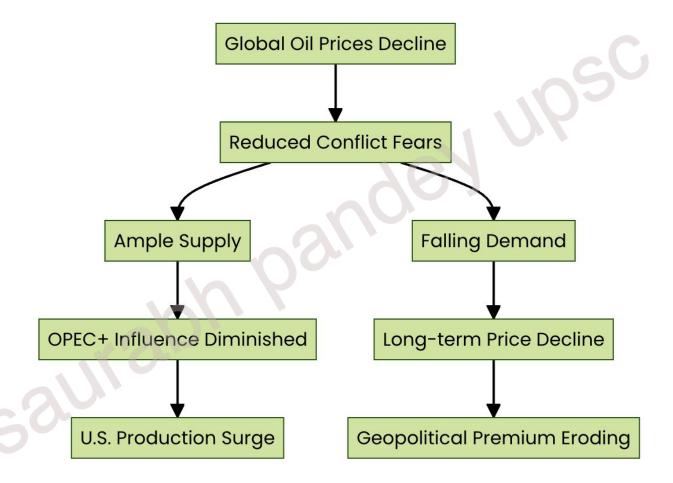
Geopolitical Premium Eroding

Limited Israeli military actions against Iran are expected to reduce fears of a wider conflict.

This leads to a lower geopolitical premium on crude oil prices.

Summary: Global oil prices are falling due to reduced fears of conflict following Israeli strikes on Iran, amid a backdrop of ample supply and declining demand.





Calming the nerves





Syrian migrants perform the traditional Dabke dance before trying to cross the English Channel in Calais in France on Wednesday. AFP



Topic → **Dabke Dance**

- It is an Arabic folk dance which originated in the mountains of the Levantine region;
 including Palestine, Lebanon, Jordan & Syria.
- Legend says that people in the Levantine region made the roof of their houses with tree branches & mud. When the weather would change, the mud would crack. Family members & community would come & help patch it by forming a line, joining hands & stomping the mud into place.
- Once better roof-making technology was available, the story of their work dance was
 passed on through generations to remind them of the importance of family, community &
 tradition. Today, dabke is seen all throughout the world at weddings, family gatherings,
 and celebrations





(From left) Astronauts Wang Haoze, Cai Xuzhe and Song Lingdong before the Shenzhou-19 mission. AFP

China's first female spaceflight engineer in 'dream' mission

Agence France-Presse

JIUQUAN

China's only woman spaceflight engineer will be among a crew of three astronauts blasting off on a "dream" mission to the Tiangong space station this week, Beijing announced on Tuesday.

The new Tiangong team will carry out experiments with an eye to the space programme's ambitious goal of placing astronauts on the Moon by 2030 and eventually constructing a lunar base.

The Shenzhou-19 mission is scheduled to take off with its trio of space explorers at 4:27 a.m. on Wednesday (2027 GMT Tuesday) from the Jiuquan Satellite Launch Center in northwest China, the China Manned Space Agency (CMSA) said.

Among the crew is Wang Haoze, 34, who is China's only female spaceflight engineer, according to the agency. She will become the third Chinese woman to take part in a crewed mission.

"Like everyone else, I dream of going to the space station to have a look," Ms. Wang said on Tuesday alongside her fellow crew members.

"I want to meticulously complete each task and protect our home in space," she said. "I also want to travel in deep space and wave at the stars."

Headed by Cai Xuzhe, the team will return to Earth in "late April or early May next year", CMSA Deputy Director Lin Xiqiang said at a separate press event confirming the launch.

Cai, a 48-year-old former Air Force pilot, brings experience from a previous sint aboard Tiangong as part of the Shenzhou-14 mission in 2022. The aerospace veteran said the crew was now "fully prepared mentally, technically, physically and psychologically" for the mission ahead.



Topic- China Space Mission-



Mission Overview: China's Shenzhou-19 mission will launch a crew of three astronauts to the Tiangong space station this week.

Lunar Ambitions: The mission aims to support China's goal of sending astronauts to the Moon by 2030 and establishing a lunar base.

Female Representation: Wang Haoze, China's only female spaceflight engineer, is part of the crew, making her the third Chinese woman to participate in a crewed mission.

Staunch Details: The launch is scheduled from the Jiuquan Satellite Launch Center in northwest China.



Trew Leadership: The mission is led by Cai Xuzhe, a 48-year-old former Air Force pilot with prior experience on the Tiangong space station.

Return Timeline: The crew is expected to return to Earth in late April or early May next year.

© Crew Aspirations: Wang expressed her dreams of exploring space and completing tasks meticulously to protect their home in space.

Summary: China's Shenzhou-19 mission, featuring its only female spaceflight engineer, aims to advance lunar exploration goals with a launch scheduled for this week

"About Shenzhou 19 mission_



- The Shenzhou-19 mission is part of China's human spaceflight program.
- It aims to advance China's capabilities in space exploration and technology.
- The mission involves sending astronauts to the Tiangong space station.
- Shenzhou-19 is expected to conduct scientific experiments and technology demonstrations.
- This mission reflects China's growing ambitions in space and international collaboration.
- The launch date and specific crew details are yet to be announced.
- Shenzhou-19 is a continuation of previous successful missions, enhancing China's presence in low Earth orbit.

Summary: The Shenzhou-19 mission is a key part of China's space program, focusing on human spaceflight and scientific research at the Tiangong space station.

DIWALI SPECIAL OFFER

50 PER OFF IN ALL COURSES

Connect with sir 9057921649(msg only)

Courses to b focused

visit -

saurabhpandeyupsc.com

Download saurabh pandey cse app

- NEW BATCH ON CURRENT AFFAIRS
- ESSAY COURSE
- PRELIMS TEST SERIES
- Agriculture optional
- ETHICS AND INTEGRITY
- · COURSE ON SOCIETY
- COURSE ON CYBERSECURITY AND DISASTER MANAGEMENT



Valid for All UPSC CSE Prelims and MAINS COURSES + Agriculture optional

Download saurabh pandey cse app visit - saurabhpandeyupsc.con and click all courses

Comprehensive course on ADVANCE CURRENT AFFAIRS BOTH FOR PRELIMS AND MAINS 2025

Includes

- The Hindu Newspaper subjectwise coverage
- Yojana magazine
- Down to earth
 PIB
- Physics.org
- Mains qs
- Prelims Practice set



FOR UPSC 2025/26

NEW BATCH
LAUNCHED

Connect with sir 9057921649



AGRICULTURE OPTIONAL

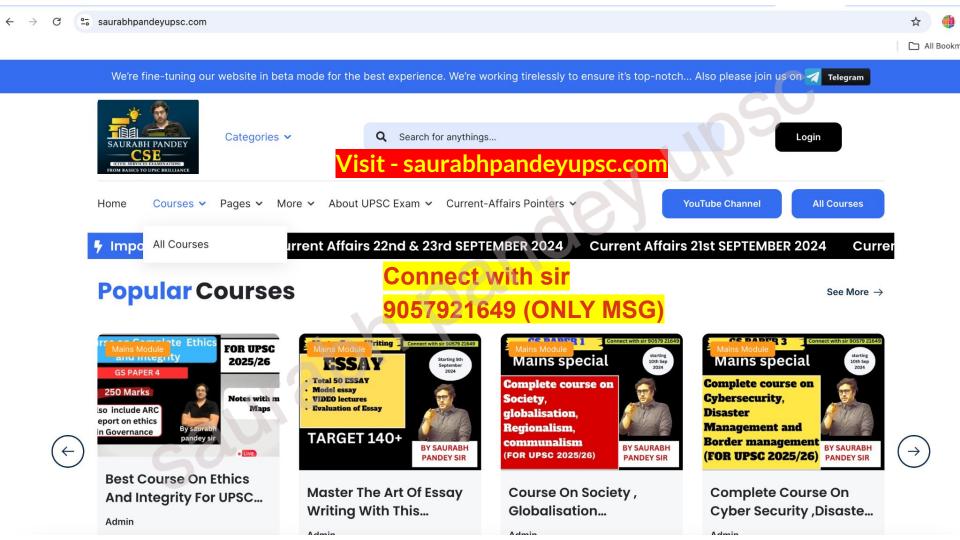
NEW BATCH LAUNCHED

For UPSC IAS /IFoS 2025/26

For any Question message-9057921649

SCORE 300+





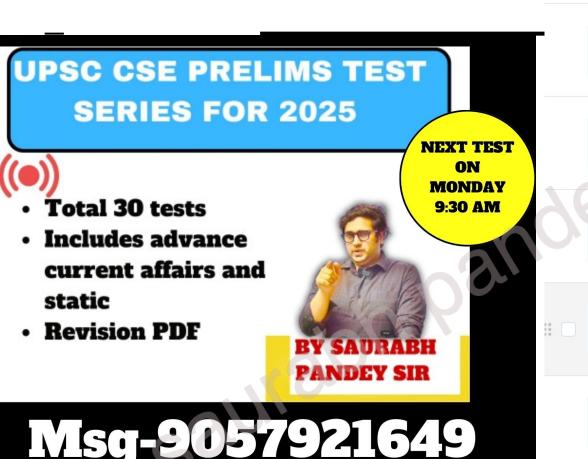
ESSAY

- Total 50 ESSAY
- Model essay
- VIDEO lectures
- Evaluation of Essay

TARGET 140+

Download -saurabh pandey cse APP

> BY SAURABH PANDEY SIR





Study material set 1.pdf



study material - set 2 .pdf



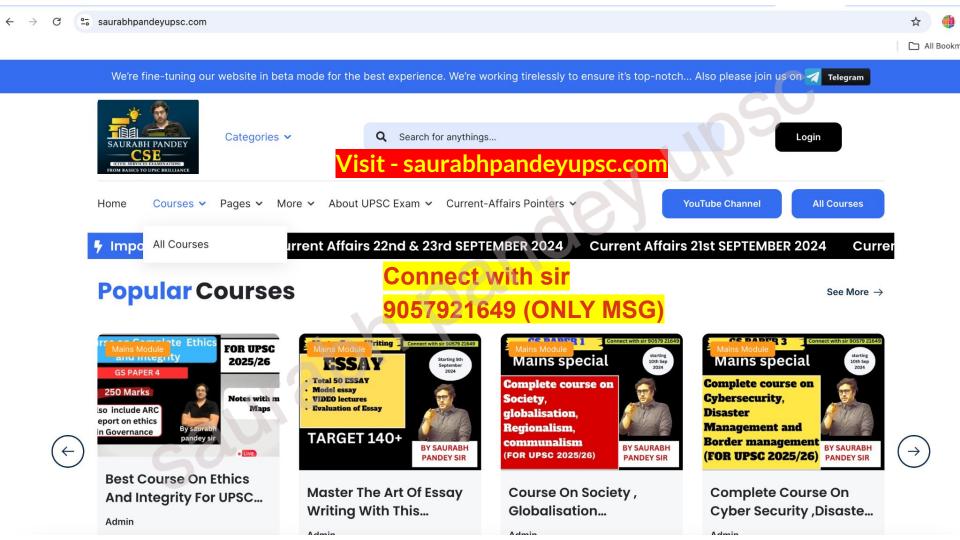
Study material set 3 .pdf



Study material set 4.pdf



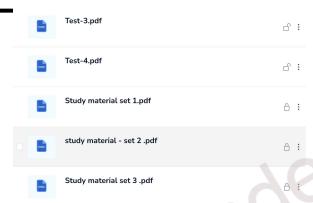
Study Material Set 5.pdf



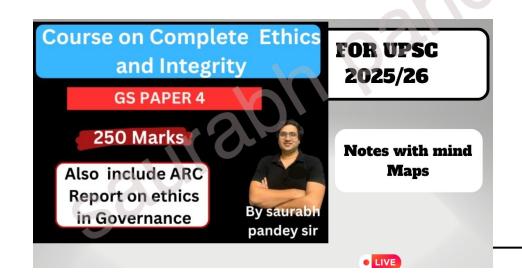
UPSC CSE PRELIMS TEST SERIES FOR 2025

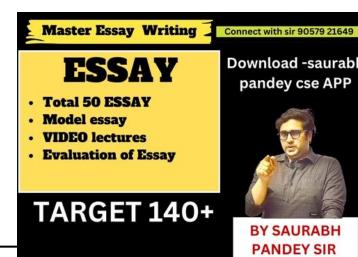
- **((•))**
 - Total 30 tests
 - Includes advance current affairs and static
- Revision PDF





1000 pages study material





Movies

Kids





Saurabh Pandey CSE

Saurabh Pandey CSE









Add to wishlist

This app is available for your device











App support Y



PDF Download → https://t.me/gesreporter





Target Mains -2025/26 -

Q "Economic Disparity among states bring more challenges in indian federalism". Discuss

Connect with sir 9057921649

send your answer - Saurabh pandey upsc telegram channel