

27 Dec 2020: UPSC Exam Comprehensive News Analysis

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B. GS 2 Related

Category: SOCIAL SECTOR

1. 'Jal Jeevan adds 1 lakh water connections daily'

Context:

- In a year since the beginning of the implementation of the Jal Jeevan scheme, more than 3 crore households have been provided with tap water connections.

Details:

- The Jal Jeevan Mission which aims to give access to safe drinking water has achieved 32.3% coverage of tap connections in rural India.
- The implementation of this scheme has been appreciated as it has achieved considerable progress even in the times of the pandemic.
- The scale and speed of the implementation have been very encouraging, every year more than 3 crore households are to be given tap water connections, with almost 1 lakh new connections are getting added on daily basis.

Jal Jeevan Mission.

- Jal Jeevan Mission is envisioned to provide safe and adequate drinking water through individual household tap connections by 2024 to all households in rural India.
- The programme will also implement source sustainability measures as mandatory elements, such as recharge and reuse through greywater management, water conservation, rainwater harvesting
- The Jal Jeevan Mission will be based on a community approach to water and will include extensive Information, Education and communication as a key component of the mission.
- JJM looks to create a Jan Andolan for water, thereby making it everyone's priority.

Need for Jal Jeevan Mission

- Less than 50 per cent of the population in India has access to safely managed drinking water.
- The two-thirds of India's 718 districts are impacted by extreme water depletion, and the current lack of planning for water safety and security is a major concern.
- One of the challenges is the fast rate of groundwater depletion in India, which is known as the world's highest user of this source due to the proliferation of drilling over the past few decades.

Financial support

- The financial support has been ensured through the allocation of a sum of Rs.23,500 crores for the year 2020-21.
- Half of the 15th Finance Commission Grants to Rural Local Bodies, that is, ₹30,375 crores as a tied grant, will be utilized for water supply and sanitation.

Conclusion

- A safe water supply is the backbone of a healthy economy, yet is woefully under prioritized, globally.
- It is estimated that waterborne diseases have an economic burden of approximately USD 600 million a year in India. This is especially true for drought- and flood-prone areas, which affected a third of the nation in the past couple of years.
- Thus it is very important that the Jal Jeevan scheme is implemented across all districts with active participation from local bodies and states.

Category: POLITY

1. J&K's District Development Council polls

Context:

- The Prime Minister has praised the District Development Council polls as a new chapter in India's democracy.

Details:

- The Union Government has paved way for setting up District Development Councils by amending the Jammu and Kashmir Panchayati Raj Act, 1989.
- The members of District Development Councils will be directly elected by voters in the Union Territory.

What are DDCs?

- The DDCs will be a unit of governance in J&K, this will encompass a DDC and a District Planning Committee (DPC)
- The structure of the District Planning and Development Boards in every district will be replaced by the District Development Council.
- Every DDC will have 14 directly-elected members. The 20 districts of J&K would have 280 directly-elected members
- The DDCs will serve for a period of five years, they will be involved in the preparation and approval of district plans and capital expenditure.

Significance of DDC elections.

- These are the first elections held in J&K after the state was divided into two Union Territories and Article 370 was revoked in 2019.
- The carrying out of the elections amidst the COVID-19 pandemic and security concerns has been praiseworthy.
- The DDC elections will be a step towards strengthening grass-root democracy in the region.

C. GS 3 Related

Category: ENVIRONMENT

1. New species of sun rose found in the Eastern Ghats

Context:

- Botanists have discovered a new species of the wild sun rose from the Eastern Ghats in India. The new species, named *Portulaca lalji*, discovered from Prakasam district of Andhra Pradesh

Details about the new specie

- It has unique features such as a tuberous root, no hair in its leaf axils, a reddish-pink flower, prolate-shaped fruits, and copper brown seeds without lustre.
- The flowers are very attractive and bloom for months from June to February. The plant can have a rich horticultural value
- The succulent nature of tuberous roots allow the plant to survive on rocky crevices

Category: SCIENCE AND TECHNOLOGY**1. Nanomicelles: using nanoparticles for cancer treatment.****Context:**

- Nanotechnology has been explored for its effectiveness as a mode of drug delivery and currently, nanomicelles has been explored for the same.

Details

- Nano-drug delivery systems (NDDSs) provide a new drug delivery method for the treatment of various medical issues, like for example Cardio-vascular diseases, cancer treatment etc.
- The advancement in nanotechnology, demonstrating great advantages in solving health issues has been very encouraging. However, there have been concerns that need to be addressed, such as cytotoxicity.

Drug delivery

- A study has revealed the possibility of deploying nanomicelle as an effective drug carrier.
- A team has created a nanomicelle that can be used to deliver a drug named docetaxel, which is commonly used to treat various cancers including breast, colon and lung cancer.
- The cancer treatment is ideally expected to kill the cancer cells without harming healthy cells of the body, and chemotherapeutics approved for the treatment of cancer are highly toxic.
- The currently used docetaxel is a highly hydrophobic drug and is dissolved in a chemical mixture (polysorbate-80 and alcohol). This aggravates its toxic effects on the liver, blood cells, and lungs.
- So, there was a pressing and unmet need to come up with an effective drug delivery vehicle for docetaxel without any collateral damage.

Nanomicells

- Nanomicelles are ultramicroscopic globular structures that consist of exterior hydrophilic polar heads and an interior hydrophobic fatty acyl chain.
- In a recent pharmacology study, it was discovered that nanomicelles are capable of delivering poorly water-soluble drugs as well as the protection of drug molecules.

- Nanomicelles are typically spherical, but can sometimes take other shapes, such as cylinders and ellipsoids.
- The small size and shape of nanomicelles are only possible due to the molecular geometry of the particle. The shapes formed also depend on the ionic strength, surfactant concentration, and pH strength of the solutions they are placed in.
- Similar to nanoshells and nanovesicles, nanomicelles are extremely small structures and have been noted as an emerging platform in targeted therapy. Nanomicelles are globe-like structures with a hydrophilic outer shell and a hydrophobic interior. This dual property makes them a perfect carrier for delivering drug molecules.

Small but active

- The nanomicelles are less than 100nm in size and are stable at room temperature. Once they are injected intravenously, these nanomicelles can easily escape the circulation and enter the solid tumours where the blood vessels are found to be leaky. These leaky blood vessels are absent in healthy organs.
- Chemical conjugation would render the phospholipid-docetaxel prodrug to be silent in the circulation and healthy organs. But once it enters the cancer cells, the enzymes will cleave the bond to activate the drug and kill the cancer cells.
- The team carried out trials in a mice breast tumour model and discovered that it contributed towards tumour regression.
- The toxicity has been observed to be well within the FDA standards

Way forward

- These nanomicelles are extremely cost-effective and can establish itself as a next-generation chemotherapeutic, more research and clinical trials can lead a breakthrough in drug delivery that could have an indelible impact on human health.

D. GS 4 Related

Nothing here for today!!!

E. Editorials

Category: SCIENCE AND TECHNOLOGY

1. Coronavirus new strain

Context:

- The news of the emergence of a new strain originating in the United Kingdom(UK) has created panic among other countries thus forcing them to take mitigative measures to prevent the spread of the new strain.
- Mutations were reported from different parts of the world, including Denmark, Australia, England and South Africa.

- The emergence of a new strain of the virus, caused by mutations, that seemed to be 70% more transmissible.

Details:

- The new variant, VUI-202012/01, has accounted for nearly 60% of all cases in London by mid-December.
- The new variant is thought to be 70% more transmissible than earlier versions of the coronavirus.
- Concerns have been raised over the nature and location of the mutation, the mutation was at the receptor-binding domain of the spike protein, which the virus uses to enter the human body. This protein is also one of the targets of vaccines currently being developed.

What is the WHO saying?

- World Health Organization (WHO) has played down the fears about the mutation, it stated that viruses mutate over time and it is natural in virology and all the fears and discussions without further studies are not warranted.

Why do viruses mutate?

- A mutation means an alteration in genetic material. A mutation is part of the life cycle of a virus. Once the virus enters a host, it begins to replicate and make copies of itself. In an RNA virus such as SARS-CoV-2, proteins are made of a sequence of amino acids. Such a virus contains some 30,000 'base pairs', which can be likened to bricks placed next to each other to form a structure.
- An alteration in this base can be a mutation, effectively changing the shape and behaviour of the virus.
- In the UK variant, one mutation has made the virus more likely to bind with human proteins called receptors. This is called N501Y.
- During the process of virus replication, random errors arise, one or two protein molecules change, possibly induced by the immune response mounted within infected people
- These changes in the genomic structure of the virus can be considered mutations. Not all mutations are significant, but those that affect the virus's ability to survive or replicate are important.

How was the new strain identified?

- The English variant was identified in genomic surveillance by COVID-19 Genomics UK (COG-UK)
- Mutations arise naturally in the SARS-CoV-2 genome as the virus replicates and circulates in the human population, as a result of this on-going process, many thousands of mutations have already arisen in the SARS-CoV-2 genome since the virus emerged in 2019
- The vast majority of the mutations observed in SARS-CoV-2 have no apparent effect on the virus and only a very small minority are likely to be important and change the virus in any appreciable way (for example, a change in the ability to infect people; cause disease of different severity; or become insensitive to the effect of the human immune response including the response generated by a vaccine).
- The variant is the result of multiple mutations in the spike protein (the point of viral entry into the host) of SARS-CoV-2, as well as mutations in other genomic regions of the RNA virus.

- COG-UK reportedly identified one of these mutations as 'N501Y', in an area of the spike protein that binds to a key protein in the human cell, the ACE2 receptor. This was an indication that the alterations may, theoretically, result in the virus becoming more infectious.

Can it be detected through PCR tests?

- PCR test is used to identify a number of gene targets and will be able to identify this variant as well.
- India is currently taking precautions such as making RT-PCR tests mandatory and also a separate unit for those diagnosed with the new strain of coronavirus.

Is it known how a vaccine will react?

- While studies are being carried out to ascertain the impact of the vaccine on the severity of disease or mortality. The hope is that the vaccine's efficacy will not be drastically impaired by the mutation.
- Several experts believe that vaccines would remain effective despite the mutation because the immune response generated is against the complete surface, so even in the event of a change in a particular point the vaccine still remains effective.
- Vaccines will offer protection even from a mutant virus. By their very nature, they will make a variety of different antibodies and memory cells that will help fight off the infection, he adds.

How can you protect yourself?

- The preventive measures do not change, the measures that were encouraged still hold relevance, like using a face mask, regularly washing hands, and maintaining distance with others when in a public setting will continue to be the best practical ways to prevent the infection.

Conclusion

- It is true that the new variant requires caution but the experts have so far sounded optimistic about the combating capabilities of vaccination.

Category: ECONOMY

1. A slump and green shoots of recovery

Context:

- The COVID-19 pandemic has thrown the economies world over off the rails and Indian economy hasn't been an exception.
- The impact of the pandemic on the economy has felt across all sectors, reflected by GDP contraction in the first and the second quarter.

Details:

- The pandemic affected 2020 sent India's economy into a tailspin, this disruption was witnessed across the globe.
- The virus seemed to hit India the hardest, upon deep observation and analysis, the data suggested that Indian economy was showing signs of deterioration from several quarters preceding the

pandemic and the poor performance of the first and second quarter of the economy this year cannot be solely blamed on the pandemic.

Why was India hit hard?

- India's economic figures were looking dull before the pandemic struck, the GDP figures steadily declined from 8.18% in the final quarter of 2017-2018.
- The data at the beginning of 2020 suggested that India was expanding at meagre 4.08%, suggesting a sustained reduction in the growth numbers.
- Several economic experts blamed the demonetization and the Goods and Service Tax for such a consistent decline, even terming it as 'major disruptors'.
- The government was making efforts to revive the economy, but the onset of the coronavirus meant that the Government had to shift focus on limiting the damage caused by the pandemic and the following pandemic.

What happened in the quarter between January and March?

- India's growth slowed to 3.09% between January and March of 2020, its lowest quarterly growth rate since 2012.
- The country's growth for the financial year 2019-20 was at a low 4.2%, various economic indicators, such as private consumption and exports, were at their lowest levels in five or more years, indicating that the economy was suffering even before the lockdown.
- However, COVID-19 and the lockdown increased the momentum of decline and ensured that no sector in the economy was spared. The COVID-19 has diverted the attention from the poor performance of the economy preceding it.

How were the States affected?

- While officials used the Epidemic Diseases Act of 1897, the rules of the lockdown were tweaked, altered and modified multiple times by the Ministry of Home Affairs.
- The rules were interpreted in multiple ways by State and local administrations, this led to chaos and confusion regarding inter-state movement for goods and also migrants who share a symbiotic relationship with economic activities, suffered from the grounding of the economy.

Who benefited from the stimulus package?

- The initial lockdown was very tight in restrictions, this meant that apart from essential goods like food and medicines.
- Thus, many course corrections were made on the way — E-passes was launched for employees to reach their workplaces and for the transport of goods across the country, along with special trains for migrant workers to go back home.
- However, this level of the clampdown was not possible to be observed for too long, thus, gradually the lockdown was eased with the gradual relaxation of restrictions to make way for a resumption of economic activities.
- The Atmanirbhar Bharat Abhiyan was launched to bring relief to the economy. Atmanirbhar Bharat Abhiyaan or Self-reliant India campaign is the vision of new India.

- A Special economic and comprehensive package of INR 20 lakh crores – equivalent to 10% of India's GDP – to fight COVID-19 pandemic in India was announced.
- The aim is to make the country and its citizens independent and self-reliant in all senses. Five pillars of Aatma Nirbhar Bharat were outlined – Economy, Infrastructure, System, Vibrant Demography and Demand.
- Finance Minister further announced Government Reforms and Enablers across Seven Sectors under Aatmanirbhar Bharat Abhiyaan.
- The direct stimulus effect of this package was limited and some of the reforms it promised, like a new strategic disinvestment policy for public sector enterprises, are still yet to be implemented.

Why did the April-June quarter see a sharp fall?

- The economy contracted nearly 24% in the April-June quarter — the sharpest fall since quarterly growth began to be recorded in 1996.
- Agriculture appeared to be the lone shining light, as it was the only sector that witnessed positive growth.
- A decline in manufacturing output, services and construction had a profound impact as these sectors generate the maximum employment.
- The strict lockdown had taken its toll, with job losses and salary cuts becoming the norm in the formal sector, while the informal sector silently withered.
- The rest of the world had also gone into the lockdown mode, but the damage to the economy in India was the sharpest among major economies. And despite this, the virus was far from contained and inflation crossed the 6% mark led by rising food prices.

How did unlocking the economy help?

- Marked by a progressive unlocking of the economy, by the end of the July-September quarter, the Home Ministry had even permitted the resumption of public transit systems, including metros.
- India managed to reduce its contraction in the second quarter to 7.5% when compared to the first-quarter GDP data of 23.9%, this was when economists had predicted India to witness a shrinkage of close 10%.
- Agricultural growth remained constant, while manufacturing managed to record positive growth, the second quarter data suggesting an uptick in industrial activity with a 0.6% expansion in industrial output.
- However, the rough patch was far from over for services such as retail trade and hotels (particularly impacted by social distancing norms) and sectors such as mining and construction.
- Among other things, rating agency CRISIL attributed the better-than-expected growth to pent-up demand finding expression after months of being locked up at home, cost savings for corporates (read 'retrenchments lowering staff costs') and a 'learning to live' attitude. Government spending — critical for India to get out of this economic rut — collapsed, even as inflation remained high.

What is the RBI's view on growth prospects?

- The economy is said to have entered a 'technical' recession after two successive quarters of contraction, the government in response announced a slew of support measures over October and

November and is expecting a more optimal performance in the following quarter, hoping to see an expansion in GDP data.

- A 'nowcast' released by the Reserve Bank of India (RBI) suggests India's recovery rate is fairly optimistic with a possibility of 0.1% growth.
- An improved GST collection, the expansion of industrial output in the second quarter with 0.6%, improved capacity to deal with the pandemic have given reasons to believe for better economic performance.
- But their coincidence with India's festive season and a reported plateauing in activity after the Deepawali festival, make it difficult to assess if this recovery is real and sustainable and also the news of the new emerging mutation in the virus as seen in the UK and other countries already are causing fear and anxiety.
- But as the year draws to a close, there is a glimmer of hope that the economy may see some recovery in 2021, that optimism, and the hopes of an imminent vaccine option for Indians should ideally help the economy leave 2020 and its worst manifestations behind.

Conclusion:

- The slowdown has been built up over the preceding 3 years on the demand side and the response has been on the supply side. Therefore, the slowdown is deeper than it was imagined, with employment and declining investment rate being major concerns.
- A large number of banks are reluctant to lend and the credit growth has slowed down. There is a need to improve the liquidity situation and the public sector has to take the lead in spurring demand.

Category: INTERNATIONAL RELATIONS

1. India and its neighbours

What were the major challenges to India's Neighbourhood First Policy this year?

Context:

- India faced challenges of a different kind in 2020 in its neighbourhood from China: the COVID-19 pandemic, the growing competition for influence in South Asia, and aggressive actions at the Line of Actual Control (LAC) by China's People's Liberation Army (PLA).

How has India helped tackle the regional COVID-19 challenge?

- The COVID-19 pandemic has emerged as one of the biggest health challenges world over, causing heavy economic damage in South Asia.
- India stands only below the United States in terms of the number of cases, and the worst-hit economy among G20 nations.
- However, India is well placed to aid recovery efforts in the region, as it is known for its expertise in the production of pharmaceuticals and drugs and vaccines.
 - India at the virtual summit of eight SAARC nations proposed a COVID-19 package, for which India provided about half of the \$20 million funding for relief.

- India's military ran a series of missions to SAARC countries and the Indian Ocean Region (IOR) with supplies of essential food and medicines, and
- India's 'Vande Bharat' mission flew home nationals from neighbouring countries, along with lakhs of Indians who had been stranded during the lockdown.

Did the military standoff impact regional ties?

- China became overzealous on territorial claims and its transgressions along its borders with India.
- There were numerous skirmishes on the border with conflicting claims from both sides of the border.
- Galwan valley became a bone of contention in the relationship between the two.
- China also laid claim to Bhutan's Sakteng natural reserves and pushed along the boundary lines with Nepal, thus provoking India into a confrontation.
- India and Nepal had disagreements over a road to Lipulekh leading to Nepal amending its constitution and map to claim Indian territory, added to the already fraught situation.
- Amidst the pandemic, Pakistan and China managed to find the time to sign a new defence pact between the two, this pact comes in at a time when there is a sharp rise in ceasefire violations along the Line of Control (LoC) with Pakistan to the highest levels since 2003.

How has India dealt with a three-pronged challenge?

- The Neighbourhood First and SAGAR (Security and Growth for All in the Region) policies have been at the forefront of India's relationship with its neighbours.
- Apart from the COVID-19 relief and neighbourhood visits, the Indian government has been able to keep a communication channel open with their counterparts in the region.
- India's performance with respect to infrastructure delivery, particularly for regional connectivity in the past year has been commendable, including completing railway lines to Bangladesh and Nepal, riverine projects, ferry service to the Maldives, identifying other services to Sri Lanka and IOR islands, while also considering debt waiver requests from its neighbours.
- Infrastructure delivery was one thing that was always held against India, especially when China was delivering projects with better efficiency, but to improve on that aspect has been commendable.
- India has appeared to have undergone a transformation in the context of allowing the other powers in offsetting China's influence in the region — India recently welcomed the U.S.'s new military dialogue with the Maldives. America's Millennium Challenge Corporation's (MCC) projects in Afghanistan, Bhutan, Sri Lanka, Nepal and Bangladesh are also finding more space.
- The Indo-Pacific policy has been very inclusive in encouraging its Quad partners — the U.S., Japan and Australia — to collaborate on security and infrastructure initiatives in the neighbourhood.
- India has also been engaging with other partners like the U.K., France and Germany on its Indo-Pacific strategy.
- It is also significant that despite considerable security challenges from China, India has not sought to elicit support from its neighbours, which might have put them in an uncomfortable position.

Conclusion:

- India, through its initiatives in the region, has helped create an image of a benign hegemon, despite constant provocations on the border from Pakistan and China, India has done well by investing in political and diplomatic capital to de-escalate tensions and focus on recovery from the pandemic.

F. Prelims Facts

Nothing here for today!!!

G. Tidbits

Nothing here for today!!!

H. UPSC Prelims Practice Questions

Q1. Consider the following statements

- Securities Appellate Tribunal (SAT) is a statutory body established under the provisions of the Securities and Exchange Board of India Act, 1992 to hear and dispose of appeals against orders passed by the Securities and Exchange Board of India.
- SAT hears and disposes of appeals against orders passed by the Pension Fund Regulatory and Development Authority (PFRDA)

Which of the following statements are correct?

- I only
- II only.
- Both I and II.
- Neither I and II.

CHECK ANSWERS:-

Q2. Coringa wildlife sanctuary is situated in

- Maharashtra
- Tamil Nadu
- Kerala
- Andhra Pradesh

CHECK ANSWERS:-

Q3. Consider the following statements
I. Polavaram project is a multi-purpose irrigation project on river Krishna.
II. The project has been accorded 'National project' status.

Which of the following statements are true?

- a. I only.
- b. II only.
- c. Both I and II.
- d. Neither I and II.

CHECK ANSWERS:-

Q4.Consider the following statements

- 1. Recessions generally occur when there is a widespread increase in spending causing high inflation.
- 2. Disinflation is a temporary slowing of the pace of price inflation.

Which of the following statements are correct?

- a. I only.
- b. II only.
- c. Both I and II.
- d. Neither I and II.

CHECK ANSWERS:-

I. UPSC Mains Practice Questions

- 1. "A safe water supply is the backbone of a healthy economy", in the light of the above statement highlight the steps taken by the governments to improve the supply of safe and adequate water in the country. (10 marks, 150 words) GS-2 Social Sector
- 2. India's economy has been witnessed a sustained decline in growth rates, explain the factors contributing to such a decline and also suggest measures to reverse such a decline. (15 marks, 250 words) Gs-3 Indian Economy