

Abode for affordable Success

# NOVEMBER 2022 CURRENT AFFAIRS



#### **Table of Contents**

SECOND WEEK NOVEMBER 2022	4
KHERSON	1
1. Context	1
2. Kherson and its significance	1
3. Kherson is under Russia's control	2
4. Russia's withdrawal from Kherson	2
4.1 The mobilisation failure	2
4.3 Ukraine's counter-offensive	3
5. Challenges to remobilise Russian forces	3
General studies II: Governance	4
DELHI AIR POLLUTION	
INFLATION TARGETING FRAMEWORK	8
1. Context	8
2. Key Points	8
3. Inflation Targeting Framework	8
4. Persistently high inflation	8
5. Breaking down the CPI and WPI	10
6. Reasons for WPI inflation consistently above CPI inflation	11
7. Composition of indices	12
ROLE OF GOVERNOR IN PUBLIC UNIVERSITIES	13
1. Context	13
2. What is the role of the Chancellor in public universities?	13
3. Does the Governor have discretion in his capacity as Chancellor?	14
4. Recent Developments	14
INDIA'S FIRST PRIVATE SATELLITE VEHICLE-VIKRAM-S	15
1. Context	15
2. Prarambh Mission	15
3. About Vikram-S	16
4. The need for satellite launch vehicles like Vikram	16

5. Need for privatization of the space sector in India	16
6. What is Skyroot Aerospace?	17
7. IN-SPACe	17
8. Beyond IN-SPACe: NSIL	17
9. ISpA	18
General studies I: Indian Heritage and Culture	18
RAKHIGARHI	18
Prelims Corner	20
Mains Corner	21





**General Studies II: International relations** 

## **KHERSON**

#### 1. Context

Ukraine's defence and intelligence unit has reported on the withdrawal of Russian troops from Kherson but predicts it to be a delusion for a retreat.

#### 2. Kherson and its significance

- Geographically, Kherson is a strategic location for Russia and Ukraine.
- Situated northwest of the Dnipro River, the province shares borders with Donetsk, Crimea and the Black Sea.
- With Moscow capturing Crimea in 2014, the occupation of Kherson in March 2022 has benefited Russia in transferring its military from Crimea to counter Ukraine.
- It provides access to Odesa and Black Sea ports in the west and serves as the main route to secure southern Ukraine.
- For Ukraine, regaining Kherson is significant to protect its population in Kalanchak and Chaplynka districts and also to recapture Crimea.
- Kherson is also an important region for its agricultural produce with irrigation channels.



#### 3. Kherson is under Russia's control

- o In early March 2022, Kherson was captured by Russia through intense fighting. The battle of Kherson proved to be the starting point to capturing and occupying the southern part of Ukraine while the battles for Kharkiv and Kyiv in the north progressed.
- Russia's hold over Kherson since March 2022 enabled Moscow to capture the key port cities Mariupol in the Sea Azov and Odesa, thus expanding Control.
- o Kherson's irrigation canals were used as defence positions, creating a strong line preventing Ukraine's counter-attacks.
- Russia also had positioned its soldiers in Kherson and Stockpiled the ammunition.

#### 4. Russia's withdrawal from Kherson

There are three reasons behind the move.

#### 4.1 The mobilisation failure

• Russia was advancing rapidly in capturing the southern and northern cities of Ukraine and its military personnel and weapon systems started to run thin.

- Russia then pursued a partial mobilisation strategy to circumvent its onground limitations.
- The failure of recruits challenges Russia to keep its hold against the Ukraine counter-offensive in Kherson.

#### 4.2 Inability to govern Kherson

Despite imposing martial law, Russia could not effectively rule Kherson; the three-level security in the occupied areas could not enforce Russia's control on the ground.

#### 4.3 Ukraine's counter-offensive

- Until August, Ukraine was supplied only with short-range and low-grade weapons by the West.
- Later, Ukrainian soldiers received military training; as Moscow continued its onslaught, the West upgraded its support with medium to high-range weapons systems such as the Howitzers, HIMARS, air defence systems, battle tanks and drone technologies.
- It came from the U.S., the U.K. and Germany, whereas Russia's procurement was slow and limited to Shahed drones.

This helped Ukraine recapture Russian-occupied areas including Izyum, northeast, and southeast of Kharkiv, Izyum-Slovyansk, and Kupiansk in Eastern Ukraine and northwest Kherson in the south.

• On the other hand, Russia has been facing challenges in augmenting its military hardware on the battleground.

#### 5. Challenges to remobilise Russian forces

- Russia's new mobilisation has failed to stop the advancement of Ukraine's forces.
- The challenges to remobilise its defence systems and the shortage of weapons must have played a role in Russia's withdrawal.
- With Ukraine strengthening its military capacity through support from the West, upgrading from land-based to air-based to heavy battle tanks, Russia is facing a challenge to hold its occupied territories in Ukraine.
- This is not the first time Moscow is making withdrawn, after an initial onslaught.
- The attack on Ukraine's capital Kyiv was an initial strategy of Russia.

- Later, Moscow shifted its strategy from capturing Kyiv to concentrating on eastern Ukraine.
- Similarly, Russia also withdrew from its strategy to capture Kharkiv.
- Controlling Donetsk and Luhansk have become a significant objective.
- Withdrawal from Kherson exposes a serious gap in Russia's strategy to hold southern Ukraine.
- It also underlines its strategy to withdraw under serious attack or resistance by the Ukrainian forces as it happened in Kyiv and Kharkiv.

#### **General studies II: Governance**

## **DELHI AIR POLLUTION**

#### 1. Context

Delhi was once again covered in a haze of smog, witnessing very poor air quality, a phenomenon that has become a trend during the winter months.

The share of vehicular exhaust contributing to Delhi's PM2.5 pollution is up to 30% while soil and road dust is up to 20%, biomass burning is 20%, industries are up to 15%, diesel generators up to 10%, power plants up to 5% and notably, the share of pollution from outside Delhi's urban airshed (like stubble burning in neighboring States) is up to 30%

#### 2.PIL on High Pollution level

In March 1995, the Supreme Court, while hearing a plea by environmentalist and lawyer M.C. Mehta about Delhi's polluting industries, noted that Delhi was the world's fourth most polluted city in terms of concentration of suspended particulate matter (SPM) in the ambient atmosphere as per the World Health Organization's 1989 report.

The Court took note of two polluting factors — vehicles and industries, and in 1996 ordered the closure and relocation of over 1,300 highly-polluting industries from Delhi's residential areas beyond the National Capital Region (NCR) in a phased manner.

In 1996, Mr. Mehta filed public interest litigation (PIL) alleging that vehicular emissions were leading to air pollution and that it posed a public health hazard. In

the same year, a report about Delhi's air pollution by the Centre for Science and Environment made the apex court issue a notice to the Delhi government to submit an action plan to curb pollution. Both matters were later merged

#### 3. Perilous level of pollution in Delhi

UrbanEmissions.Info re-analyzed the pan-India PM2.5 concentration from 1998 to 2020 and found that Delhi was the most polluted of all States/UTs each year through all 23 years. Delhi's annual PM2.5 levels increased by 40% from 80 g/ m3 to 111 g/m3.

Another study by the U.S. - based Health Effects Institute released this year, studying data between 2010 and 2019, also found Delhi to be the most polluted city in the world in terms of PM2.5 levels. In the winter of 2016, Delhi witnessed one of its worst incidents of pollution-induced smog, with PM2.5 and PM10 levels reaching a whopping 999 ug/m3 in parts of Delhi on November 1.

#### 4. Measures are taken to Curb Pollution

#### 4.1. Environmental Pollution Control Authority of Delhi NCR (EPCA)

The Supreme Court, recognizing the need for technical assistance and advice in decision-making and implementation of its orders, asked the Ministry of Environment and Forests (now the Ministry of Environment, Forests, and Climate Change — MoEFCC) to establish an authority for Delhi, leading to the creation of the Environmental Pollution Control Authority of Delhi NCR (EPCA) in 1998

- The EPCA submitted its report containing a two-year action plan in June of that year and the Supreme Court subsequently ordered the Delhi Trasport Corporation (DTC) bus fleet, taxis, and autos to switch to Compressed Natural Gas (CNG), and the phasing out of all pre-1990 autos.
- Other measures between the late 1990s and early 2000s included the complete removal of leaded petrol, removal of 15 and 17-year-old commercial vehicles, and a cap of 55,000 on the number of two-stroke engine auto rickshaws (which reports at the time said were contributing to 80% of pollution in the city).
- Coal-based power plants within Delhi were also converted to gas-based ones.

#### **4.2.**National Air Quality Programme (NAMP)

The Centre decided to establish a network of monitoring stations under the National Air Quality Programme (NAMP) to measure key pollutants. Under the National Ambient Air Quality Standards (NAAQS) specified by the Central Pollution Control Board (CPCB), pollutants like PM10 (particulate matter with a diameter exceeding 10 microns), sulphur dioxide, and nitrogen oxides were measured.

#### 4.3. Graded Response Action Plan (GRAP)

The Supreme Court in November 2016 told Delhi and NCR authorities to form a plan to deal with the air pollution, and the MoEFCC in early 2017 came out with the Graded Response Action Plan (GRAP), which involved coordination between multiple agencies in Delhi to activate pollution control measures corresponding to the increasing Air Quality Index (AQI) levels.

#### 5. Revised standards of Air quality

The NAAQS was revised in 2009 to include 12 categories of pollutants including PM2.5 (particulate matter with a diameter under 2.5 microns) — noxious pollutants which can penetrate deep into the lungs and even enter the bloodstream, resulting in cardiovascular and respiratory impacts.

Particulate Matter (PM) is primarily generated by fuel combustion from different sectors, including transport, energy, households, industry, and agriculture. According to the revised NAAQS, the acceptable annual limit for PM2.5 is 40 micrograms per cubic metre (ug/m3) and 60 ug/m3 for PM10. The renewed WHO standards meanwhile, prescribe an accepted annual average of 5 ug/m3 for PM2.5 and 15 ug/m3 for PM10. While PM2.5 as a pollutant was only included in 2009

#### 6. Causes Behind High Pollution level in Delhi

- **6.1.Rapid growth in Delhi's population:** Population density grew from 9,340 persons per sq km in 2001 to 11,320 persons per sq km in 2011
- **6.2.Industrialization :** The Najafgarh drain basin, which houses multiple industrial areas, is the most polluted cluster in India with its air and water being in the 'critical' category
- **6.3.Urbanization:** Increase in motorized private vehicle fleets led to the high concentration of air pollutants such as particulate matter, nitrogen oxides, sulphur dioxide, carbon monoxide, and ozone. From around 4.2 million motor vehicles

registered in 2004 in Delhi alone, the registered vehicles increased to around 10.9 million in March 2018

#### 7. Loopholes And Solutions

#### 7.1. Holistic Policy Approach

Multiple researchers have alleged that the policy approach and measures taken by the Central and State authorities for specific polluting sectors over the years have been fragmented and often reactive

#### 7.2. Public Transport

Due to the Supreme Court's 55,000 cap on two-stroke auto rickshaws, the sector could not grow, leading to black marketing of permits. Studies note that between 1997 and 2011, Delhi's population grew by 45% and registered cars and two-wheelers grew by 250%, meaning the lower availability of autos could have likely contributed to increased private vehicle ownership. Besides, Delhi still does not have the required public bus fleet vis-a-vis demand

#### 7.3.Odd Even Formulae On Freight Vehicles

Although vehicular emissions contribute 25% to Delhi's PM2.5 levels, passenger vehicles contribute just 8%, of which cars constitute 5%. This means that if all passenger vehicles within Delhi stopped operating, PM2.5 levels would reduce by an average of 8%, but the remaining 17%, contributed by heavy freight vehicles, would remain as it is not covered under the odd-even rule. Experts also point out that a coordinated response factoring in Delhi's waste management has to be taken to reduce air pollution.

#### 7.4.Delhi Waste Management

While the daily waste generation rate in Delhi is over 10,000 tons, the capacity of its already overflowing landfills to collect and manage garbage is under 6,000 tons. This leads to the practice of burning waste around residential areas

#### 7.5. Stubble Burning

Burning of farm residue or stubble in Delhi's neighbouring States, Haryana, Punjab, Uttar Pradesh, and Rajasthan, researchers have emphasized the need for airshed management, along with improved machinery subsidies from the

government and alternatives to crop burning. An airshed is a common geographic area where pollutants get trapped

**General studies III: Economy** 

### INFLATION TARGETING FRAMEWORK

#### 1. Context

The Monetary Policy Committee (MPC) has decided to conduct an off-cycle meeting today to discuss the failure to meet the inflation target under Section 45ZN of the Reserve Bank of India Act, 1934.

#### 2. Key Points

- As per the Reserve Bank of India Act (RBI), 1934, MPC is required to meet at least four times each year to discuss the macroeconomic issues in the country and take policy decisions to address those.
- This is the second time MPC has conducted an off-cycle meeting in 2022-23.
- The meeting is scheduled in light of inflation being consistently high for nine consecutive months.

#### 3. Inflation Targeting Framework

- o In 2016, Parliament amended the RBI Act of 1934 to change the monetary policy and introduce an inflation-targeting framework.
- This framework prioritises price stability to achieve sustainable GDP growth.
- Price stability allows investors to confidently invest their money in productive activities without worrying about losing value.
- o Price stability also maintains the purchasing power of consumers, i.e. the ability to purchase a good (or service) with a given amount of money.

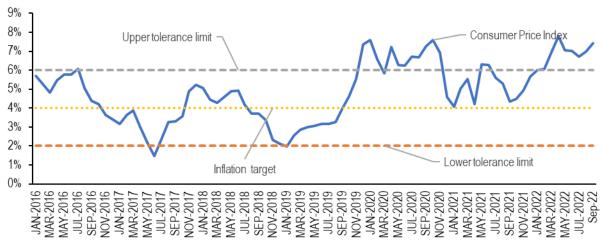
#### 4. Persistently high inflation

As per the new framework, the central government, in consultation with RBI sets

- 1. An inflation target and
- 2. An upper and lower tolerance level for retail inflation.

- The target has been set at 4 per cent with an upper tolerance limit of 6 per cent and a lower tolerance limit of 2 per cent.
- The upper and lower limits indicate that although inflation should be close to 4 per cent, the deviation between these limits is acceptable.
- The target and bands are revised every five years.
- In march 2021, the existing targets were carried forward.
- Retail inflation has been above 6 per cent for the past nine months and it has been above 4 per cent from October 2019 onwards

Figure 1: Consumer price index (year-on-year; in percentage)



Sources: Database on Indian Economy, Reserve Bank of India; PRS.

If inflation is above or below the prescribed limits for three quarters, RBI must submit a report to the central government explaining why prices have been rising (or falling) persistently, what will be done to correct that and estimated when the target will be achieved.

- The MPC uses tools such as interest rates to control the level of inflation in the economy.
- One such rate is the policy report rate, which is the rate at which RBI lends money to banks.
- An increase in the policy repo rate makes borrowing money more costly and hence is expected to control inflation by reducing the money supply.
- MPC increased this rate from 4 per cent in April 2022 to 4.4 per cent in May 2022, to 4.9 per cent in June 2022, to 5.4 per cent in August 2022 and 5.9 per cent in September 2022.

#### 5. Breaking down the CPI and WPI

- o Consumer Price Index (CPI) measures the general prices of goods and services such as food, clothing and fuel over time.
- o Retail inflation is calculated as the change in the CPI over a period of time.
- Goods and services such as petrol, food products, health and education are considered for their calculation, which are assigned different weights.

Table 1: Assigned weights for the calculation of CPI

Category	Weight	
Food and beverages	46 per cent	
Miscellaneous (including petrol and diesel, health and education)	28 per cent	
Housing	10 per cent	
Clothing and footwear	7 per cent	
Fuel and Light	7 per cent	
Pan, tobacco and intoxications	2 per cent	
Total	100 per cent	

Sources: MOSPI; PRS.

- Between February 2022 and August 2022, the average annual inflation was 6.9 per cent.
- The rise in prices of subcomponents of the CPI during this period is indicated in Table 2.

Table: 2 The average inflation of some CPI components between February 2022 to August 2022 (in percentage)

Subcategory of CPI	Average inflation	
Vegetables	13.26 per cent	
Oils and facts	12. 46 per cent	
Foot wear	11.41 per cent	
Fuel and Light	9.88 per cent	
Transport and communication	7. 74 per cent	

Cereals and products	6.05 per cent
1	1

Sources: Database on Indian Economy, RBI; PRS

- CPI is not the only index that measures inflation in an economy.
- The Wholesale Price Index (WPI) measures the wholesale prices of goods.
- A change in wholesale prices reflects wholesale inflation.
- Table 3 indicates the weights assigned to goods for calculating the WPI.
- Manufactured goods include metals, chemicals, food products and textiles.

Primary articles (23per cent) include food articles and crude petroleum and natural gas.

Fuel and power (12 per cent) mineral oils, electricity and coal.

WPI has remained above 10 per cent from April 2021 onwards.

It reached an all-time high of 17 per cent in May 2022.

This was driven by the inflation in metals, kerosene and petroleum coke, fruits and vegetables and palm oil.

Table: 3 Assigned weights for the calculation of WPI (in percentage)

Category	Weight
Manufactured products	64 per cent
Primary articles	23 per cent
Fuel and Power	12 per cent
All commodities	100 per cent

Sources: Ministry of Commerce and Industry; PRS

#### 6. Reasons for WPI inflation consistently above CPI inflation

- Movements in the WPI have an impact on the CPI.
- For almost a year and a half, CPI inflation has remained below WPI inflation.
- As per the design of the indices, it is expected that CPI would remain above WPI and that any increase in WPI would reflect in the CPI after a time lag.
- This is because retail prices include taxes (as a percentage of price), while wholesale prices do not.

- This is because retail prices include taxes (as a percentage of price), while wholesale prices do not.
- Additionally, some of the goods in WPI act as inputs in the goods considered in CPI.
- An increase in input prices would lead to higher retail prices after a time lag.

Figure 2: Consumer Price Index and Wholesale Price Index

Sources: Database on Indian Economy, Reserve Bank of India; PRS.

#### 7. Composition of indices

- As indicated in Tables 2 and 3, the composition of the two indices varies.
- For instance, prices of manufacture of basic metals, chemicals and machinery grew at an average rate of 13 per cent between February 2021 and September 2022.
- They contribute 7 per cent to the WPI.
- These are input goods for the production of final goods and services such as automobiles, which are included in the CPI.
- The rise in prices of transport vehicles, communication devices, fuel for transport and housing (CPI components) rose by 6 per cent during this period.
- The Ministry of Finance has observed that wholesale prices did not feed into retail prices (from March 2021 onwards) as wholesalers absorbed the rising input costs and did not pass them on to retailers.
- In August 2022, it was noted that as retail prices are rising now, the pass-through may occur.

# ROLE OF GOVERNOR IN PUBLIC UNIVERSITIES

#### 1. Context

Recently, the West Bengal government passed a bill to replace the Governor with the Chief Minister, as the Chancellor of 31 state public universities (Such as Calcutta University, and Jadavpur University). As per the All India Survey on Higher education (2019-20), state public universities provide higher education to almost 85% of all students enrolled in higher education in India.

#### 2. What is the role of the Chancellor in public universities?

- State public universities are established through laws passed by state legislatures. In most laws, the Governor has been designated as the chancellor of these universities.
- The chancellor functions as the head of public universities and appoints the Vice-Chancellor of the university. Further, the Chancellor can declare invalid, any university proceeding which is not as per existing laws.
- In some states such as Bihar, Gujarat, and Jharkhand the Chancellor has the power to conduct inspections in the university. The chancellor also presides over the convocation of the university and confirms proposals for conferring honorary degrees. This is different in Telangana, where the Chancellor is appointed by the state government.
- The Chancellor presides over the meetings of various university bodies (such as the court/senate of the university). The court/senate decides on matters of general policy related to the development of the university, such as: (i) establishing new university departments, (ii) conferring and withdrawing degrees and titles, and (iii) instituting fellowships.
- The West Bengal University Laws (Amendment) Bill, 2022 designates the Chief Minister of West Bengal as the Chancellor of the 31 public universities in the state.

• Further, the Chief Minister (instead of the Governor) will be the head of these universities and preside over the meetings of University bodies (Such as the Court/Senate).

#### 3. Does the Governor have discretion in his capacity as Chancellor?

- The Sarkaria and Puunchi Commission also dealt with the role of the Governor in educational institutions. Both Commissions concurred that while discharging statutory functions, the Governor is not legally bounded by the aid and advice of the Council of Ministers.
- However, it may be advantageous for the Governor to consult the concerned Minister.
- o The Sarkaria Commission recommended that state legislatures should avoid conferring statutory powers on the Governor, which were not envisaged by the constitution.
- The Puunchi Commission observed that the role of the Governor as the Chancellor may expose the office to controversies or public criticism. Hence, the role of the governor should be restricted to constitutional provisions only.

#### 4. Recent Developments

- Recently, some states have taken steps to reduce the oversight of the Governor in-state public universities.
- In April 2022, the Tamil Nadu Legislative Assembly passed two Bills, to transfer the power of appointing the Vice-Chancellor (in public universities) from the Governor, to the state Government. As of June 8, 2022, these bills have not received the Governor's assent.
- In 2021, Maharastra amended the process to appoint the Vice Chancellor of state public universities. Before the amendment, a search Committee forwarded a panel of a least five names to the Chancellor (who is the Governor).
- The Chancellor could then appoint one of the persons from the suggested panel as Vice-Chancellor, or ask for a fresh panel of names to be recommended.
- The 2021 amendment mandated the search Committee to first forward the panel names to the state government which would recommend a panel of two names (from the original panel) to the Chancellor.
- The Chancellor must appoint one of the two names from the panel as Vice-Chancellor within thirty days.

- As per the amendment, the Chancellor has no option of asking for a fresh panel of names to be recommended.
- The Chancellor must appoint one of the two names from the panel as Vice-Chancellor within thirty days. As per the amendment, the Chancellor has no option of asking for a fresh panel of names to be recommended.

**General Studies III: Science & Technology** 

# INDIA'S FIRST PRIVATE SATELLITE VEHICLE-VIKRAM-S

#### 1. Context

India's first privately developed launch vehicle is set to make its maiden flight from the Indian Space Research Organisation's (ISRO) launch pad at Sriharikota between November 12 and 16. The mission, of Hyderabad-based Skyroot Aerospace, is called 'Prarambh' (the beginning) and will carry two Indian and one foreign customer payloads on the launch vehicle named 'Vikram'.

#### 2. Prarambh Mission

- It will mark the beginning of private sector launches in India. The development of privately built rockets and satellites received a boost, especially after the finance minister opened the space sector to private participation in 2020. Skyroot will be the first private company to launch its rocket.
- Other companies and missions
- 1. Agnikul Cosmos tested its semi-cryogenic Agnilet engine.
- 2. ISRO's small satellite Launch Vehicle (SSLV) is also likely to be manufactured and operated by private players soon.
- Private satellite mission launched by ISRO. ISRO's heaviest launch vehicle Mark III launched 36 OneWeb satellites (India's Bharti is a stakeholder). ISRO will be launching another fleet of 36 satellites for the company as

well. The space agency has also launched at least four satellites made by students.

#### 3. About Vikram-S

- The Vikram-S rocket is a single-stage suborbital launch vehicle that would carry three customers' payloads.
- Suborbital flight is those vehicles travel slower than the orbital velocity, meaning it is fast enough to reach outer space but not fast enough to stay in an orbit around the Earth.
- It would help test and validate most of the Vikram series of space launch vehicle technologies.
- Sky root has been working on three different Vikram rocket versions.
- The Vikram-I can launch with 480 kilograms of payload, whereas the Vikram-II is designed to do so with 595 kilos and Vikram-III has a 500 km Low Inclination Orbit launch capability with 815 Kg

#### 4. The need for satellite launch vehicles like Vikram

- The timeline of the launch would be directed by this larger, primary, satellite, whose interests would take precedence. But with more and more businesses, government agencies, even universities, and laboratories beginning to send satellites- nearly all of them falling in this category of small satellites- to space, the constraints of a piggyback ride have started to hurt.
- o The demand for the launch of small satellites has increased at a rapid pace in the last eight to ten years, thanks to the ever-growing need for space-based data, communication, surveillance, and commerce. The need for satellite data, imageries, and space technology now cut across sectors, from weather to agriculture to transport to urban development.
- o In India, ISRO is capable of launching satellites into space and the demand is fast outrunning its capacity, especially as the space agency also has other, larger goals it needs to focus on. Therefore, the sector is being opened up to private players, with ISRO helping them with facilities and knowledge. The use of facilities can be chargeable, providing ISRO with revenue.

#### 5. Need for privatization of the space sector in India

- o The global space industry is valued at 400 billion US dollars and has the potential to become a 1 trillion-dollar industry by 2040.
- India needs to increase its share in the global space industry and the private sector will play a big role in that.
- New fields like space tourism and space diplomacy need to be explored to walk shoulder to shoulder with other advanced nations.
- o India is working on a New Indian Space Policy for coordinating between government companies, space industries, start-ups, and institutions.

#### 6. What is Skyroot Aerospace?

Skyroot, a two-time national award winner, is the first start-up to sign a Memorandum of Understanding (MoU) with ISRO to launch a rocket into space. Skyroot Aerospace has so far raised \$68 million and it is India's most funded private space startup.

It is among the first companies to locally build fully 3D-printed rocket engines and successfully tested the same in November last year.

#### 7. IN-SPACe

- o In-SPACe is an autonomous and single window nodal agency in the Department of Space for the promotion, encouragement, and regulation of space activities of both government and private entities.
- o IN-SPACe will act as a single window, the independent nodal agency to take care of all the needs of the private sector.
- o It also facilitates the usage of ISRO facilities by private entities.
- o The establishment of IN-SPACe was announced in June 2020.

#### 8. Beyond IN-SPACe: NSIL

The government has announced the setting up of a New Space India Limited (NSIL), a public sector company that would serve as a marketing arm of ISRO. Its main purpose is to market the technologies developed by ISRO and bring it more clients that need space-based services with the primary responsibility of enabling Indian industries to take up high-technology space-related activities.

#### 8.1 NSIL Mandate

 Owing satellites for the Earth Observation and communication application and providing space-based services.

- Building satellites and launching them as per demand. Providing Launch Services for satellites belonging to customers.
- Building launch vehicles through Indian Industry and launching as per satellite customer requirements.
- Space-Based services related to Earth Observation and Communication satellites on a commercial basis.
- Technology transfer to the Indian industry.

#### 9. ISpA

- Indian Space Association (ISpA) was launched in 2021, an industry body consisting of various stakeholders in the Indian space domain. The members of the organization include government bodies such as the Indian Space Research Organisation (ISRO) and private telecom companies such as Bharati Airtel's One Web, Tata Group's Nelcom, L& T, MapMyIndia, and others.
- One of the main goals of the organization is to supplement the government's efforts toward making India a global leader in commercial space-based excursions.

General studies I: Indian Heritage and Culture

### RAKHIGARHI

#### 1.Context

ASI's latest excavation has revealed new archaeological findings. The major findings include a drainage system, the structure of some houses, lanes, jewellery unit, copper and gold jewellery, terracotta toys, earthen pots, seals, a burnt-brick wall (possibility of a walled settlement), an aristocratic settlement, semi-precious stones such as agate and carnelian, two female skeletons buried with a plethora of pottery and adorned jewellery etc.



#### 2. Facts about Rakhigarhi

- It is the largest Harappan site in the Indian Subcontinent.
- It is situated in the Hisar district of Haryana and is located in the Ghaggar-Hakra river plain.
- The site was first excavated by Amarendra Nath of ASI.
- Earlier Mohenjodaro (Pakistan) was considered the largest Harappan site until Prof. Vasanth Shinde and his team started fresh excavations at Rakhigarhi.
- The findings confirm both the early and mature phases of this 5,000-years-old Harappan site of Rakhigarhi.
- An important find from this site is a cylindrical seal with 5 Harappan characters on one side and a symbol of an alligator on the other
- The Ritual system is signified by an animal sacrificial pit lined with mudbrick and triangular and circular fire altars on the mud floor.
- A DNA study from skeletal remains from the cemetery at Rakhigarhi found that the Harappan people had an independent origin. The study negates the theory of the Harappans having ancestral links with steppe pastoral or ancient Iranian farmers.

#### 3. The idea behind this phase of excavation at Rakhigarhi

The idea of this phase of excavation is to make the archaeological site of Rakhigarhi accessible to people by exposing the structural remains and conserving them for future viewing, along with providing amenities to the visitors

#### **Iconic sites**

Union Budget (2020-21) has proposed to develop Rakhigarhi (Hisar district, Haryana) as an Iconic Site.

4 other archaeological sites in Hastinapur (Uttar Pradesh), Shivsagar (Assam), Dholavira (Gujarat), and Adichanallur (Tamil Nadu) will also be developed as iconic sites with onsite museums.

#### **Prelims Corner**

- 1. Consider the following statements
- 1. Electoral bonds are interest-free bearer instruments used to donate money anonymously to political parties.
- 2. The bonds are sold in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh, and Rs 1 crore, and all Public sector banks authorized to sell them

Which of the above given statement is/ are correct

- A.1 Only B.2 Only C.Both 1 and 2 D. Neither 1 Nor 2
- 2. Consider the following statements regarding Electoral bonds
- 1. Only those political parties that are registered under Section 29A of the Representation of the People Act, 1951, and which secured not less than 1% of votes polled in the last General Election to the House of the People or the Legislative Assembly of the State are eligible to receive Electoral Bonds.
- 2. Individuals, groups of individuals, NGOs, religious and other trusts are permitted to donate via electoral bonds without disclosing their details

Which of the above given statement is/ are correct

- A.1 Only B.2 Only C.Both 1 and 2 D. Neither 1 Nor 2
- 3."Parambh" was recently in the news, choose te correct answer
- A. Hyderabad-based Skyroot Aerospace
- B.Indus valley satellite found in Haryana
- C. ISRO's Department of Space for the promotion, encouragement
- D. Earth Observation and communication application
- 4. Consider the following statements
- 1. It is the largest Harappan site in the Indian Subcontinent
- 2. It is situated in the Hisar district of Haryana and is located in the Ghaggar-Hakra river plain

Which of the following is the correct answer

- A.Mohenjadaro B.Surkotada C.Rakhigari D.Lothal
- 5. The National Geophysical Research Institute is a geoscientific research organization that comes under which autonomous body in the country?

A.Indian Institute of geomagnetism B.Aryabhatta research institute of observational science

- C.Technology information, Forecasting and assessment council
- D.Council of Scientific and Industrial research (CSIR)

#### **Mains Corner**

- 1. What is the Iconic Tourist Sites Initiative?
- 2. What are the key features of Vikram-S mission and explain the Need for privatization of the space sector in India?
- 3. Explain the role of the Chancellor (Governor) in public universities in light of recent developments

- 4. How far do you think Inflation targeting as an approach to monetary policy has yielded its intended results?
- 5. What are the causes of high pollution level in Delhi .suggest measures to control it?

## Prelims Key

1	2	3	4	5
A	C	A	C	D





Abode for affordable success



10+ Mock Tests
English &Telugu

Join our Exclusive Online
Program for
APPSC GROUP 1
PRELIMS&MAINS

With just

RS.1999

Covered every topic in the notification

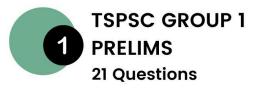
Covered year long Current affairs

**Covered budget highlights** 

Covered Government schemes
Covered Mental Ability

Detailed live explanations of every exam

#### **Upscexamnotes.com Endeavours**





**UPSC MAINS 2022** 

18 Questions from our Content

#### **UPSC IAS PROGRAM**



INTEGRATED MAINS & PRELIMS
MENTORSHIP (IMPM)

**RS.1000** 

(Both prelims& mains test series on every sunday for one year)

Subscribe to upscexamnotes.com for updates in the website

9642608080, 8971134181

Support@upscexamnotes.com



#### Abode for affordable success



APPSC గ్రూప్ 1 ప్రిలిమ్స్ &మెయిన్స్

కోసం మా ప్రత్యేకమైన <mark>ఆన్లైన్ ప్రోగ్రామ్</mark>లో చేరండి upscexamnotes.com

10+ Mock Tests English & Telugu

కేవలం

RS.1999

మాత్రమే GSTతో కల్పిస్టి

నోటిఫికేషన్లలోని ప్రతి టాపిక్ సంవత్సరం పొడవునా కరెంట్ అఫైర్స్ మెంటల్ ఎబిలిటీ , సైన్స్&టెక్నాలజీ బడ్జెట్ ముఖ్యాంశాలు

ప్రభుత్వ పథకాలు

ప్రతి పరీక్ష వివరణ ఆన్లెన్లలో వీడియో క్లాస్ ద్వారా

## upscexamnotes.com యొక్క ఫలితాలు

**TSPSC GROUP 1 PRELIMS** 21 Questions

**UPSC MAINS 2022** 18 Questions from our Content

#### **UPSC IAS PROGRAM**

3

**INTEGRATED MAINS & PRELIMS** MENTORSHIP (IMPM)

**RS.1000** 

(ఒక సంవత్సరం పాటు ప్రతి ఆదివారం ప్రిలిమ్స్ మరియు మెయిన్స్ టెస్ట్ సిరీస్లు రెండూ)

వెబ్సెట్లో అప్డేట్ల కోసం upscexamnotes.com కు సబ్స్క్రైబ్ చేయండి

9642608080,8971134181 Support@upscexamnotes.com



**Abode for Affordable Success** 

TSPSC GROUP 1
PRELIMS

21 Questions

**UPSC MAINS 2022** 

18 Questions from our Content

# APPSC GROUP 1 PRELIMINARY EXAM SPECIAL

- Indian Polity
- Mental ability
- AP Economy
- AP History
- RS.389

- Science& Technology
- Environment& Ecology
- AP Geography
- AP BUDGET
- Current affairs











1200+ MCQ's (10Mock Test)
Most Probable Questions
by Subject Experts which
can Change your Marks

DTS ACADEMY INDIA PRIVATE LIMITED PUBLICATIONS

Support@upscexamnotes.com 9642608080



# JOIN INTEGRATED MAINS & PRELIMS PLAN (IMPM) With just

**1000 RUPEES** 

**Prelims and Mains Test Series on Every Sunday** 

Subject Expert will review Your Answers and send it to your profiles

**Total 52 Prelims & 52 Mains Test Series**