

PERFECT 7

**Weekly
Current Affairs**

An Initiative of Dhyeya IAS

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Facebook-Reliance Jio Deal

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Arctic



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Ministry of Health & Family Welfare
Government of India



Help us to
help you

NOVEL CORONAVIRUS (COVID-19)



Protect yourself and others!

Follow these Do's and Don'ts

Do's ✓



Practice frequent hand washing. Wash hands with soap and water or use alcohol based hand rub. Wash hands even if they are visibly clean



Cover your nose and mouth with handkerchief/tissue while sneezing and coughing



Throw used tissues into closed bins immediately after use



See a doctor if you feel unwell (fever, difficult breathing and cough). While visiting doctor wear a mask/cloth to cover your mouth and nose



If you have these signs/symptoms please call State helpline number or Ministry of Health & Family Welfare's 24X7 helpline at 011-23978046



Avoid participating in large gatherings



Have a close contact with anyone, if you're experiencing cough and fever



Touch your eyes, nose and mouth



Spit in public

Don'ts ✗

Together we can fight Coronavirus

For further information :

Call at Ministry of Health, Govt. of India's 24X7 control room number

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Email at **ncov2019@gmail.com**



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DHYEYA IAS : AN INTRODUCTION



Vinay Kumar Singh
Founder & CEO

The guiding philosophy of the institute, throughout, has been creation of knowledge base. Dhyeya IAS inculcates human values and professional ethics in the students, which help them make decisions and create path that are good not only for them, but also for the society, for the nation, and for the world as whole. To fulfill its mission in new and powerful ways, each student is motivated to strive towards achieving excellence in every endeavor. It is done by making continuous improvements in curricula and pedagogical tools. The rigorous syllabi not only instills in them, a passion for knowledge but also attempts to teach them how to apply that knowledge in real-life situations. The programmes lay emphasis on well-rounded personality development of the students and also in inculcating the values of honesty and integrity in them.



Q.H. Khan
Managing Director

Dhyeya IAS is an institution that aims at the complete development of the student. Our faculty are hand-picked and highly qualified to ensure that the students are given every possible support in all their academic endeavors. It is a multi-disciplinary institution which ensures that the students have ready access to a wide range of academic material. Our brand of education has broad horizons as we believe in exposure. Our students are encouraged to widen their knowledge base and study beyond the confinements of the syllabus. We aim to lend a gentle guiding hand to make our students recognize their inner potential and grow on their own accord into stalwarts of tomorrow's society.

PERFECT 7 : AN INTRODUCTION



Kurban Ali
Chief Editor

With immense pleasure I would like to inform you that the new version of 'Perfect 7', from the Dhyeya IAS, is coming with more information in a very attractive manner. Heartily congratulations to the editorial team. The 'Perfect 7' invites a wider readership in the Institute. The name and fame of an institute depends on the caliber and achievements of the students and teachers. The role of the teacher is to nurture the skills and talents of the students as a facilitator. This magazine is going to showcase the strength of our Institute. Let this be a forum to exhibit the potential of faculties, eminent writers, authors and students with their literary skills and innovative ideas.

Please do visit our website www.dhyeyaias.com and our youtube channel for regular and updated information on current affairs.



Ashutosh Singh
Managing Editor

We have not only given the name 'Perfect 7' to our magazine, but also left no stone unturned to keep it 'near to perfect'. We all know that beginning of a task is most vital and full of challenges. So we met the same fate.

Publishing 'Perfect 7' provided us various challenges because from the beginning itself we kept our bar too high to ensure the quality. Right from the very first issue we had a daunting task to save aspirants from the 'misinformation' or 'overdose of information'. Focussing on civil services examination 'Perfect 7' embodies in itself perfect friend and guide in your preparation. This weapon is built to be precise yet comprehensive. It is not about bombardment of mindless facts, rather an analysis of various facets of the issues, selected in a systematic manner. We adopted the 'Multi Filter' and 'Six Sigma' approach, in which a subject or an issue is selected after diligent discussion on various levels so that the questions in the examination could be covered with high probability.

Being a weekly magazine there is a constant challenge to provide qualitative study material in a time bound approach. It is our humble achievement that we feel proud to make delivered our promise of quality consistently without missing any issue since its inception.

Your suggestions and popular demands always motivate us and keep our morale high.

May this version of 'Perfect 7' instill a new energy and a new spirit in you. We wish that the bond of affection between you and Dhyeya IAS is reaches a new height.



Send us your suggestions, comment, views and feedback for guiding us on

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PREFACE



Dhyeya family has decided to bring a new colourful and vibrant version of **'Perfect 7'** – a panacea for current affairs, which will add positive and dynamic energy in your preparation.

'Perfect7' is an outstanding compilation of current affairs topics as per the new pattern of Civil Services Examination (CSE). It presents weekly analysis of information and issues (national and international) in the form of Articles, News Analysis, Brain Boosters, PIB Highlights and Graphical Information, which helps to understand and retain the information comprehensively. Hence, **'Perfect 7'** will build in-depth understanding of various issues in different facets.

'Perfect7' is our genuine effort to provide correct, concise and concrete information, which helps students to crack the CSE. This magazine is the result of the efforts of the eminent scholars and the experts from different fields. **'Perfect 7'** is surely a force multiplier in your effort and plugs the loopholes in the preparation.

We believe in environment of continuous improvement and learning. Your constructive suggestions and comments are always welcome, which could guide us in further revision of this magazine.

Omveer Singh Chaudhary

Editor
Dhyeya IAS

As a proud jewel of Dhyeya IAS, **'Perfect 7'** now comes in a new coloured avatar. **'Perfect 7'** is a quintessential part of your preparation strategy for Civil Services Examination. A regular and manageable dose of current affairs will now reach you in new format, making it more reader friendly. Our humble attempt to serve you is surely rewarded by your appreciations. It encourages us to innovate and provide the best as per our ability.

A dedicated team of experts at Dhyeya IAS toils night and day to make your dream of Civil Services come true. I heartily thank and express my gratitude to the esteemed readers and all the people involved in making this magazine a shining star in the galaxy of Dhyeya IAS.

Rajat Jhingan

Editor
Dhyeya IAS



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(Broadcasted on YouTube & Dhyeya-TV)

7

IMPORTANT ISSUES

01

Facebook-Reliance Jio Deal : An Overview

Why in News?

- Facebook's purchase of a nearly 10% stake in Reliance Industries' digital business unit Jio Platforms brings one of the world's largest Internet companies on the table with India's largest telecom player.

Introduction

- Facebook has invested about Rs 43,574 (\$5.7 billion) crore to pick up a 9.99 per cent stake in Jio Platforms.
- The investment by Facebook put the value of Jio Platforms at Rs 4.62 lakh crore.
- Reliance Industries Limited (RIL) has come a long way in a few decades: from selling cloth (Only Vimal) to a multi-dimensional, most modern, 21st century corporate conglomerate.
- Reliance Jio is India's biggest telecom service with a subscriber base of 33.13 crore users as of July last year, while Facebook and WhatsApp are by far the biggest social media players in the country, with 32.8 crore and 40 crore subscribers, respectively.

JIO PLATFORMS + FACEBOOK: STRATEGIC RATIONALE



- Enables Reliance and Jio Platforms** to accelerate the roll-out of their omni-channel "New Commerce" strategy
- The e-commerce business by Reliance** wants to digitise merchants and mom-and-pop stores via Jio point-of-sale machines
- Commercial partnership** between WhatsApp and Reliance's JioMart to propel hyperlocal commerce
- WhatsApp Pay** likely to be integrated with Reliance JioMart to facilitate digital payments

What does the Deal Mean for Reliance?

- In 2019, Reliance Industries had said the group had prepared a roadmap for becoming a zero net-debt company within 18 months. The Facebook deal significantly contributes to that plan by paring about Rs 43,574 crore from its outstanding debt as of September 2019 of Rs 2.92 lakh crore. The other primary contributors to the debt-reduction plan will be a potential \$15 billion (around Rs 1.05 lakh crore) deal with Saudi Aramco for a 20% stake in Reliance Industries' refining and petrochemicals business and Rs 7,000 crore from a 49% sale in its

fuel retail joint-venture to British firm BP. However, experts believe the Aramco deal to be under threat on account of the oil prices crash caused by the COVID-19 outbreak.

- The timing of the deal with Facebook is significant for another reason: online platforms selling essential goods have suddenly witnessed an upsurge in demand. For example, before the outbreak, just 1% of the Rs 80,000-crore grocery market in India was represented by online players. After the lockdown, online platforms started to account for 50% of the grocery demand in the country by some estimates before it corrected.
- Jio Platforms has sniffed this opportunity early — through

its app JioMart, it has already started on-boarding local mom-and-pop stores (or kirana stores) to give shape to its hyper-local e-commerce model. The deal with Facebook now gives JioMart the scope to combine with WhatsApp that would enable these kirana stores to digitally transact with customers.

- ◆ The JioMart platform mounted on the encrypted WhatsApp platform will allow traders and customers to move on to a more efficient payment system that can offer credit to both customers and shop owners on a non-cash, bank/financial institution-driven model.
- ◆ In addition, WhatsApp boasts 400 million users in India. Further, using WhatsApp's base also allows Reliance Retail to promote its services to users of Jio's rival telecom players.

What does the Deal Mean for Facebook?

- ◆ Facebook has been trying for years to get its finger in the Internet pie. It had experimented with 'Free Basics', which provided free access to basic Internet services as a partnership with

service providers, beaming free Internet from the air using a solar-powered drone called 'Aquila' and low cost high-speed Wi-Fi in some remote parts of India with an initiative called 'Express Wi-Fi'.

- ◆ But data was expensive in those times, and free access to the Internet was envisioned as the easiest way to bring the next billion users online. Then, Reliance Jio happened. It launched with data rates so low that they became the industry standard in one of the largest online markets in the world. Jio alone helped bring 388 million users online, well over a third of what Facebook had planned.
- ◆ The partnership with Reliance could also help Facebook navigate the regulatory environment in India, where it has had several skirmishes with the authorities, including for its major initiatives such as WhatsApp Pay.
- ◆ The deal with Reliance also gives Facebook access to the latter's bouquet of digital apps. These include in-house apps such as Jio Money, Jio TV, etc in addition to the young startups acquired by Reliance or its subsidiaries across

categories such as logistics, e-commerce and artificial intelligence.

Words of Caution

Data Treasure

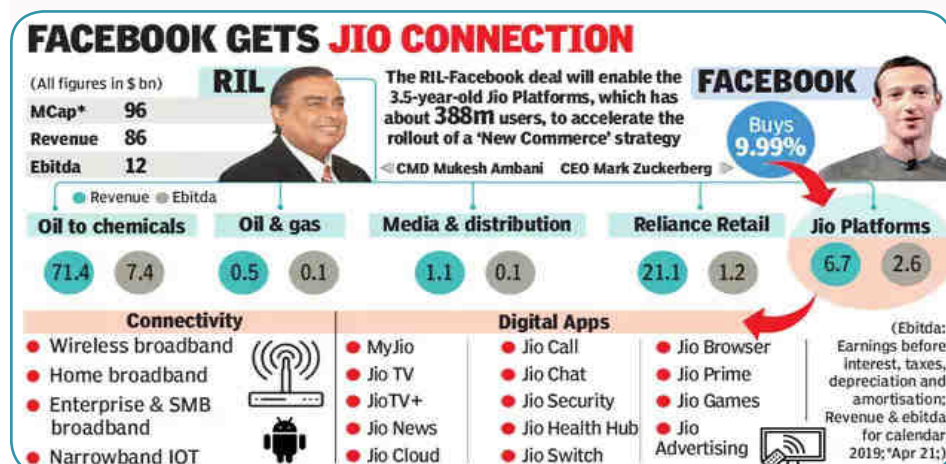
- ◆ The United States has very strict laws about national security implications arising from lack of privacy and data security. At present India does not have any such reciprocal law on privacy, and hence the huge data that would be generated by the Facebook-Jio collaboration would travel just one way: from India to the US.
- ◆ Some experts have raised the red flag over Facebook's track-record on data privacy issues, executives of both companies said that data sharing was not a part of the deal. Facebook has maintained its stance in favour of an open ecosystem for data to flow across boundaries.

Net Neutrality

- ◆ Net neutrality means service providers must treat all traffic equally, and not charge differently based on content. The net neutrality principle is considered a cornerstone of a free and open internet that provides equal access to all and bans "any form" of data discrimination. India's fight for net neutrality began in 2015.
- ◆ The recent tie-up also raises questions on net neutrality with the possibility of preferential treatment being granted.

Other Concerns

- ◆ The Facebook and Jio are both market leaders in their respective



fields, with access to massive amounts of data, which they claim might set the stage for “digital colonisation”.

- ◆ The deal will not only end competition in e-commerce segment by monopolising data but will destroy DTH and OTT platform and other media platform. In the long run, it will be big blow to net neutrality.
- ◆ Once Facebook and Jio become partners they will have monopoly on data and may block others. They may push their content, the whole net neutrality ecosystem can collapse. Earlier, the nation fought a war for colonisation. Here, they can colonise the Indian mindset by pushing their content.
- ◆ The deal may cause deep disruption in the digital payments segment, with the AliBaba-backed PayTM and Walmart's PhonePe facing a funds crunch. WhatsApp's payments feature was rolled out in India earlier this year.

Positives from the Deal

- ◆ In the midst of the gloom of the global coronavirus pandemic and its resultant economic fallout, the deal underlines the resilience and strong outlook for the sector.
- ◆ The new digital platform will not displace small and local businesses. Instead, it will collaborate with them and

amplify their reach as well as their profitability. The distinctly Indian ‘Kirana’ led retail model will be infinitely strengthened both in terms of business viability and their employment generation capacity.

- ◆ In fact, the primary beneficiaries of this new arrangement will also be India's as yet untapped semi-urban and rural digital economy. It will be a big step towards giving form and shape to Prime Minister Narendra Modi's ‘Digital India’.
- ◆ Jio can utilise Facebook's ad platform. Jio will leverage Facebook's user analytics-powered targeted advertising. Or, that Reliance customers can make in-app purchases via Facebook or Instagram checkout.
- ◆ Further, the deal is aimed at using the troika of Reliance Retail, Reliance Jio and Facebook-WhatsApp to tap the potential of 6 crore MSMEs, 12 crore farmers and 3 crore kiranas.

Way Forward

- ◆ It is not entirely clear at this stage what the eventual shape of this collaboration will be. Ambani's vision for the platform seemed to include extending it to farmers, teachers, healthcare workers and small- and medium- scale enterprises. In sheer scope, this is as bold as one has come to expect

of Reliance. Unfortunately, we do not yet have any details on how it will be implemented.

- ◆ Further, we do not yet have a data protection law in this country. This means that we do not yet have a data protection regulator. In the absence of an authority tasked with ensuring compliance, there is nothing—beyond the good conscience of Facebook and Reliance—that stops them from doing what they want when it comes to the sharing of data. Sure, they will be answerable in the court of public opinion, and, as a global company, Facebook has to operate with the high standards that global regulators expect of it, but in the absence of regulatory oversight in India, much could fall between the cracks.
- ◆ Only time will tell if ‘India's digital sarvodaya (universal service)’ that Mukesh Ambani spoke about in a media statement after the Jio-Facebook deal will be for everyone. Or if this will just be a sequel to what Reliance Jio did to the Indian telecom market. ⏪ ⏩ ⏴ ⏵

General Studies Paper- III

Topic: Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

Q: “The deal between Facebook and Reliance Jio is seen with many apprehensions related to data security and privacy.” In the light of this statement highlight the need a regulator for managing data security and online issues of internet users.

02

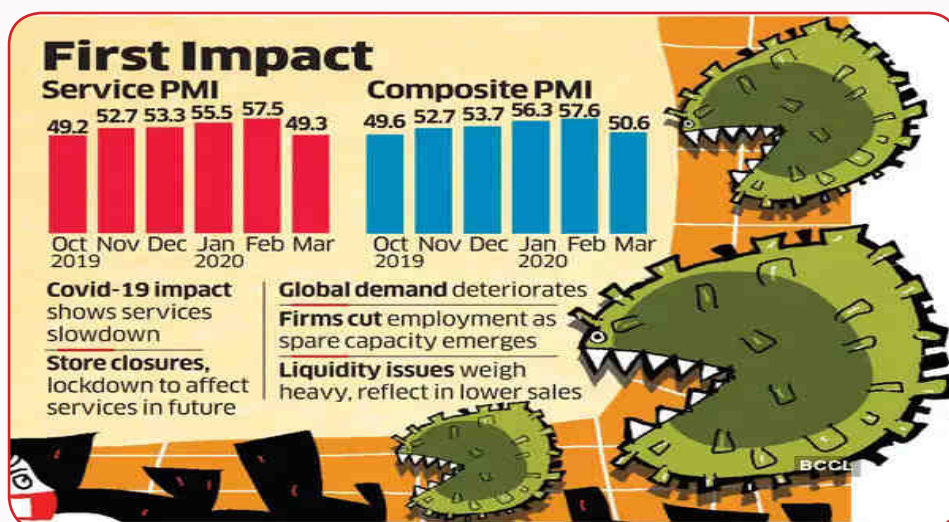
Fiscal Empowerment of States : Need of the Hour

Why in News?

- ♦ The scale of disruption caused by the COVID-19 pandemic has never been seen before. Even as we are in the midst of the third phase of the national lockdown, there is no clarity on the time it will take to come out of the crisis, the extent of damage it will inflict, and the cost of relief and rehabilitation required.
- ♦ At a time when governments, both at the Centre and in the States, are fiscally stressed, the pandemic has forced them to undertake huge expenditures to save lives, livelihoods and reduce distresses and even more, to create a stimulus to revive the economy as we map the exit strategy.

Introduction

- ♦ Being closer to the people, the States have a much larger responsibility in fighting this war. Public health as well as public order is State subjects in the Constitution. In fact, some States were proactive in dealing with the COVID-19 outbreak by involving the Epidemic Diseases Act, 1897, even before the Government of India declared a universal lockdown invoking the Disaster Management Act, 2005.
- ♦ The pandemic has underlined the historical neglect of the health-care sector in the country. The total public expenditures of Centre and States work out to a mere 1.3% of Gross Domestic Product



(GDP). In 2017-18, in per capita terms, the public expenditure on medical and public health varied from an abysmal Rs. 690 in Bihar and Rs. 814 in Uttar Pradesh to the highest of Rs. 2,092 in Kerala. The centrally sponsored scheme, the National Health Mission, is inadequately funded, micromanaged with grants given under more than 2,000 heads and poorly targeted. The focus of “Ayushman Bharat” has been to advocate insurance rather than building wellness centres.

- ♦ Nine states – Maharashtra, Gujarat, Rajasthan, Uttar Pradesh (UP), Madhya Pradesh (MP), Tamil Nadu, Andhra Pradesh, Telangana, West Bengal and Delhi – comprise 85% of the total cases in India. Notably, the aforementioned states account for 66% of India’s cumulative Gross State Domestic Product (GSDP) for 2017-18. These states also account for 80% of red zones and 58% of orange zones.

Addressing Revenue Loss

- ♦ Public finances at both central and state levels have been under considerable strain. Even as the central government invoked the exception clause and budgeted its fiscal deficit higher by 50 basis points, to limit it to 3.8 percent and 3.5 percent for 2019-20 and 2020-21 respectively, it was clear at the time of budget presentation itself that achieving these targets was impossible. This was because the revenues in the revised estimate for 2019-20 were far too ambitious and the budget estimate for 2020-21 based on the previous year’s revised estimate was far too optimistic.
- ♦ According to the State Bank of India (SBI) Data, 19 key States faced revenue shortfalls of Rs. 1.26 lakh crore in their share of Central taxes in FY20, struggling to keep their deficits within the 3 per cent Fiscal Responsibility and Budget Management (FRBM)

limits. This fiscal, State resources are further stretched by the Covid response, while revenues are in contraction mode from falling Goods and Services Tax (GST) and a standstill on key tax-generating activities such as transport, real estate transactions, liquor sales and entertainment, which have been deemed non-essential during the lockdown.

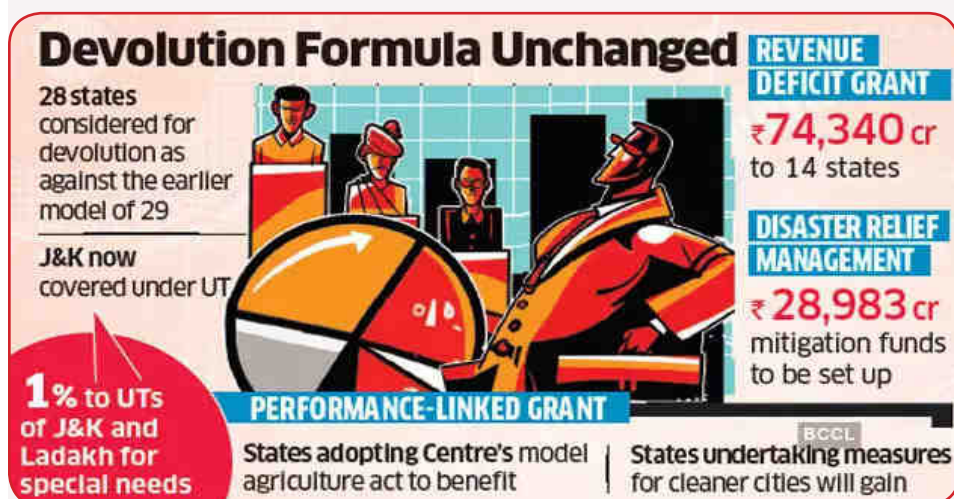
- While the requirement of States for immediate expenditures is large, they are severely crippled in their resources. In the lockdown period, there has virtually been no economic activity and they have not been able to generate any revenue from State excise duty, stamp duties and registration fees, motor vehicles tax or sales tax on high speed diesel and motor spirit. The revenue from GST is stagnant and compensation on time for the loss of revenue has not been forthcoming. In Karnataka for example, it is reported that as against the estimated Rs. 12,000 crore every month, the State may not be able to generate even Rs. 300 crore in April.

- The position regarding tax devolution from the Centre is even more precarious. To begin with, the tax devolution in the Union Budget estimate is lower than the Finance Commission's estimate by Rs. 70,995 crore. The required growth to achieve the Budget estimate is 33.3% over the annualised actual collection. The projections are that the growth of nominal GDP in 2020-21 will be just about 4% and if the tax revenue increases by the same rate, devolution to the States would be lower by Rs. 2.2-lakh crore than the Finance Commission's estimate. There is a strong case for the States to go back to the Finance Commission with a request to make and give a supplementary report.
- States' borrowing space too is limited by the fiscal responsibility and budget management limit of 3% of Gross State Domestic Product (GSDP). Faced with an acute fund crunch, Kerala floated 15-year bonds but was faced with a huge upsurge in the yield to 8.96%. The announcement by the Reserve Bank of India on

the increase in the limit of ways and means advances by 60% of the levels prescribed in March 31 could help States to plan their borrowing better; but that is too little to provide much relief. Therefore, it is important for the Central government to provide additional borrowing space by 2% of GSDP from the prevailing 3% of GSDP.

States' Revenue and Resolve for Federalism

- The regulations in place seek to jeopardise the states' efforts in tackling the disease in multiple ways. Firstly, the Centre is criticised for including the PM-CARES relief fund as an avenue of expenditure under the ambit of Corporate Social Responsibility (CSR) contributions. However, contributions to the 'Chief Minister's Relief Fund' or 'State Relief Fund for COVID-19' do not qualify as admissible CSR expenditure. However, if there is political will, a simple ordinance suitably amending the law will enable states to receive CSR funds.
- Secondly, faced with a funds crunch characterised by reduced economic activities and delays in receiving GST dues and arrears, the state governments of Kerala and Rajasthan have sold their 15-year bonds. Additionally, states like Gujarat and Maharashtra also reported 38% and 40% decline in their stamp duty collection, which contributes significantly to their income.



- ♦ For the period 2011-12 to 2018-19, on an average, 56% of states' tax revenue came from their own collections and 44% came from central transfers. However, in the GST regime, the states have limited autonomy on 65% of the revenue they generate and are more dependent on central transfers.
- ♦ Thirdly, for 2019-20, Rs 1,487 crore was released from the Centre towards the Members of Parliament Local Area Development Scheme (MPLADS), which is just 55% of the total funds that the states were entitled to. Furthermore, the suspension of MPLADS and diversion of the funds to the Consolidated Fund of India is also an anti-federal move, which strips states of its autonomy and discourages locally tailored solutions by the MPs.
- ♦ Fourthly, as per the new RBI guidelines, on April 1, the Ways and Means Advances (WMA) limit of states was increased to Rs 51,560 crore from Rs 32,225 crore for the first half of 2020-21. The

increase in WMA is helpful, but it also needs to be complemented with an increase in the cap of fiscal deficit as percentage of GSDP from the existing 3% as mandated by the FRBM Act.

Post Covid Growth Rate

- ♦ According to the World Bank, India's economy is expected to grow 1.5 per cent to 2.8 per cent in the 2020-21 fiscal.
- ♦ As per the RBI data, India will continue to grow at 1.9 per cent during the current fiscal year.

Way Forward

- ♦ Due to the lockdown announced by the Indian Government, the economy may slow over the next few months. For most businesses, the slowdown could be in the form of supply disruptions, fall in consumption demand, and stress on the banking and financial sectors. The Union government is needed to empower states to fight Covid-19 crisis as the states and local administration are working on ground zero. They need to have more resources at their disposal to

address the crisis.

- ♦ The country is literally placed in financing a war-like situation and the government will have to postpone the fiscal consolidation process for the present, loosen its purse strings and finance its deficits substantially through monetisation. This is also the time for the government to announce relaxation in the States' fiscal deficit limit to make them effective participants in the struggle. It is also important for the States to realise the importance of health and prioritise spending on health-care services.



General Studies

Paper- II

Topic: Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.

Topic: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Q: With respect to the Covid crisis and its management, the Union Government is needed to fiscally empower the states. Elaborate.

03

e-teaching during COVID-19 : Transformation of Traditional Way

Why in News?

- Online lessons are helping educational institutions around India beat the Covid-19 lockdown to push ahead with the academic calendar. But the trend has raised many concerns among educational experts.

Introduction

- According to data provided by the United Nations Children's Fund (UNICEF), 1.57 billion students have been affected due to school closures in more than 190 countries worldwide because of COVID-19.
- As the COVID-19 pandemic has necessitated closure of schools and universities across the globe, teaching has moved online. And while some use apps like Microsoft Teams and Google Meet as virtual classrooms, others say they're ensuring the security of students while using Zoom. However, some experts have argued that in a country such as India where access to the internet is pitifully low, this new education model may fail miserably.

Access to Internet in India

- According to data collected by the National Sample Survey as a part of the Survey on Education (2014), only 27% of households in India have some member with access to internet. Access to internet does not necessarily mean that a household actually has internet at home. In fact, only

half of the households (47%) that have any access to internet own a computing device (including a smartphone).

- Using this definition, only 12.5% of the households of students in India have internet access at home. There is an urban-rural divide: 27% have access in urban areas and only 5% in rural areas. Given the current crises, this does not augur well for holding online classes for students who have gone back home. It is perhaps this view that makes people apprehensive about online classes.
- The distinction between home and in-general access to internet is important during these times. The gap opens up starkly for some states of India. While 51% of rural households in Kerala have access to the internet through a myriad of sources, only 23% of rural households have access at home; the difference is even starker for states like Andhra Pradesh where 30% of rural households have access to internet but only 2% are likely to have access at home.
- In states like West Bengal and Bihar, which traditionally have a large number of migrant students, only 7-8% of rural households have any access to internet; the proportion that have access at home being a minuscule number. Differences in internet access among urban households across states of India are less

stark; however, that internet access at home can still be serious constraint among urban households is apparent as states like Bihar and West Bengal have only 18% and 21% (respectively) of urban households who can access the web at home.

Common Issues for Online Education

- In a country like India, there are significant issues — technological, social and pedagogical — which need to be understood carefully.
- First, the technological issue. The University of Hyderabad carried out an in-house survey with about 2,500 students on issues related to online teaching. Though 90 per cent of the respondents have a mobile phone, about 63 per cent of them could only access online classes infrequently or not at all. Interestingly, among the concerns raised about online instruction, 40 per cent reported unreliable connectivity as being a major deterrent while 30 per cent cited the cost of data. Significantly, 10 per cent reported uncertain electricity supply as a concern.
- These numbers are not specific to a particular institution. The situation of students in hundreds of state universities and thousands of colleges could at best be similar, or worse. The NITI Aayog, in its "Strategy for New India@75" report, highlighted quality and

reliability of the internet as a major bottleneck. It went on to point out that 55,000 villages in the country are without mobile network coverage.

- ◆ The technological issues are, of course, interrelated with social issues. In the last two decades, there has been a conscious effort on the part of the state to improve access to education at all levels. From the Right to Education Act to Other Backward Caste (OBC) reservation to the more recent Economically Backward Class (EWS) reservation, we have seen a concerted effort to bring marginalised sections of our society into the ambit of state-funded education.
- ◆ Given the socio-economic milieu from which students are coming into higher education, these challenges are important to factor into policies. And they segue into pedagogical issues — a large number of students are not comfortable with spoken or written English. This makes online pedagogical material that much inaccessible. In face-to-face teaching, these factors are mitigated to an extent by the use of the bilingual communication which, incidentally, we have been using for several years now. Further, the students come with

different levels of prior training, which makes it difficult to have a one-size-fits-all approach which online teaching assumes.

Possible Threats from Going Online

- ◆ Online lessons are helping educational institutions around India beat the COVID-19 lockdown to push ahead with the academic calendar. But the trend has raised many concerns among educational experts, including those at UNESCO and UNICEF.
- ◆ While some have expressed alarm about the potential dangers of internet exposure for young children, others say they are scared the digital shift may alienate economically disadvantaged students who don't have access to the technology digital lessons require.
- ◆ On 15 April, the United Nations Children's Fund (UNICEF), which is engaged in humanitarian aid for young ones around the world, said "millions of children are at increased risk of harm as their lives move increasingly online during lockdown in the COVID-19 pandemic".
- ◆ According to the statement, the internet exposure puts children at the risk of "online sexual exploitation and grooming, as

predators look to exploit the COVID-19 pandemic".

- ◆ Online grooming, a worrying product of the internet and social media age, involves predatory adults building online relationships with gullible children and tricking or pressuring them into sexual behaviour.

Way Forward

- ◆ While online learning have the potential to enable students to pursue independent learning, conventional and digital forms of education should not be considered mutually exclusive. Online learning needs to be understood as one strand in a complex tapestry of curricular communication that may still assign an important central role to direct human engagement and social learning.
- ◆ The current situation is, of course, an unprecedented one. However, we should be careful of advocating inappropriate, inequalitarian, and discriminatory strategies to deal with it. 📖📚📖

General Studies Paper- II

Topic: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

Q. Though COVID-19 has forced the education industry in India to opt for online mode of imparting knowledge, highlight the issues concerned with online education and issues particular to India?

04

The Issues and Controversies Related to Clinical Trials

Why in News?

- ◆ As laboratories around the world race to develop a vaccine for the novel coronavirus, many people have volunteered to take part in a controversial testing method called human challenge trials. As of April 27, a global initiative called '1DaySooner' had registered 3,817 people in 52 countries who had signed up for such trials.

Introduction

- ◆ Human challenge trials are trials in which participants are intentionally challenged (whether or not they have been vaccinated) with an infectious disease organism. This challenge organism may be close to wild-type and pathogenic, adapted and/or attenuated from wild-type with less or no pathogenicity, or genetically modified in some manner.
- ◆ Under human challenge trials, participants of both the vaccine group and placebo group upon consent are deliberately exposed to the infection – thus are “challenged” by the disease organism.
- ◆ Typical vaccine trials take a long time because thousands of people receive either a vaccine or a placebo, and researcher's track who becomes infected in the course of their daily lives. A challenge study could in theory be much faster: a much smaller group of volunteers would receive a candidate vaccine

and then be intentionally infected with the virus, to judge the efficacy of the immunization.

- ◆ Although human challenge trials are not a required element of every vaccine development programme, there are many reasons why a developer may request to conduct with humans a “challenge-protection” study that might normally be conducted in animals. Animal models are often quite imprecise in reflecting human disease, and many infectious organisms against which a developer might wish to develop a vaccine are species-specific for humans.

Phases Involved

- In Phase 1, small groups of people receive the trial vaccine.
- During Phase 2, the clinical study is expanded and the vaccine is given to people who have characteristics (such as age and physical health) similar to those for whom the new vaccine is intended.
- In Phase 3, the vaccine is given to several thousand people and tested for efficacy and safety. During this phase, participants either receive the vaccine or a placebo.
- A placebo is anything that seems to be a “real” medical treatment – but isn't. It could be a pill, a shot, or some other type of “fake” treatment. What all placebos have in common is that they do not contain an active substance meant to affect health.

Potential Purposes of Human Challenge Trials

- ◆ Characterization of the challenge stock and model system: titration,

symptoms, kinetics, shedding, and transmissibility;

- ◆ Clearer understanding of the pathogenesis of and immunity to the organism in order to guide decisions on what (type and/or quantity) immune responses a vaccine might need to elicit in order to protect against that disease – i.e. insight for vaccine design (studies for this purpose may be referred to as experimental medicine studies);
- ◆ Identification of potential immune correlates of protection;
- ◆ Identification of the optimal trial design for traditional pivotal efficacy trial(s) (e.g. case definitions, endpoints, study design aspects);
- ◆ Generation of appropriate hypotheses to be formally tested in traditional efficacy trials;
- ◆ Proof-of-concept as to whether a particular vaccine candidate might provide protection or not;
- ◆ Down- or up-selection among various potential lead vaccine candidates to advance only the best to large pilot or pivotal efficacy trials and to eliminate those not worth advancement;
- ◆ De-risk or “left-shift” risk of failure in a vaccine development programme;
- ◆ Comparison of vaccine performance in endemic settings versus an efficacy trial population, including evaluating the impact of prior immunity in the context of prevalent endemic diseases and conditions;

- ◆ Support for emergency use of an investigational vaccine (e.g. in an influenza pandemic);
- ◆ A basis for licensure (this purpose would be a rare exception rather than the routine); and
- ◆ Exploration post-licensure of whether immunity to vaccination wanes, and if or when booster doses might be required for durable protection.

Some Key Ethical Considerations

- ◆ Ethics in clinical trials include the precept of “minimizing risks to subjects and maximizing benefits”. Review of the proposed human challenge study by an independent ethics committee is essential. By their nature (i.e. intentional infection of humans with disease-causing organisms), human challenge trials would seem to contradict this basic precept.
- ◆ Further, clinical trials should be designed and conducted in a manner that minimizes risks to human subjects while maximizing the potential for benefit.
- ◆ Ethical considerations about challenges in clinical trials should be thoroughly evaluated.

Critics

- ◆ While human challenge trials are not new, they are usually carried

out in developing medications for diseases which are considered less lethal and have been better understood by scientists over the years, such as malaria.

- ◆ Critics have questioned undertaking such trials for COVID-19, a potentially deadly disease for even those who are less at risk, and which researchers are still in the early stages of studying.

Proponents

- ◆ Proponents of the method believe that such trials could save valuable time in developing a COVID-19 vaccine, as researchers would not have to wait for participants to contract the infection under real-world conditions.
- ◆ Controlled human challenge trials of SARS-CoV-2 vaccine candidates could accelerate the testing and potential rollout of efficacious vaccines. By replacing conventional Phase 3 testing of vaccine candidates, such trials may subtract many months from the licensure process, making efficacious vaccines available more quickly.

Conclusion

- ◆ Infectious human challenge studies involve deliberate exposure of human volunteers to infectious agents. Human challenge studies

have been conducted over hundreds of years and have contributed vital scientific knowledge that has led to advances in the development of drugs and vaccines. Nevertheless, such research can appear to be in conflict with the guiding principle in medicine to do no harm.

- ◆ Well documented historical examples of human exposure studies would be considered unethical by current standards. It is essential that challenge studies be conducted within an ethical framework in which truly informed consent is given.
- ◆ When conducted, human challenge studies should be undertaken with abundant forethought, caution, and oversight. The value of the information to be gained should clearly justify the risks to human subjects. Information to be gained should clearly justify the risks to human subjects.

General Studies Paper- II

Topic: Important aspects of governance, transparency and accountability, e-governance-applications, models, successes, limitations and potential; citizens charters, transparency & accountability and institutional and other measures.

Q- What are human challenge trials, and why are they controversial?

05

The US Commission on International Religious Freedom Report 2020 : An Analysis

Why in News?

- ◆ The United States Commission on International Religious Freedom (USCIRF) has released its 2020 Annual Report, documenting significant developments during 2019, including remarkable progress in Sudan and a sharp downward turn in India, and making recommendations to enhance the U.S. government's promotion of freedom of religion or belief abroad in 2020.

Key Findings

- ◆ The report has placed India alongside Pakistan, China and North Korea. This is the first time India has been placed in this category since 2004.
- ◆ Earlier, India was in the Tier-2 category (States under watch list), and now it has been moved to the Tier-1 category (Countries of particular concern). The USCIRF has done away with the Tier 1 & Tier-2 nomenclature this year, and renamed them as "countries of particular concern" and "states under watchlist".
- ◆ It called on the administration to "impose targeted sanctions on Indian government agencies and officials responsible for severe violations of religious freedom by freezing those individuals' assets and/or barring their entry into the United States under human rights-related financial and visa authorities, citing specific religious freedom violations".
- ◆ The commission also recommended that the U.S. government take stringent action against India under the "International Religious Freedom Act" (IRFA).
- ◆ It cited the CAA-NRC issue, revoking of Article 370 in Jammu and Kashmir and Delhi riots in February this

year (which took place outside the reporting period of USCIRF's annual report) as reasons for the downgrade of India.

- ◆ The USCIRF 2020 report makes a specific mention of Home Minister Amit Shah, for not taking what it deemed as sufficient action to stop cases of mob lynching in the country, and for referring to migrants as "termites".
- ◆ In December 2019, the USCIRF had also asked the U.S. government to consider sanctions against Mr. Shah and "other principal leadership" over the decision to pass the Citizenship Amendment Act.
- ◆ In 2005, Prime Minister Narendra Modi who was at the time the Chief Minister of Gujarat was censured by the USCIRF. The commission had recommended sanctions against Mr. Modi for the 2002 riots and the U.S. government had subsequently cancelled his visa.

Reasons Cited By UNCIRF

- ◆ The Citizenship (Amendment) Act and the National Register of Citizens: In December 2019, parliament passed the CAA, providing a pathway to citizenship for non-Muslim migrants already in India from Afghanistan, Bangladesh, and Pakistan by treating them as refugees fleeing religious persecution. The CAA would be even more problematic in conjunction with a nationwide NRC, which could be modeled after the statewide NRC in Assam, and is a goal outlined in the BJP's manifesto and repeatedly promised by BJP leadership.
- ◆ Cow Slaughter Laws: In Hinduism, the cow is considered sacred. Article 48 of India's Constitution directs the state to "take steps prohibiting the

slaughter of cows and calves," and 21 states criminalize cow slaughter in various forms.). Lynch mobs, often organized over social media, have attacked minorities—including Muslims, Christians, and Dalits—under suspicion of eating beef, slaughtering cows, or transporting cattle for slaughter

- ◆ Anti-Conversion Laws: While the constitution protects the right to proselytize, 10 states have anti-conversion laws criminalizing conversion using force, allurements, inducement, or fraud, but many use vague language that can be interpreted as prohibiting consensual conversions. In 2019, BJP-ruled Himachal Pradesh increased the penalties for forced conversions.
- ◆ Religious Freedom in Jammu and Kashmir: In August 2019, the government stripped Muslim-majority Jammu and Kashmir's autonomy and imposed security measures, including restricting freedom of movement and assembly, cutting Internet and phone access, and arresting Kashmiri leaders, including religious leaders.

Recommendations to the US Government

- ◆ Designate India as a 'country of particular concern (CPC)' for engaging in and tolerating systematic, on-going, and egregious religious freedom violations, as defined by the International Religious Freedom Act (IRFA);
 - ◆ The list includes 14 nations that have been flagged as "countries of particular concern". These include nine countries that the State Department designated as CPCs last December -- Myanmar,

China, Eritrea, Iran, North Korea, Pakistan, Saudi Arabia, Tajikistan and Turkmenistan -- as well as five others -- India, Nigeria, Russia, Syria, and Vietnam.

- ◆ Impose targeted sanctions on Indian government agencies and officials responsible for severe violations of religious freedom by freezing those individuals' assets and/or barring their entry into the United States under human rights-related financial and visa authorities, citing specific religious freedom violations
- ◆ Strengthen the U.S. Embassy's and consulates' engagement with religious communities, local officials, and police, especially in regions impacted by religiously motivated violence; increase U.S. partnerships with Indian law enforcement to build capacity to protect religious minorities, houses of worship, and other holy sites, and confront religious-based hate crimes; and
- ◆ Allocate funding to support civil society to create a monitoring and early warning system in partnership with police to challenge hate speech and incitement to violence.
- ◆ The U.S. Congress should continue to hold hearings highlighting religious freedom conditions in India and U.S. policy toward India.

Dissent in the Report

- ◆ Three of the nine-member panel expressed dissent over the recommendations. Commissioner Tenzin Dorjee said "India does not belong to the same category as authoritarian regimes like China and North Korea. India is the largest democratic nation in the world, where the CAA has been challenged

openly by the opposition Congress Party and law makers, civil society, and various groups".

- ◆ Three of the 10 USCIRF commissioners, including Gary Bauer, Johnnie Lee, and Tenzin Dorjee, dissented with the panel's recommendation on India as being 'too harsh' and that ended up placing the country alongside what they termed as "rogue nations" like China and North Korea.

India's Response

- ◆ The government of India has rejected the observations on India and said that the report was "biased" and a "new level of misrepresentation".
- ◆ The MEA had also criticised the USCIRF for a tweet on religious segregation in hospitals while treating COVID-19 patients, saying that the U.S. body made "peremptory commentary on religious freedom in India" and spread "misguided reports".
- ◆ The Ministry of External Affairs had rejected the USCIRF statement as neither "accurate nor warranted" and questioned the body's "locus standi" in India's internal affairs.
- ◆ Traditionally, India does not recognise the view of the USCIRF and has not allowed members to visit the country.

About USCIRF

- ◆ USCIRF is established by the US Government in 1998 after the inaction of the International Religious Freedom Act.
- ◆ The recommendations of USCIRF are non-binding to the State Department.

- ◆ It makes policy recommendations based on its review of global religious freedom to the US President, the Secretary of State and the US Congress.

Way Forward

- ◆ Indian society is a dynamic society where opposition and dissent are an essential part of the democratic system. There have been laws and open dissent and demonstrations in India. The laws passed by parliament which are made by the representatives of the people in democracy are part of internal Indian fabric.
- ◆ Though being a diverse country India faces many challenges and to and fro but the bleak situation created by UNCIRF is more of a play ball to its home audience and to balance pro India stance of American government.
- ◆ UNCIRF has been often internationally criticized for promoting the agenda to appease evangelical bigots at home. But this report also gives India an opportunity to strengthen its religious tolerance and move ahead with democratic political values.



General Studies Paper- II

Topic: Important aspects of governance, transparency and accountability, e-governance-applications, models, successes, limitations and potential; citizens charters, transparency & accountability and institutional and other measures.

Q. Evaluate the key observations made by the UNCIRF towards India with respect of religious freedom.

06

The Internal Disarray in US and China and Its Impact

Context

- ♦ The massive shock of the COVID-19 crisis is going to occasion deep restructuring of the internal credibility of two countries- the United States of America and China.

Introduction

- ♦ Chinese attempts to displace American economic and strategic hegemony in the international system were not going to be without friction. This competition opened up the prospect of what Graham Allison described as the 'Thucydides Trap' — the possibility of deepening tension as one great power seeks to replace another. This tension has now been immeasurably deepened.
- ♦ But when the dynamics of the 'Thucydides Trap' were being analyzed, few had imagined that this competition would break out when both the Chinese and the American political systems would be facing deep internal challenges.
- ♦ This opens up the possibility of overlaying what is known as the 'Tacitus Trap' over the 'Thucydides Trap'. The Chinese coined the term, 'Tacitus Trap', in homage to the great Roman historian, Tacitus.
 - ♦ This trap describes a condition where a government has lost credibility to the point where it



- is deemed to be lying, even if it speaks the truth. President Xi Jinping himself used this term as a call to arms to the Chinese government to maintain its credibility. What tactics the Chinese government will adopt to achieve this end is an open question.
- ♦ Authoritarian governments would face a credibility crisis because of their propensity to control information.
- ♦ Many democratic governments face a different credibility crisis: Hyper-partisanship would simply make truth or lies a function of which side was saying it, making sober collective action difficult. The existence of a possible 'Tacitus Trap' exacerbates the risks of the 'Thucydides Trap'.
- display greater pathologies than strength. The Chinese and American political systems are by no means equivalent. But their weaknesses seem to be gaining the upper hand.
- ♦ In the US, healthy political competition has been replaced by hyper-partisanship: At the federal level, many of the checks and balances on executive power have been denuded; American federalism which was a shock absorber is now also a potential source of conflict; class conflict is at the deepest it has been for decades.
- ♦ America made horrendous mistakes in the conduct of its international affairs. But it was able to absorb the moral costs of those mistakes because of the ideological allure of its model — grounded in openness. The American system has a capacity for renewal. But it will be a long haul.

Impact in US

- ♦ A great power competition is riskier when the political systems of the great powers

"It was the rise of Athens, and the fear that this inspired in Sparta, that made war inevitable."

"We all need to work together to avoid the Thucydides trap – destructive tensions between an emerging power and established powers."

Troubled Times Ahead

♦ There is a unique and worrisome convergence in the longer-term structural drivers and the short-term cyclical ones at the heart of US-China relations. Both are pushing this relationship in a more competitive

Impact in China

- ♦ The Chinese regime will face a deeper legitimacy crisis of its own. A legitimacy crisis does not mean a weakening hold on power. It can have the opposite effect — an aggressive and coercive hunkering down of elites.
- ♦ But the signs of a crisis are apparent: The increasing use of coercion, surveillance and repression and the even more insistent control of information orders. The Chinese government might get high marks for its lockdown strategy. But the stigma that it covered up the facts and inflicted needless damage on China and the world will gnaw at its political system.
- ♦ China's relatively quiet confidence that it would gain global ascendancy in the world system has been replaced over the last few years by a bellicose

diplomatic aggressiveness. This is not a sure-footed regime confident of its capabilities and growing external legitimacy.

- ♦ China is in an even more difficult situation. There is no question that the world will increasingly call China to account for its actions during this crisis. The intention may not necessarily be to censure China. It can be driven by the desire to ensure that there are sufficient levels of transparency and international cooperation to both combat the virus, and to minimize the risks of such events being repeated.
- ♦ But the Chinese regime will not find it easy to accommodate the international community, without in some senses, risking opening up a domestic can of worms. Such openness and transparency would now be inconsistent with the principles by which the regime now secures its internal legitimacy.

direction, and the resulting competition is on a broader range of issues and involving more actors.

- ♦ This is occurring at the same time that the classic buffers and stabilizers to competition are diminished, if not inoperative. It is uncertain that a new US president would or could fundamentally change this dynamic or that Xi Jinping would radically change course in the coming years. Many of these drivers are tied to the identities, material interests, and capabilities of countries, suggesting, but not guaranteeing, their perpetuity.
- ♦ Thus, we appear to be entering a new phase of the relationship unlike past ones; this one will be characterized by the primacy of competition and an augmented risk of conflict and confrontation.

Micro-Geopolitics and Meta-Geopolitics

Let us mention four of them, which may very well be combined.

- ◆ The crowding-out effect: In the coming months, it will be difficult for policymakers and public opinion to focus their attention on anything other than managing COVID-19. Already, the strikes against US bases in Iraq, still going on by the way, and Washington's intention to withdraw some of its forces there, have gone virtually unnoticed.
- ◆ The windfall effect: An opportunistic player can take advantage of this situation to carry out a "coup" that he would not have otherwise pursued under different circumstances. One goes back once again to the Iranian American confrontation in the Middle East, or even tensions in the China Sea, if not the "capture of pawns" with which Putin is quite familiar in Russia's "close abroad" strategy.
- ◆ The escalation effect: a local incident can always escalate into a more general conflict, but in the present circumstances, elements of tension (see the "narratives'

war" and American journalists' expulsion from China) that are multiplying between Beijing and Washington can by themselves be factors of an intensification of the confrontation between the two powers.

- ◆ An opportunity effect: finally, it cannot be ruled out that the pandemic also offers an opportunity to put forward constructive proposals insofar as the major responsible decision-makers may not be, in time of COVID-19, in the mood of opening up new conflicts.

WayForward

- ◆ The challenges of dealing with the pandemic or existing interdependencies may yet impose a degree of sobriety on both superpowers. But the demands on internal legitimation are increasingly pointing in a direction where both countries will not find it easy to dial back from ratcheting up tensions, in ways that might make delicate diplomacy more difficult.
- ◆ We are at a transformative moment where almost all the rules of the international order are potentially up for

renegotiation, from trade to cyber security, from the environment to pandemic risks. The massive economic shock of the COVID-19 crisis is going to occasion deep restructuring of the domestic economies.

- ◆ But for these challenges to occur when the political systems of both superpowers are becoming exaggerated caricatures of themselves does not bode well. We might not just be in G-Zero worlds, with the two major powers abdicating their international responsibilities; we might be in G-minus-two world, where the internal credibility crises of the governments of the major powers work simultaneously to the detriment of the international system.



General Studies Paper- II

Topic: India and its neighborhood- relations.

Topic: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora

Q. The massive shock of the COVID-19 crisis is going to occasion deep restructuring of the internal credibility of two countries- the United States of America and China. Comment.

07

Healing of Ozone Hole over Arctic

Why in News?

- ♦ According to the Copernicus Atmosphere Monitoring Service (CAMS), an ozone hole over the Arctic that was the largest ever recorded there has closed. And its beginning and end have nothing to do with climate change, global warming or a reduction in air pollution because of the coronavirus pandemic. It has to do simply with the weather.

Arctic and Antarctic Ozone Holes

- ♦ The Arctic, which has more variable temperatures, doesn't usually see the same ozone-depleting conditions. The hole in the ozone layer — a portion of Earth's atmosphere that shields the planet from ultraviolet radiation — first opened over the Arctic in late March when unusual wind conditions trapped frigid air over the North Pole for several weeks in a row.
- ♦ Those winds, known as a polar vortex, created a circular cage of cold air that led to the formation of high-altitude clouds in the region. The clouds mixed with man-made pollutants like chlorine and bromine, eating away at the surrounding ozone gas until a massive hole roughly three times the size of Greenland opened in the atmosphere.
- ♦ While a large ozone hole opens every autumn over the South Pole, the conditions that allow these holes to form are much rarer in the Northern Hemisphere. The Arctic ozone hole opened this

year only because the cold air was concentrated in the area for much longer than is typical.

- ♦ Antarctica ozone hole opens every year due to the combination of frigid temperatures and man-made pollution. When temperatures plummet at the start of Antarctica's winter, high-altitude clouds form over the South Pole.

- Earlier this month, scientists from the European Space Agency said that the rare hole covered an area about three times the size of Greenland. They expected it to heal as temperatures increased, breaking down the Arctic polar vortex and allowing ozone-depleted air to mix with ozone-rich air from lower latitudes.
- The news also comes after NASA reported that ozone levels above the Arctic reached a record low in March. This was caused by unusually weak upper atmospheric wave events that drive air movements.
- Unlike the hole in the Arctic, the one that has been growing over the Antarctic for the last 35 years is caused by chemicals such as chlorofluorocarbons that come from hairsprays and refrigerators.

Ozone Layer: Significance

- ♦ Ozone (O₃) absorbs the most energetic wavelengths of ultraviolet light, known as UV-C and UV-B, wavelengths that harm living things. Oxygen molecules absorb other forms of ultraviolet light, too. Together, ozone and oxygen molecules are able to absorb 95 to 99.9% of the ultraviolet radiation that gets to our planet. When UV

light is absorbed by oxygen and ozone, heat is generated, which is why the stratosphere gets warmer with altitude.

- ♦ Exposure to UVB radiation is linked with increased risk of skin cancer and cataracts, as well as damage to plants and marine ecosystems.
- ♦ Atmospheric ozone is sometimes labeled as the "good" ozone, because of its protective role, and shouldn't be confused with tropospheric, or ground-level, "bad" ozone, a key component of air pollution that is linked with respiratory disease.
- ♦ Near the ground, ozone is an air pollutant that causes lung damage and asthma attacks. But 10 to 30 miles above the Earth's surface (16-48 km), ozone molecules protect life on Earth. They help shield our planet from harmful solar radiation.

What is UV Radiation?

- ♦ Everyone is exposed to UV radiation from the Sun and an increasing number of people are exposed to artificial sources used in industry, commerce and recreation. Emissions from the Sun include visible light, heat and UV radiation.
- ♦ The UV region covers the wavelength range 100-400 nm and is divided into three bands:
 - ♦ UV-A (315-400 nm)
 - ♦ UV-B (280-315 nm)
 - ♦ UV-C (100-280 nm)
- ♦ As sunlight passes through the atmosphere, all UV-C and approximately 90% of UV-B radiation is absorbed by ozone,

water vapour, oxygen and carbon dioxide. UV-A radiation is less affected by the atmosphere. Therefore, the UV radiation reaching the Earth's surface is largely composed of UV-A with a small UV-B component.

About Montreal Protocol

- ♦ The Montreal Protocol is an international treaty designed to protect the ozone layer by phasing out the production of numerous substances that are responsible for ozone depletion. It was agreed on 16th September 1987, and entered into force on 1st January 1989.
- ♦ The Montreal Protocol phases down the consumption and production of the different Ozone Depleting Substances (ODS) in a step-wise manner, with different timetables for developed and developing countries (referred to as "Article 5 countries").
- ♦ The Protocol includes provisions related to Control Measures (Article 2), Calculation of control levels (Article 3), Control of trade with non-Parties (Article 4), Special situation of developing countries (Article 5), Reporting of data (Article 7), Non-compliance (Article 8), Technical assistance (Article 10), as well as other topics.

♦ The substances controlled by the treaty are listed in Annexes A [Chlorofluorocarbons (CFCs), halons], B (other fully halogenated CFCs, carbon tetrachloride, methyl chloroform), C [hydrochlorofluorocarbon (HCFCs)], E (methyl bromide) and F (HFCs).

Kigali Amendment

- ♦ The Parties to the Montreal Protocol reached agreement at their 28th Meeting of the Parties on 15 October 2016 in Kigali, Rwanda to phase-down HFCs. Countries agreed to add HFCs to the list of controlled substances, and approved a timeline for their gradual reduction by 80-85 per cent by the late 2040s. The first reductions by developed countries are expected in 2019. Developing countries will follow with a freeze of HFCs consumption levels in 2024 and in 2028 for some nations.

Conclusion

- ♦ In the past 60 years or so human activity has contributed to the deterioration of the ozone layer. Man-made chlorines, primarily CFCs, contribute to the thinning of the ozone layer and allow larger quantities of harmful ultraviolet rays to reach the earth.

♦ Opening and closing of ozone holes due to natural weather phenomena are cyclical and repetitive in nature. They are balanced by natural systems. But anthropogenic factors create an imbalanced and unprecedented damage to the ozone layer thus endangering the life on Earth.

- ♦ With the full and sustained implementation of the Montreal Protocol, the ozone layer is projected to recover by the middle of this century. Without this treaty, ozone depletion would have increased tenfold by 2050 compared to current levels, and resulted in millions of additional cases of melanoma, other cancers and eye cataracts. It has been estimated, for example, that the Montreal Protocol is saving an estimated two million people each year by 2030 from skin cancer.



General Studies Paper- III

Topic: Conservation, environmental pollution and degradation, environmental impact assessment

Q. During the COVID-19 crisis there has been news about the closure of an Ozone Hole over the Arctic. But its opening and closure were not linked to any lockdown or climate change. Explain the phenomena related to this Arctic Ozone Hole.

7

IMPORTANT BRAIN BOOSTERS

01

Khudai Khidmatgar Movement

1. Why in News?

- In April 2020, India has remembered a massacre in Peshawar in pre-independence united India.
- The marketplace named as 'QissaKhwani Bazaar' where a massacre was perpetrated by British soldiers against non-violent protesters of the KhudaiKhidmatgar Movement on April 23, 1930.

2. Qissa Khwani Bazaar Incident

- On 23 April 1930, Bacha Khan was arrested in the town called Utmanzaid during protests arising out of the Salt Satyagraha.
- Protests spilled into the QissaKhwani Bazaar in Peshawar on the day of Khan's arrest. British soldiers entered the market area to disperse crowds that had refused to leave.
- In response, British army vehicles drove into the crowds, killing several protesters and bystanders.
- Two platoons of the Garhwal Rifles regiment under Chandra Singh Garhwali refused to fire on the non-violent crowd. They were later court-martialled with heavy punishment, including life imprisonment.



3. Khudai Khidmatgar Movement

- The KhudaiKhidmatgar (Servants of God) was a non-violent movement against British occupation of the Indian subcontinent led by Abdul Ghaffar Khan, a Pashtun freedom fighter, in the North-West Frontier Province (now in Khyber Pakhtunkhwa, Pakistan).
- This was originally a social reform organisation focusing on education and the elimination of blood feuds; it was known as the 'Anjuman-e-Islah-e Afaghina' (society for reformation of Afghans).
- Over time, the movement acquired a more political colour, leading to the British taking notice of its growing prominence in the region.
- Following the arrest of Khan and other leaders in 1929, the movement formally joined the Indian National Congress after they failed to receive support from the All-India Muslim League.
- Members of the KhudaiKhidmatgar were organised and the men stood out because of the bright red shirts they wore as uniforms, while the women wore black garments.
- The KhudaiKhidmatgar opposed Partition, a stance that many interpreted as the movement not being in favour of the creation of the independent nation of Pakistan.
- Post 1947, the KhudaiKhidmatgar slowly found their political influence decreasing to such an extent that the movement and the massacre 90 years ago in the QissaKhwani Bazaar has been wiped out from collective memory.

4. Abdul Ghaffar Khan

- In 1919, Ghaffar Khan met Mahatma Gandhi and entered national politics. He joined Khilafat movement in 1920 and in 1921 was elected as the president of district Khilafat committee.
- As close friend of Mahatma Gandhi, Bacha Khan was nicknamed the "Frontier Gandhi" in British India by his close associate Amir Chand Bombwal.
- In June 1947, Khan and other KhudaiKhidmatgars declared the Bannu Resolution, demanding that the Pashtuns be given a choice to have an independent state of Pashtunistan, composing all Pashtun territories of British India, instead of being made to join Pakistan.
- After Partition, Khan chose to stay in Pakistan. Despite being a Pakistani citizen, he was awarded the Bharat Ratna in 1987 (First non-Indian to receive Bharat Ratna). He was nominated for Nobel Peace Prize in 1984.
- Upon his death in 1988 in Peshawar under house arrest, following his will, he was buried at his house in Jalalabad, Afghanistan.

02

Reverse Vaccinology

1. Why in News?

- The Tamil Nadu Dr. MGR Medical University has developed a vaccine candidate against SARS-CoV-2 through 'reverse vaccinology'.



2. About Reverse Vaccinology

- Reverse vaccinology defines the process of antigen discovery starting from genome information.
- Reverse vaccinology is the name given to the examination of the genome of an organism in order to identify novel antigens and epitopes that might constitute vaccine candidates.
- It helps to unwrap the entire genomic sequence. When have the genomic sequence with us, we know what molecules make the genomic sequence.
- Using 'reverse vaccinology', vaccinations were developed for meningococcal and staphylococcal infections all through the world.
 - ☛ Meningococcal meningitis is a bacterial form of meningitis, a serious infection of the thin lining that surrounds the brain and spinal cord.
 - ☛ These bacteria spread through the exchange of respiratory and throat secretions like spit.
 - ☛ A staphylococcus infection or staph infection is an infection caused by members of the Staphylococcus genus of bacteria. These bacteria commonly inhabit the skin and nose where they are innocuous, but may enter the body through cuts or abrasions which may be nearly invisible.
- The 'reverse vaccinology' technique has been available for the last 10 to 15 years.

3. About Immune System

- The immune system is a complex network of cells and proteins that defends the body against infection. The immune system keeps a record of every germ (microbe) it has ever defeated so it can recognise and destroy the microbe quickly if it enters the body again.
- Antigen, substance that is capable of stimulating an immune response, specifically activating lymphocytes, which are the body's infection-fighting white blood cells. In general, two main divisions of antigens are recognized: foreign antigens (or heteroantigens) and autoantigens (or self-antigens).
- Antibody, also called immunoglobulin, a protective protein produced by the immune system in response to the presence of a foreign substance, called an antigen.
- Antibodies are produced by specialized white blood cells called B lymphocytes (or B cells). The mature B cells, called plasma cells, secrete millions of antibodies into the bloodstream and lymphatic system.
- Antibodies are grouped into five classes according to their constant region. Each class is designated by a letter attached to an abbreviation of the word immunoglobulin: IgG, IgM, IgA, IgD, and IgE.
- T cell, also called T lymphocyte, type of leukocyte (white blood cell) that is an essential part of the immune system. T cells are one of two primary types of lymphocytes—B cells being the second type—that determine the specificity of immune response to antigens (foreign substances) in the body.
 - ☛ CD8+ T cells, also known as "killer cells", are cytotoxic - this means that they are able to directly kill virus-infected cells as well as cancer cells.
 - ☛ CD4+ T cells, function as "helper cells", helper T cells function by indirectly killing cells identified as foreign: they determine if and how other parts of the immune system respond to a specific, perceived threat. Helper T cells also use cytokine signaling to influence regulatory B cells directly, and other cell populations indirectly.
 - ☛ Regulatory T cells are yet another distinct population of these cells that provide the critical mechanism of tolerance, whereby immune cells are able to distinguish invading cells from "self".

03

Operation Twist

1. Why in News?

- The Reserve Bank of India (RBI) has announced simultaneous purchase and sale of government bonds in a bid to soften long-term yields.
- The central bank will purchase long-dated securities with tenor between 6-10 years aggregating Rs. 10,000 crore, while it will sell short-dated securities maturing June 2020, October 2020 and April 2021.

2. What is Operation Twist?

- The term 'Operation Twist' is an Indian version of unconventional measures taken by the US Federal Reserve in 2011 in its bid to boost economic growth after getting hit by the global financial crisis.
- Operation Twist normally leads to lower longer-term yields, which will help boost the economy by making loans less expensive for those looking to buy homes, cars and finance projects, while saving becomes less desirable because it doesn't pay as much interest.
- 'Operation Twist' is RBI's simultaneous selling of short-term securities and buying of long term securities through open market operations (OMO).
 - ☛ Under OMO mechanism, the short-term securities are transitioned into long-term securities.
 - ☛ Whenever there is a long-term investment deficit in the country and the investors are hesitant to make long-term investments in the economy, the government jumps in to revive growth by lowering the interest rate for long-term investment ventures.



3. Rationale behind Operation Twist

- It is a two-step action taken by RBI to address the issue of transmission of the monetary policy actions to the longer end of the yield curve and bring down the yields.
- This operation involves buying and selling government securities simultaneously in order to bring down long-term interest rates and bolster short-term rates.
- There is an inverse relationship between the bond prices and their yields. As the central bank buys long-term securities (bonds), their demand raises which in turn pushes up their prices. However, the bond yield comes down with an increase in prices.
 - ☛ Yield is the return an investor gets on his (bond) holding/investment.
- The interest rate in an economy is determined by yield. Thus, lower long-term interest rates mean people can avail long-term loans (such as buying houses, cars or financing projects) at lower rates.
- This also results in a dip in the expected returns from long-term savings which tilts the balance from saving towards spending. Hence, cheaper retail loans can help encourage consumption spending which is the largest GDP component in the economy.

4. How Does It Affect Investors?

- Fixed income investors with higher exposure to long term debt will benefit from easing yield of long-term bonds.
- Consumers/borrowers will also profit from 'Operation Twist' as the retail loans will now get cheaper. Previously banks were forced to price their retail loans at higher rates owing to high yields on long-term government borrowings.
- Cheaper retail loans mean a boost in consumption and spending in the economy which in turn will revive growth.

04

Trade and Development Report 2019

1. Why in News?

- As the world marks the International Day of Multilateralism and Diplomacy for Peace on 24 April 2020, United Nations Conference on Trade and Development (UNCTAD) has published its Trade and Development Report (TDR) for 2019.



4. About UNCTAD

- The UNCTAD was established in 1964 as a permanent intergovernmental body.
- UNCTAD is the part of the United Nations Secretariat dealing with trade, investment, and development issues.
- The organization's goals are to: "maximize the trade, investment and development opportunities of developing countries and assist them in their efforts to integrate into the world economy on an equitable basis".

2. Covid Crisis and Debt Repayments

- In 2020 and 2021 alone, repayments on developing countries' public external debt are estimated at nearly \$3.4 trillion – between \$2.0 trillion and \$2.30 trillion in high-income developing countries and between \$666 billion and \$1.06 trillion in middle- and low-income countries.
- The financial turmoil from the crisis has triggered record portfolio capital outflows from emerging economies and sharp currency devaluations in developing countries, making servicing their debts more onerous.
- On 30 March, UNCTAD called for a \$2.5-trillion coronavirus crisis package for developing countries.
- UNCTAD suggests that a trillion dollar write-off would be closer to the figure needed to prevent economic disaster across the developing world.
- India has sought \$2 billion from the World Bank to sustain its social sector programmes due to acute resource crunch. The World Bank has asked for certain loan guarantees, including portability of ration cards and insurance programs.
- On April 13, the International Monetary Fund (IMF) cancelled debt repayments due to it by the 25 poorest developing economies for the next six months. This debt cancellation is estimated at around \$215 million.
- On 15 April, leaders of the Group of 20 leading economies (G20) announced the suspension of debt service payments for 73 of the poorest countries from May to the end of this year.

3. Steps Proposed by UNCTAD

- At the end of 2018, the total debt-stocks of developing countries (external and domestic, private and public) stood at 191 per cent (or almost double) of their combined GDP, the highest level on record.
- To overcome the high debt burden, the UN body calls for a global debt deal for the developing world outlining three key steps in this regard — "automatic temporary standstills", "debt relief and restructure programmes," and an "international developing country debt authority".
 - The "automatic temporary standstill would provide macroeconomic "breathing space" for all crisis-stricken developing countries requesting forbearance to free up resources, normally dedicated to servicing external sovereign debt.
 - If the standstills are long and comprehensive enough they would facilitate an effective response to the COVID-19 shock through increased health and social expenditure in the immediate future and allow for post-crisis economic recovery along sustainable growth, fiscal and trade balance trajectories.
 - As part of the debt relief and restructuring programs such programs would ensure the "breathing space" gained under the first step is used to reassess longer-term developing country debt sustainability, on a case-by-case basis."
- For proper implementation of the above two steps, the UNCTAD report proposed the establishment of an International Developing Country Debt Authority (IDCDA) to oversee their implementation and lay the institutional and regulatory foundations for a more permanent international framework to guide sovereign debt restructuring in future.

05

South China Sea Dispute

1. Why in News?

- American warships have sailed into disputed waters in the South China Sea, heightening a standoff in the waterway and sharpening the rivalry between the United States (US) and China.



5. About South China Sea

- The South China Sea is world's busiest commercial gateway for a significant portion of the world's merchant shipping, and hence is an important economic and strategic sub-region of the Indo-Pacific.
- The South China Sea is bordered by Brunei, Cambodia, China, Indonesia, Malaysia, the Philippines, Singapore, Taiwan, Thailand and Vietnam.
- Japan and South Korea rely heavily on the South China Sea for their supply of fuels and raw materials and as an export route.
- One third of global shipping, or a total of US\$3.37 trillion of international trade, passes through the South China Sea.
- The sea is also believed to contain major reserves of natural resources, such as natural gas and oil.
- The South China Sea also accounts for 10 per cent of the world's fisheries, making it a key source of food for hundreds of millions of people.

2. Introduction

- The US' guided-missile cruiser USS Bunker Hill conducted a "freedom of navigation operation" in the Spratly Islands; a day after the guided-missile destroyer USS Barry conducted a similar operation near the Paracel Islands.
- The Chinese military called the United States a "troublemaker" in the disputed South China Sea, stressing that China was on "high alert" to safeguard its interests in the contested waters.
- The two powers, already mired in a dispute over the handling of the coronavirus pandemic, have engaged in tense stand-offs over the South China Sea, with two back-to-back operations by the US to challenge China's expansive claims in the region in the last few days.

3. About the Conflict

- The South China Sea is also a subject to several overlapping territorial disputes involving China, Vietnam, the Philippines, Taiwan, Malaysia and Brunei.
- The Philippines, Vietnam, China, Brunei, Taiwan and Malaysia hold different, sometimes overlapping, territorial claims over the sea, based on various accounts of history and geography.
- China claims more than 80 per cent, while Vietnam claims sovereignty over the Paracel Islands and the Spratly Islands.
- The Philippines asserts ownership of the Spratly archipelago and the Scarborough Shoal, while Brunei and Malaysia have claimed sovereignty over southern parts of the sea and some of Spratly Islands.
- Over the years, the claimants have seized control of a raft of sea features, including rocks, islands and low-tide elevations.
- China's "nine-dash line" is a geographical marker used to assert its claim. It stretches as far as 2,000km from the Chinese mainland, reaching waters close to Indonesia and Malaysia.

4. Role of US in the Dispute

- The US has wide-ranging security commitments in East Asia, and is allied with several of the countries bordering the South China Sea, such as the Philippines, Singapore and Vietnam.
- Furthermore, the South China Sea is a vital trade route in the global supply chain, used by American companies who produce goods in the region.
- Although the US does not officially align with any of the claimants, it has conducted Freedom of Navigation operations, designed to challenge what Washington considers excessive claims and grant the free passage of commercial ships in its waters.

06

Hydrogen Fuel Cell Based Electric Buses and Cars

1. Why in News?

- Scientists at the Council of Scientific and Industrial Research (CSIR) Institute of Genomics and Integrative Biology have come up with a low-cost coronavirus test that will not require any expensive machines for detection of the pathogen.
- It is named after 'Feluda', the detective character in legendary filmmaker Satyajit Ray's stories.

2. Introduction

- The EoI has been issued by NTPC's wholly owned subsidiary, NTPC VidyutVyapar Nigam (NVVN) Limited.
- The move to procure Hydrogen Fuel Cell based vehicles is first of its kind project in the country, wherein a complete solution from green energy to the fuel cell vehicle would be developed.
- The initiative, which has been undertaken with support of Ministry of New and Renewable Energy, will also harness renewable energy for generation of hydrogen and develop its storage and dispensation facilities as part of pilot projects at Leh and Delhi.
- The move to launch hydrogen powered vehicles aims at decarbonizing mobility segment.
- The PSU has been taking various technology initiatives to provide complete e-Mobility solution for public transport including creation of public charging infrastructure and providing electric buses to State/City Transport Undertakings.
- In this regard, 90 public charging stations in various cities and battery charging and swapping station at Faridabad for e-3-wheelers have already been commissioned. Similarly, e-Bus solution for Andaman & Nicobar Administration is under implementation.



3. Working of Hydrogen Fuel Cells

- The fuel cell combines hydrogen and oxygen to generate electric current, water being the only byproduct.
- Like conventional batteries under the bonnets of automobiles, hydrogen fuel cells too convert chemical energy into electrical energy.
- While the fuel cells generate electricity through an electrochemical process, unlike a battery-electricity vehicle, it does not store energy and, instead, relies on a constant supply of fuel and oxygen — in the same way that an internal combustion engine relies on a constant supply of petrol or diesel, and oxygen.
- In that sense, it may be seen as being similar to a conventional internal combustion engine.
- But unlike the combustion engine cars, there are no moving parts in the fuel cell, so they are more efficient and reliable by comparison. Also, there is no combustion onboard, in the conventional sense.

4. Advantages and Disadvantages of Fuel Cells

- Fuel cells produce much smaller quantities of greenhouse gases and none of the air pollutants that cause health problems.
- Also, if pure hydrogen is used, fuel cells emit only heat and water as a byproduct. Such cells are also far more energy efficient than traditional combustion technologies.
- Unlike battery-powered electric vehicles, fuel cell vehicles do not need to be plugged in, and most models exceed 300 km of range on a full tank. They are filled up with a nozzle, just like in a petrol or diesel station.
- While they do not generate gases that contribute to global warming, the process of making hydrogen needs energy — often from fossil fuel sources. That has raised questions over hydrogen's green credentials.
- Also, there are questions of safety — hydrogen is more explosive than petrol.
- The other major hurdle is that the vehicles are expensive, and fuel dispensing pumps are scarce.

07

Basic Structure of the Indian Constitution

1. Context

- Exactly 47 years ago, in KesavanandaBharati's State of Kerala, the Constitution Bench of Supreme Court (SC) ruled that the 'basic structure' of the Constitution is inviolable, and could not be amended by Parliament.
- The basic structure doctrine has since been regarded as a tenet of Indian constitutional law.

2. Background

- Since the Indian Constitution was first adopted, debates have raged as to the extent of power that Parliament should have to amend key provisions.
- In the early years of Independence, the SC conceded absolute power to Parliament in amending the Constitution, as was seen in the verdicts in Shankari Prasad (1951) and Sajjan Singh (1965).
- In subsequent years, as the Constitution kept being amended at will to suit the interests of the ruling dispensation, the SC in Golaknath (1967) held that Parliament's amending power could not touch Fundamental Rights, and this power would be only with a Constituent Assembly.
- In the early 1970s, the government of then Prime Minister Indira Gandhi had enacted major amendments to the Constitution (the 24th, 25th, 26th and 29th) to get over the judgments of the SC in RC Cooper (1970), MadhavraoScindia (1970) and the earlier mentioned Golaknath.
- In RC Cooper, the court had struck down Indira Gandhi's bank nationalization policy, and in MadhavraoScindia it had annulled the abolition of privy purses of former rulers.
- All the four amendments, as well as the Golaknath judgment, came under challenge in the KesavanandaBharati case.
- Since Golaknath was decided by eleven judges, a larger bench was required to test its correctness, and thus 13 judges formed the Kesavananda bench.

3. The Judgment in Kesavananda Bharti

- The Constitutional Bench, whose members shared serious ideological differences, ruled by a 7-6 verdict that Parliament should be restrained from altering the 'basic structure' of the Constitution.
- The court held that under Article 368, which provides Parliament amending powers, something must remain of the original Constitution that the new amendment would change.
- The court did not define the 'basic structure', and only listed a few principles — federalism, secularism, democracy — as being its part. Since then, the court has been adding new features to this concept.



4. The Minority View

- The minority view delivered by Justices A N Ray, D G Palekar, K K Mathew, M H Beg, S N Dwivedi, and Y V Chandrachud dissented.
- They upheld the validity of all three amendments challenged before the court. Justice Ray held that all parts of the Constitution were essential and no distinction could be made between its essential and non-essential parts.
- All of them agreed that Parliament could make fundamental changes in the Constitution by exercising its power under Article 368.

5. Conclusion

- The 'basic structure' doctrine has since been interpreted to include the supremacy of the Constitution, the rule of law, independence of the judiciary, doctrine of separation of powers, federalism, secularism, sovereign democratic republic, the parliamentary system of government, the principle of free and fair elections, welfare state, etc.
- The doctrine of the basic structure helps to prevent legislative excesses, as was evident in the Emergency Era. This is required as a shield against an all-powerful parliament, which can resort to an overuse of Article 368.
- Critics of the doctrine have called it undemocratic, since unelected judges can strike down a constitutional amendment.
- At the same time, its proponents have hailed the concept as a safety valve against majoritarianism and authoritarianism.

7

MCQ's WITH EXPLANATORY ANSWERS (Based on Brain Boosters)

01 Khudai Khidmatgar Movement

Q. With reference to the 'Khudai Khidmatgar Movement', consider the following statements:

1. The Khudai Khidmatgar was a violent movement against British occupation of the Indian subcontinent led by Abdul Ghaffar Khan, in the Punjab.
2. The movement never joined the Indian National Congress.
3. In India, remittances are projected to fall by about 23% in 2020.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
c) Both 1 and 2 d) Neither 1 nor 2

Answer: (d)

Explanation: Both statements are incorrect. The Khudai Khidmatgar (Servants of God) was a non-violent movement against British occupation of the Indian subcontinent led by Abdul Ghaffar Khan, a Pashtun freedom fighter, in the North-West Frontier Province (now in Khyber Pakhtunkhwa, Pakistan). This was originally a social reform organisation focusing on education and the elimination of blood feuds.

Following the arrest of Khan and other leaders in 1929, the movement formally joined the Indian National Congress after they failed to receive support from the All-India Muslim League.

02 Reverse Vaccinology

Q. Consider the following statements with respect of 'reverse vaccinology':

1. Reverse vaccinology defines the process of antigen discovery starting from genome information.
2. Using 'reverse vaccinology', the Tamil Nadu Dr. MGR Medical University has developed a vaccine candidate against SARS-CoV-2.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
c) Both 1 and 2 d) Neither 1 nor 2

Answer: (c)

Explanation: Both statements are correct. Reverse vaccinology is the name given to the examination of the genome of an organism in order to identify novel antigens and epitopes that might constitute vaccine candidates.

Using 'reverse vaccinology', vaccinations were developed for meningococcal and staphylococcal infections all through the world. Recently, the Tamil Nadu Dr. MGR Medical University has developed a vaccine candidate against SARS-CoV-2 through 'reverse vaccinology'.

03 Operation Twist

Q. Consider the following statements with respect of 'Operation Twist of the RBI':

1. 'Operation Twist' is RBI's simultaneous selling of short-term securities and buying of long term securities through open market operations (OMO).
2. It normally leads to lower longer-term yields, which will help boost the economy by making loans less expensive for those looking to buy homes, cars and finance projects.
3. Cheaper retail loans can help encourage consumption spending which is the largest GDP component in the economy.

Which of the statements given above is/are correct?

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

Answer: (d)

Explanation: Both All statements are correct. 'Operation Twist' is RBI's simultaneous selling of short-term securities and buying of long term securities through open market operations (OMO). Under OMO mechanism, the short-term securities are transitioned into long-term securities.

Operation Twist normally leads to lower longer-term yields, which will help boost the economy by making loans less expensive for those looking to buy homes, cars and finance projects, while saving becomes less desirable because it doesn't pay as much interest.

This also results in a dip in the expected returns from long-term savings which tilts the balance from saving towards spending. Hence, cheaper retail loans can help encourage consumption spending which is the largest GDP component in the economy. 

04 Trade and Development Report 2019

Q. With reference to the 'Trade and Development Report 2019', consider the following statements:

1. It has published by United Nations Conference on Trade and Development (UNCTAD) and International Monetary Fund (IMF).
2. As per the report, developing countries' repayments on their public external debt alone will soar between \$2.6 trillion and \$3.4 trillion in 2020 and 2021 due to the COVID-19 pandemic.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: (b)

Explanation: Statement 1 is incorrect. As the world marks the International Day of Multilateralism and Diplomacy for Peace on 24 April 2020, United Nations Conference on Trade and Development (UNCTAD) has published its Trade and Development Report (TDR) for 2019.

Statement 2 is correct. In 2020 and 2021 alone, repayments on developing countries' public external debt are estimated at nearly \$3.4 trillion – between \$2.0 trillion and \$2.30 trillion in high-income developing countries and between \$666 billion and \$1.06 trillion in middle- and low-income countries. 

05 South China Sea Dispute

Q. Consider the following statements with respect of 'South China Sea':

1. The South China Sea is bordered by Brunei, Cambodia, China, Indonesia, Malaysia, the Philippines, South Korea, Taiwan, Thailand and Vietnam.
2. China's "nine-dash line" is a geographical marker used to assert its claim. It stretches as far as 2,000km from the Chinese mainland, reaching waters close to Indonesia and Malaysia.
3. This technology is not limited to COVID-19 and can work on any DNA-RNA or single mutations, disease mutations etc.

3. USA is allied with several of the countries bordering the South China Sea, such as the Philippines, Vietnam, among others.

Which of the statements given above is/are correct?

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

Answer: (c)

Explanation: Statement 1 is incorrect. The South China Sea is bordered by Brunei, Cambodia, China, Indonesia, Malaysia, the Philippines, Singapore, Taiwan, Thailand and Vietnam.

Statement 2 and 3 are correct. China's "nine-dash line" is a geographical marker used to assert its claim. It stretches as far as 2,000km from the Chinese mainland, reaching waters close to Indonesia and Malaysia.

The US has wide-ranging security commitments in East Asia, and is allied with several of the countries bordering the South China Sea, such as the Philippines, Singapore and Vietnam. 

06 Hydrogen Fuel Cell Based Electric Buses and Cars

Q. With reference to the hydrogen fuel cells, consider the following statements:

1. The fuel cell combines hydrogen and oxygen to generate electric current, water being the only byproduct.
2. Like conventional batteries, hydrogen fuel cells too convert chemical energy into electrical energy.
3. Like the battery-electricity vehicle, fuel cells can also store energy.

Which of the statements given above is/are correct?

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

Answer: (a)

Explanation: Statement 1 and 2 are correct. The fuel cell combines hydrogen and oxygen to generate electric current, water being the only byproduct. Like conventional batteries under the bonnets of automobiles, hydrogen fuel cells too convert chemical energy into electrical energy.

Statement 3 is incorrect. While the fuel cells generate electricity through an electrochemical process, unlike a battery-electricity vehicle, it does not store energy and, instead, relies on a constant supply of fuel and oxygen — in the same way that an internal combustion engine relies on a constant supply of petrol or diesel, and oxygen. 

07 Basic Structure of the Indian Constitution

Q. With reference to the 'basic structure of the Indian Constitution', consider the following statements:

1. In the early years of Independence, the SC conceded absolute power to Parliament in amending the Constitution, as was seen in the verdicts in *Shankari Prasad* (1951) and *Sajjan Singh* (1965).
2. In *Kesavananda Bharati*, the court did not define the 'basic structure' but since then, the court has been adding new features to this concept.

Which of the statements given above is/are correct?

- a) 1 only b) 2 only
- c) Both 1 and 2 d) Neither 1 nor 2

Answer: (c)

Explanation: Both statements are correct. In the early years of Independence, the SC conceded absolute power to Parliament in amending the Constitution, as was seen in the verdicts in *Shankari Prasad* (1951) and *Sajjan Singh* (1965).

In *KesavanandaBharati*, the court did not define the 'basic structure'; and only listed a few principles — federalism, secularism, democracy — as being its part. Since then, the court has been adding new features to this concept.



7

IMPORTANT NEWS

01 First Virtual Petersberg Climate Dialogue

- ◆ The eleventh session and first ever virtual of Petersberg Climate Dialogue was held in Germany.

Key Highlights

- ◆ Petersberg Climate Dialogue has been hosted by Germany since 2010 to provide a forum for informal high-level political discussions, focusing both on international climate negotiations and the advancement of climate action. The virtual XI Petersberg Climate Dialogue was co-chaired by Germany and United Kingdom, the incoming Presidency of 26th Conference of Parties (COP 26) to United Nations Framework Convention on Climate Change (UNFCCC).
- ◆ This year's dialogue came at a crucial juncture when countries are



tackling the COVID-19 pandemic to save lives, overcoming social and economic consequences of the pandemic while also preparing to move into the implementation phase of Paris Agreement under UNFCCC in post-2020 period. The key agenda of the dialogue was to discuss how we can jointly tackle the challenge of reinvigorating our economies and societies after COVID-19, while enhancing our resilience and catalyzing climate action while also supporting in particular those most vulnerable.

The Eleventh Session and India

- ◆ Union Minister for Environment, Forest and Climate Change, Shri Prakash Javadekar has represented India. The Minister mentioned that India's Nationally Determined Contributions spanning a ten-year time frame are ambitious and are also compliant with the temperature goal of the Paris Agreement.
- ◆ He expressed the solidarity with the world as it combats the COVID-19 pandemic and highlighted how COVID – 19 has taught us that we can survive on less.
- ◆ Further, he stressed on the issue of Climate finance, said the world now needs more. We must plan for 1 trillion USD in grants to developing world immediately. 

02 New List of Names of Tropical Cyclones over North Indian Ocean

- ◆ The India Meteorological Department (IMD) has released a new list with the names of 169 tropical cyclones that are likely to emerge over the north Indian Ocean, including the Bay of Bengal

and the Indian Ocean.

Key Highlights

- ◆ The list contains the names of 13 cyclones for the 13 member countries out of the total 169

names. The names of cyclones that may emerge in the future in India are Gati, Tej, Murasu, Aag, Vyom, Jhar, Probaho, Neer, Prabhanjan, Ghurni, Ambud, Jaladhi and Vega, the report said.

- ◆ Some other names include Biparjoy, Arnab and Upakul. The list also includes names such as Nisarga for Bangladesh and Nivar for Iran.

Process of Naming

- ◆ Worldwide there are six regional specialised meteorological centres (RSMCs) and five regional Tropical Cyclone Warning Centres (TCWCs) mandated for issuing advisories and naming of tropical cyclones. India Meteorological Department (IMD) is one of the six RSMCs to provide tropical cyclone and storm surge advisories to 13 member countries under WMO/ESCAP Panel including



Bangladesh, India, Iran, Maldives, Myanmar, Oman, Pakistan, Qatar, Saudi Arabia, Sri Lanka, Thailand, United Arab Emirates and Yemen. RSMC, New Delhi is also mandated to name the Tropical Cyclones developing over the north Indian Ocean (NIO) including the Bay of Bengal (BoB) and the Arabian Sea (AS). Therefore, the tropical

cyclones forming over different Ocean basins are named by the concerned RSMCs & TCWCs.

Benefits of Naming

- ◆ Naming of tropical cyclones helps the scientific community, disaster managers, media and general masses to identify each individual cyclone; create awareness of its development; remove confusion in case of simultaneous occurrence of tropical cyclones over a region; and remember a tropical cyclone easily rapidly and effectively disseminate warnings to much wider audience. 

03

COVID-19 Active Response and Expenditure Support Programme (CARES Programme)

- ◆ The Government of India and the Asian Development Bank (ADB) has signed a \$1.5 billion loan that will support the government's response to the novel coronavirus disease (COVID-19) pandemic, focusing on immediate priorities such as disease containment and prevention, as well as social protection for the poor and economically vulnerable sections of the society, especially women and disadvantaged groups.

Key Highlights

- ◆ ADB's timely assistance for the government's immediate response measures to the coronavirus pandemic to implement (i) COVID-19 containment plan to rapidly ramp up test-track-treatment capacity, and (ii) social protection for the

poor, vulnerable, women, and disadvantaged groups to protect more than 800 million people over the next three months.

- ◆ Building on the CARES Programme, ADB is also in dialogue with the government for further possible support for stimulating the economy, support strong growth recovery, and to build resilience to future shocks. This includes the support for the affected industries and entrepreneurs particularly micro, small, and medium-sized enterprises

(MSMEs) by facilitating their access to finance through credit guarantee schemes, MSME integration into global and national value chains through enterprise development centers, and a credit enhancement facility for infrastructure projects. Strengthening of public service delivery will be another important agenda, including the extension of comprehensive primary health services in urban areas, and of secondary and tertiary health care systems through Public Private Partnership (PPP) modalities.

India's Efforts

- ◆ India has taken several decisive measures to contain the outbreak of COVID-19 pandemic, including a \$2 billion health sector spending programme to expand hospital



facilities, ramp up test-track-treatment capacity and launched a \$23 billion pro-poor package to provide direct cash transfer, provide basic consumption goods and free cooking gas cylinders to the poor, particularly to women, old and socially disadvantaged

groups. It has also extended insurance coverage to frontline health workers engaged in COVID 19 response. The Central bank, Reserve Bank of India, has slashed policy rates, eased asset quality norms, provided loan moratoriums, taken measures to

support exporters and allowed states to borrow more to meet their financing requirements. It has also pumped in massive liquidity to support banks, non-banking financial companies, mutual funds as well as taken measures to push the flow of funds to the MSMEs and the corporate sector. 

04

Yemen Separatists has Declared Self-rule in South

- ◆ Yemen's main southern separatist group, Southern Transitional Council (STC) has declared a state of emergency, saying it would govern the port city and other southern provinces. The STC is supported by the United Arab Emirates. The move threatens to renew conflict between the STC and the Saudi-backed government, nominal allies in Yemen's war, even as the United Nations is trying to secure a nationwide truce to confront the novel coronavirus.

Key Highlights

- ◆ The STC deployed its forces in Aden, the southern port which is the interim seat of the government ousted from the capital, Sanaa, by the Iran-aligned Houthi movement.

The STC is one of the main groups fighting against the Houthis as part of a coalition led by Saudi Arabia. But the separatists, long backed by Saudi coalition partner the United Arab Emirates, have clashed with government forces in the past.

- ◆ The Saudi-backed government and southern regions of Shabwa, Hadhramout and Socotra, among the few areas under coalition control, issued separate statements rejecting the declaration.

Background

- ◆ Yemen has been mired in violence since the Houthis ousted Hadi's government from power in Sanaa in late 2014, prompting the Saudi-led coalition to intervene.

The conflict, seen as a proxy war between Saudi Arabia and Iran, has been in a military stalemate for years.

- ◆ The Houthis still hold most major cities despite fighting that has killed more than 100,000 people. The war has choked supply lines in the poorest Arabian peninsula nation, leaving millions of people on the brink of famine and dependent on international aid.
- ◆ The Saudi-led coalition has announced a unilateral ceasefire prompted by a U.N. plea to focus on the coronavirus pandemic. It extended the ceasefire on Friday for a month, but the Houthis have not accepted the truce and violence has continued. 

05

Green Zones: A Exit Strategy from the COVID-19 Lockdown

- ◆ The COVID-19 pandemic has put the world to the test. Never before have we been so aware of the many ways we come into contact with innumerable others. We have been forced to reassess and retrain common habits, from the handshake to the simple act of opening a door.

Green Zoning

- ◆ Green zoning would make the transition back to normal life after the initial spread is contained a lot easier. To control the process and the inevitable partial resurgence of the virus, experts have proposed first opening up zones that act as

local labour markets – areas that have high levels of commuting within, but little commuting beyond them.

- ◆ They also suggested that each nation should be partitioned into geographic areas, or cells, with 5,000 to 100,000 inhabitants.

To limit economic damage, this partition should consider “commuting zones”, that is, zones which share many economic ties. Each cell is labelled red or green depending on their current status regarding COVID-19. In red cells, the situation would be similar to lockdown. The sanitary measures, restrictions on opening of shops and restrictions on leaving your house would remain in place. In addition, in order to leave one's

WHAT IS A HOTSPOT	
 Areas in districts where six or more people have been tested positive of the Coronavirus.	 The area is earmarked based on probability of high degree of spread and people's response to the call for home stay.
WHAT YOU CANNOT DO IN A HOTSPOT - No movement of people in and out of the area - Cannot visit stores for grocery or even medicine - Media is not allowed	WHAT CAN BE DONE - Rigorous door-to-door monitoring - Grocery and other essentials ordered to homes - Ambulances with special permission in case of medical emergency - Sanitisation of the area

zone, a special certificate would be required, reserved for key workers and other important reasons. In contrast, life would progressively go back to normal within green cells.

Advantages of Green Zoning

- ♦ Green zoning would allow rapid reunification and the minimisation of societal and economic damage by restarting normal relationships as soon as possible. There would also be the possibility of adopting green zoning to fit each region's capability to implement other measures, such as, availability of testing or immunity certificates or practice of sanitary precautions.



06

Jal Shakti Abhiyan

- ♦ The government of India is planning to use the upcoming monsoon season to scale up its water conservation efforts, using human resources now available in the rural areas and the Mahatma Gandhi Rural Employment Guarantee Act (MGNREGA) mission to build up activities under the national Jal Shakti mission.

Key Highlights

- ♦ The work pertaining to the rejuvenation of traditional water bodies, removal of encroachments in the water bodies, desilting of lakes and ponds, construction/strengthening of inlets/outlets, catchment area treatment will be done under this initiative.
- ♦ The coming monsoon will be crucial for the country, not just for meeting the country's food security and economic needs but also for rural areas where reverse migration has taken place because of the COVID-19 pandemic and subsequent lockdown.



- ♦ Under the lockdown, the Ministry of Home Affairs has allowed irrigation projects, which the government said can be dovetailed with the MGNREGA work. This will help in generating work for the people who have left cities to return to their villages, and thus create employment and rev up rural economy.
- ♦ The India Meteorological Department had predicted a normal monsoon this season. This is crucial for the Kharif crop for which sowing has started.

Good rains are expected to address food security needs and help revive the economy.

Background

- ♦ Last year, the government has launched its flagship water conservation scheme—the Jal Shakti Abhiyan—in 256 water-stressed districts of the country. Under this, one crore rain harvesting structures have been created and 75 lakh water bodies and tanks have been renovated across the country.



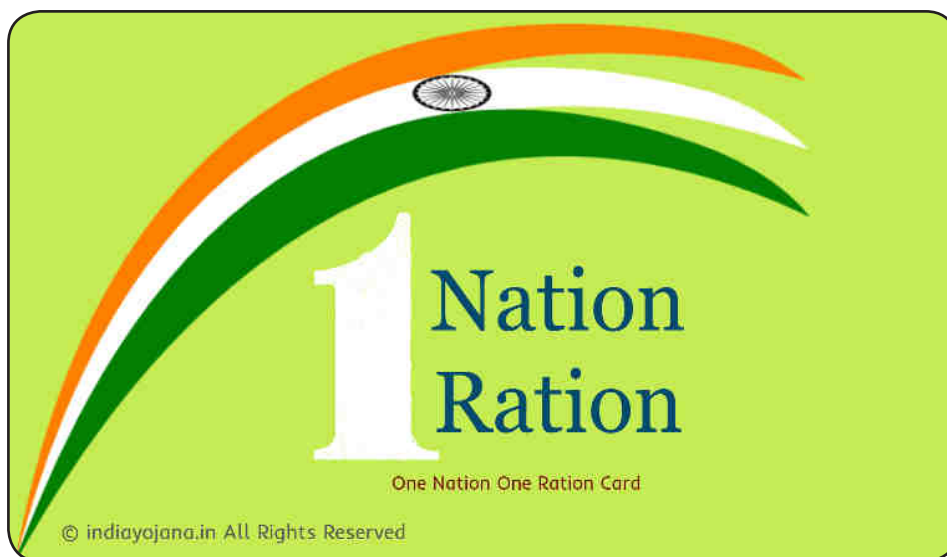
07

One Nation One Ration Card

12 states were integrated among each other and now 17 states are on integrated management of the public distribution system (PDS), also called ration shops/fair price shops.

Key Highlights

- ♦ The scheme was launched in January this year in 12 states—Andhra Pradesh, Goa, Gujarat, Haryana, Jharkhand, Kerala, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Telangana and Tripura. The rest of the country will be included in the portability scheme by June this year. This will benefit 600 million beneficiaries out of 810 million covered under the Food Security Act.
- ♦ Under the 'one nation, one ration card' initiative, eligible beneficiaries would be able to avail their entitled food grains under the National Food Security Act (NFSA) from any fair-price



shop in the country. There are over 81 crore beneficiaries under NFSA in the country, for subsidised foodgrains of 5 kilo per person at Rs 1-3/kg.

Significance

- ♦ The portability will help them draw their share of ration from a nearby ration shop by biometric registration. However, during lockdown most of the states are

distributing foodgrains without ration cards also to help feed the poor.

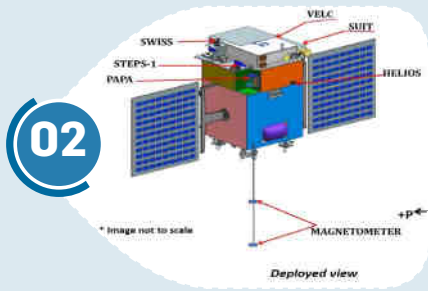
Background

- ♦ The move comes three days after the Supreme Court directed the Centre to consider whether it is feasible for it to implement the "one nation-one ration card" at this stage or not and take appropriate decision in this regard keeping in view the hardship caused by the lockdown.



7

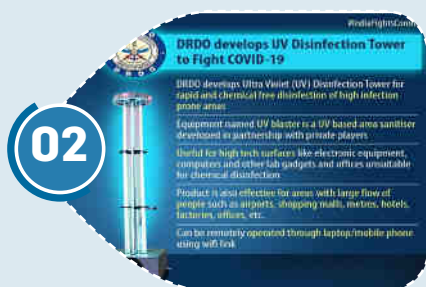
IMPORTANT PRACTICE QUESTIONS (For Mains)



- 01** In the context of recent incident of styrene gas leak in Visakhapatnam, discuss the safeguards against chemical disasters in India.
- 02** How does the Aditya L1 Mission of ISRO help to understand the the Sun's corona?
- 03** Examine how the decline of traditional artisanal industry in colonial India crippled the rural economy.
- 04** Discuss the potential threats of Cyber attack during the coronavirus pandemic and the security framework to prevent it.
- 05** Mob violence is emerging as a serious law and order problem in India. By giving suitable examples, analyze the causes and consequences of such violence.
- 06** Young people with ethical conduct are not willing to come forward to join active politics. Suggest steps to motivate them to come forward.
- 07** Examine the role of supermarkets in supply chain management of fruits, vegetables and food items. How do they eliminate number of intermediaries?

7

IMPORTANT FACTS (For Prelims)



01 What is the name of Indian Navy's operation, which is a part of national effort to repatriate Indian citizens from overseas? -

'Operation Samudra Setu' (Sea Bridge)

02 What is the name of equipment which is developed by the Defence Research and Development Organisation (DRDO) for rapid and chemical-free disinfection of high infection-prone areas?

Ultra Violet (UV) Blaster

03 Which state government has decided to start the "Mukhya Mantri Shahari Rojgar Guarantee Yojna" to provide assured 120 days employment for people living in urban areas?

Himachal Pradesh

04 Which mobile application has been developed by the CSIR-Central Road Research Institute (CSIR-CRRI) to connect farmers to the supply chain and freight transportation management system?

Kisan Sabha App

05 Which programme has been launched by National Council for Science & Technology Communication (NCSTC) on health and risk communication with focus on COVID-19?

'Year of Awareness on Science & Health (YASH)'

06 What is the theme for 'World Asthma Day 2020'?

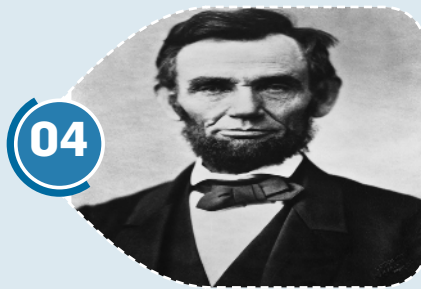
'Enough Asthma Deaths'

07 Which nation has launched a new rocket along with a prototype deep-space spacecraft that is somewhat akin to the deep-space Orion capsule NASA?

China (Long March 5B Rocket)

7

IMPORTANT QUOTES (For Essay and Answer Writing)



01 "Empower a woman - Empower a community"

Kofi Annan

02 "What we are doing to the forests of the world is but a mirror reflection of what we are doing to ourselves and to one another"

Mahatma Gandhi

03 "Be kind to all creatures; this is the true religion"

Gautam Buddha

04 "Nearly all men can stand adversity, but if you want to test a man's character, give him power"

Abraham Lincoln

05 "It is the duty of every citizen according to his best capacities to give validity to his convictions in political affairs."

Albert Einstein

06 "Everyone thinks of changing the world, but no one thinks of changing himself."

Leo Tolstoy

07 "Darkness cannot drive out darkness, only light can do that. Hate cannot drive out hate, only love can do that."

Martin Luther King

AN INTRODUCTION

Dhyeya IAS, a decade old Institution, was founded by Mr. Vinay Singh and Mr. Q.H. Khan. Ever since its emergence it has unparalleled track record of success. Today, it stands tall among the reputed institutes providing coaching for Civil Services Examination (CSE). The institute has been very successful in making potential realize their dreams which is evident from success stories of the previous years.

Quite a large number of students desirous of building a career for themselves are absolutely less equipped for the fairly tough competitive tests they have to appear in. Several others, who have a brilliant academic career, do not know that competitive exams are vastly different from academic examination and call for a systematic and scientifically planned guidance by a team of experts. Here one single move invariably put one ahead of many others who lag behind. Dhyeya IAS is manned with qualified & experienced faculties besides especially designed study material that helps the students in achieving the desired goal.

Civil Services Exam requires knowledge base of specified subjects. These subjects though taught in schools and colleges are not necessarily oriented towards the exam approach. Coaching classes at Dhyeya IAS are different from classes conducted in schools and colleges with respect to their orientation. Classes are targeted towards the particular exam. Classroom guidance at Dhyeya IAS is about improving the individual's capacity to focus, learn and innovate as we are comfortably aware of the fact that you can't teach a person anything you can only help him find it within himself.

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Distance learning Programme, DSDL, primarily caters the need for those who are unable to come to metros for economic or family reason but have ardent desire to become a civil servant. Simultaneously, it also suits to the need of working professionals, who are unable to join regular classes due to increase in work load or places of their posting. The principal characteristic of our distance learning is that the student does not need to be present in a classroom in order to participate in the instruction. It aims to create and provide access to learning when the source of information and the learners are separated by time and distance. Realizing the difficulties faced by aspirants of distant areas, especially working candidates, in making use of the institute's classroom guidance programme, distance learning system is being provided in General Studies. The distance learning material is comprehensive, concise and exam-oriented in nature. Its aim is to make available almost all the relevant material on a subject at one place. Materials on all topics of General Studies have been prepared in such a way that, not even a single point will be missing. In other words, you will get all points, which are otherwise to be taken from 6-10 books available in the market / library. That means, DSDL study material is undoubtedly the most comprehensive and that will definitely give you added advantage in your Preliminary as well as Main Examination. These materials are not available in any book store or library. These materials have been prepared exclusively for the use of our students. We believe in our quality and commitment towards making these notes indispensable for any student preparing for Civil Services Examination. We adhere all pillars of Distance education.

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