

**CURRENT EVENTS
AND
ANALYSIS
(July 2020)
Part-2**

Editor

R.C. Reddy

R.C. REDDY IAS STUDY CIRCLE

**H.No. 3-6-275, Opp. Telangana Tourism Development Corporation,
Near Telugu Academy, Himayatnagar, Hyderabad - 500 029.**

**Phone No. : 040-23228513; 040-27668513; 040-27612673;
9346882593; 9573462587**

Email : rcredyiasstudycircle1989@gmail.com

CURRENT EVENTS AND ANALYSIS

CONTENTS

JULY 2020 Part-2 CURRENT AFFAIRS

Index	PageNo:
NATIONAL POLITY:	
<i>Politician Criminal Police Nexus :</i>	
Notorious Gangster Vikas Dubey Killed in Police Encounter	1
<i>Criminal Law Reforms:</i>	
National Level Committee for Reform of Criminal Law Constituted	3
<i>Plea Bargaining:</i>	
Foreign Nationals Freed under Plea Bargaining	3
<i>Good Governance:</i>	
Prime Minister's Awards for Excellence in Public Administration Restructured	4
<i>Regulatory Bodies:</i>	
Regulation of Over The Top (OTT) Platforms Proposed	5
<i>Rural Development:</i>	
Financial Management Index for Rural Development Programmes Launched	6
<i>Land Records Modernisation:</i>	
Digital India Land Records Modernization Programme	7
SOCIAL SECTOR:	
EDUCATION:	
National Educational Policy 2020	8
Debate over Medium of Instruction in Schools	15
<i>IND-SAT 2020:</i>	
First-ever Indian Scholastic Assessment Test, IND-SAT 2020, Conducted	16
<i>HEALTH:</i>	
<i>MMR:</i>	
India's Maternal Mortality Ratio (MMR) Declines to 113	17
<i>Institutional Deliveries:</i>	
Institutional Deliveries Increased in the Past Two Decades	18
SOCIAL ISSUES:	
<i>Population:</i>	
India's Population to Peak by 2048	19
<i>Housing:</i>	
Affordable Rental Housing Complexes for the Poor	20

FOREIGN RELATIONS

Indo-EU:

15th India-EU Summit Held Virtually 20

Indo-USA:

US Remains India's Top Trading Partner 22

Indo-Bhutan:

New Trade Route Between India and Bhutan 23

Indo-Mauritius:

Supreme Court of Mauritius Built with India's Assistance Inaugurated 23

INTERNATIONAL RELATIONS

USA:

USA Gives Notice to Withdraw from World Health Organisation 24

Kuwait:

Kuwait to Reduce Expat Population 26

ICCPR:

Article 21 of the International Covenant on Civil and Political Rights (ICCPR) Interpreted 27

UN ECOSOC:

Prime Minister Addresses UN ECOSOC Meet 28

SCIENCE & TECHNOLOGY

HEALTH:

Covid-19:

Serological Surveys for COVID19 29

Airborne Transmission of COVID19 31

Itolizumab Drug Approved for Emergency Use to Treat COVID19 32

Vaccines:

GAVI Launched COVAX Facility Programme 32

ENVIRONMENT:

Tiger Population:

India Home to 70 Per cent of World Tiger Population 34

Turtle Conservation:

KURMA, a Mobile App for Turtle Conservation 35

Woolly Whitefly Pests:

Controlling Woolly Whitefly Pests Through Natural Predators 36

Lichen Park:

India's First Lichen Park Opened in Uttarakhand 37

Pied Cuckoo:

Migratory Pattern of 'Pied Cuckoo' To Be Studied 38

Mausam App:

Ministry of Earth Sciences Launches Mobile App "Mausam" 38

DEFENCE:***Rafales:***

Five Rafale Fighter Jets Arrive in India 39

Defence Purchases:

Defence Acquisition Council Approves Purchases Worth Rs. 38,900 Crore 41

Dhruvastra:

'Dhruvastra', Indigenous Anti-tank Guided Missile, Successfully Test-fired 41

DISASTER MANAGEMENT:**NDRF:**

Individual Contributions to NDRF Allowed 42

SPACE:***Perseverance Rover:***

NASA Launches 'Perseverance' Rover to Mars 42

Tianwen 1:

China Launches Its Mars Mission 'Tianwen 1' 43

Hope Probe:

United Arab Emirates Launches First Mission 'Hope Probe' to Mars 44

Questions for Practice:

Mains Practice Questions: 45

Prelims Practice Questions: 45

MISCELLANEOUS

International Persons 48

National Persons 48

Sports Persons 49

National Awards 49

Sports 50

NATIONAL POLITY

Politician Criminal Police Nexus :

Notorious Gangster Vikas Dubey Killed in Police Encounter

- Eight policemen, including a Deputy Superintendent of Police, were killed in an ambush by notorious gangster Vikas Dubey and his associates in Uttar Pradesh on July 2, 2020.
- The policemen were killed when they went to arrest Vikas Dubey in Bikru village near Kanpur as there were more than 60 criminal cases against him with offences like kidnapping, extortion, attempt to murder, etc.
- The policemen were obstructed with an earthmover near the Bikru village by gangster Vikas Dubey and his associates. The information about this police raid was reportedly passed on to the gangster by Station House Officer of Chaubeypur station and a constable as the police party started from this station to arrest Vikas Dubey. Both of them have been suspended. Two more inspectors who were in regular touch with the gangster Vikas Dubey were also suspended after in-house investigation and verifying their call records.

Vikas Dubey and five of his associates Killed in Encounter:

- In less than 10 days after the killing of eight policemen, the Uttar Pradesh police killed gangster Vikas Dubey and five of his associates in police encounters.
- The main accused Vikas Dubey was killed on July 10, 2020.
- The entire issue of killing of eight policemen and encounter of Vikas Dubey and his associates raised two important issues.
 1. Politician-Criminal-Police Nexus, and
 2. Violation of Rule of Law.

Politician-Criminal-Police Nexus:

- Vikas Dubey is a notorious criminal wanted in more than 60 cases. His first criminal case was in 1993.
- In 2001 also, Vikas Dubey was accused of shooting and killing of BJP leader Santosh Shukla, who had minister of state rank in UP, inside Shivli police station in Kanpur Dehat. He was exonerated as no policeman was willing to testify before the court.
- The continuation of criminal activities by Vikas Dubey for more than 25 years bring the politician-criminal-police nexus to the fore.

1. What is Politician-Criminal-Police nexus?

- Criminals provide money and muscle power to politicians to win elections. Politicians use them for mobilisation of votes and intimidating rivals.
- After winning elections, politicians patronage the criminals by shielding their criminal activities. Using political patronage, criminals indulge in extortion, kidnapping, etc to make money.
- Ruling party politicians control the postings and transfers of police officers. Hence, all these criminal activities are not acted upon by the police on the instructions of elected representatives.
- Whenever criminals indulge in extreme activities like the case of Vikas Dubey, they are disowned by politicians.

2. Violation of Rule of Law:

- The killing of Vikas Dubey in encounter has also come under criticism for violating the due process of law. The police had the option of handcuffing him after his arrest if he was a threat to their personal security. But, he was killed in the encounter on the ground that he snatched weapon from them and tried to kill them, and he was killed in subsequent exchange of fire in self defence. This provides immunity to the police for their actions.
- His arrest, proper investigations, and trial would have exposed his nexus with politician and police.
- This would also have meant adhering to the rule of law. Through encounters, rule of law is subverted. Police play the role of judge and executioner.
- Such encounters weaken institutional mechanisms established for enforcing rule of law.
- Police resort to such encounters to render instant justice. Such encounters also sometimes get social sanction like the case of Hyderabad encounter where the accused in the gang rape and murder of a young veterinary doctor were killed in encounter. People celebrated the encounter killings and garlanded the police.

Risks in Such Encounters:

- Encouraging police encounters for instant justice delivery and tolerating such conduct, creates an atmosphere of **impunity among the police force** and **loss of faith in the criminal justice system**. More than 100 people have been killed in police encounters after Yogi Aditanath took over power in March 2017. Vikas Dubey was the 119th person to be killed in encounters.
- Such impunity could lead to **murder of innocent people** as happened with the custodial deaths in Tamil Nadu where a father-son duo died to custodial violence. They were arrested and tortured for keeping their mobile shop open beyond the permitted hours.
- Support for such killings by the police will not make a society more just. When law enforcers short-circuit due process, the damage to Government institutions is severe and long-lasting.

Ideal Solution:

- The ideal solution lies in quick, fair and impartial trial by the court and punishment if convicted.
- Fast trial and judgement preferably in seven to eight months will ensure faith in justice delivery system. Speedy trial can be ensured through day to day hearings and not allowing too many adjournments.
- Speedy justice delivery ensures faith of common people in the justice system. Such justice delivery will avoid the need for instant justice through encounters.

Breaking Politician-Criminal-Police Nexus:

- Setting up State Security Commissions and Police Establishment Boards as recommended by the Supreme Court in Prakash Singh Vs Union of India would reduce the political interference in the working of the police.
- State Security Commissions are meant to ensure that the state government does not exercise unwarranted influence in the working of the police by laying down clear policy guidelines. A State Security Commission should be headed by Chief Minister or Home Minister and should include leader of the opposition party and independent members from civil society.
- Similarly Police Establishment Boards are meant to decide all transfers, postings, promotions and other service related matters of officers of and below the rank of Deputy Superintendent of Police. The Establishment Board shall be a departmental body comprising the Director General of Police and four other senior officers of the Department.
- But, these reforms are being scuttled as no party in power wants to loose its arbitrary power over police.

Criminal Law Reforms:

National Level Committee for Reform of Criminal Law Constituted

In July 2020, the Union Home Ministry constituted a 'Committee to Suggest Reforms in Criminal Law' under the Chairmanship of Dr. Ranbir Singh, Vice Chancellor of National Law University, New Delhi.

The Committee will look into reforms needed in

1. Indian Penal Code of 1860,
2. Code of Criminal Procedure that was rewritten in 1973, and
3. Indian Evidence Act, 1872.

Committee Seeks Opinion of Experts:

The Committee under Dr. Ranbir Singh invited recommendations from the experts on criminal law. The following are some of the issues on which recommendations are invited:

- Should the definition, scope and cognizability of sedition under Section 124A of the IPC be changed?
- Should "insults to the National Flag, Emblems and Constitution of India" be offences under the IPC?
- Should 'mob lynching' and 'honour killing' be penalised as separate offences under the IPC?
- Should sexual offences be categorised differently from other offences against the human body? Should these be made gender-neutral?
- Does the standard of consent under Section 375 of the IPC (definition of rape) need to be changed? Should the exception for marital rape be removed?
- Should there be an exception to the legal doctrine of 'ignorance of the law is no excuse'?
- Should euthanasia be decriminalised?

Plea Bargaining:

Foreign Nationals Freed under Plea Bargaining

- In July 2020, A Delhi court allowed 121 foreign nationals from countries like Bangladesh, Sri Lanka, Myanmar, Mali, Kenya, Djibouti, Kyrgistan to walk free on payment of fine of Rs. 5000 each, after they accepted mild charges under the plea bargain process, related to violations of visa norms.
- The foreigners were chargesheeted for attending the religious congregation of Tablighi Jamaat at Nizamuddin Markaz in New Delhi by allegedly violating visa conditions, and violating government guidelines, issued in the wake of COVID-19 outbreak in the country.
- Tablighi Jamaat (Society of Preachers) focusses on 'purifying' the Muslim faith. It has presence in 150 countries. It was founded by a Deobandi Islamic scholar Muhammad Ilyas al-Kandhlawi at Mewat, Uttar Pradesh, in 1926.

What is Plea Bargaining?

- Plea bargaining refers to pre trial negotiations where a person charged with a criminal offence can negotiate with prosecutor for a lesser punishment than what is provided under the law for the offence committed by him

What types of Crimes are considered for Plea Bargaining?

- Cases for which the plea bargaining is allowed are limited.
- It is only applicable for the offences for which punishment is less than 7 years.
- Offences like causing hurt, grievous hurt, theft, causing death due to rash and negligent driving, assault or use of criminal force on women, etc are considered for plea bargaining.

What Crimes are not allowed for Plea bargaining?

- Plea bargaining is **not applicable for the offences** for which **punishment is life imprisonment or death sentence**.
- Further offences affecting **socio-economic condition of the country** or committed against **women or children below 14 years** have been excluded from the ambit of Plea Bargaining.

Advantages of Plea Bargaining?

1. It ensures **quick disposition** of criminal cases by avoiding protracted trials.
2. It saves **litigation costs**.
3. It **improves conviction rates as the offenders** agree that they have committed the crime for which they are being tried in lieu of reduced punishment.
4. It **reduces pendency of cases in courts**.

Huge number of pending cases is leading to prolonged incarceration of undertrials without any progress in the cases for years and overcrowding of prisons.

5. It also helps offenders make a fresh start in life.

When was Plea bargaining Allowed in India?

- Plea bargaining was recommended by the Law Commission of India in its 142nd report in 1991.
- But, it was introduced in India in 2006 as part of amendments to the Code of Criminal Procedure, 1973.
- Plea bargaining was first started by United States of America in the 1970s. Many countries adopted plea bargaining to ensure speedy disposal of cases and reduce pendency of cases.

Difference between Plea bargaining in USA and India?

- In USA prosecutor plays in key role in plea bargaining. He initiates bargaining with the suspected offender.
- But as per law in India, plea bargaining can be initiated only by the accused. He has to apply to the court for invoking plea bargaining. This is to ensure that the prosecutor does not force the accused to accept plea bargaining.

How is the punishment decided in Plea bargaining?

- Courts can reduce the punishment to half in case of the offences for which minimum punishment has been prescribed.
- In some other cases, only the upper limit and not the minimum quantum of punishments will be spelt out. In such cases, the court shall award only one-fourth of the maximum punishment.
- They can also be let free in some cases with fines like the foreigners who attended Tablighi Jamaat.

Good Governance:

'Prime Minister's Awards for Excellence in Public Administration' Restructured

- 'Prime Minister's Awards for Excellence in Public Administration' was instituted by the Union Government in 2006 to acknowledge, recognise and reward the exemplary work done by Civil Servants across the country.
- The scheme was restructured in 2014 to recognise the performance of District Collectors in Priority Programmes, Innovations and Aspirational Districts (districts which are lagging in socio-economic indicators like health, education, skill development, financial inclusion, etc.)
- In July 2020, the Government of India announced further restructuring of the 'Prime Minister's Awards for Excellence in Public Administration'.

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- The Prime Minister's Awards for 2020 have been expanded to recognise the contribution of Civil Servants in the following areas:

1. Inclusive Development through Credit Flow to the Priority Sector (2 Awards)
2. Promoting people's movements - "Jan Bhagidari" through Swachh Bharat Mission (Urban and Gramin) in the District. (2 Awards)
3. Improving Service Delivery and Redressal of Public Grievances. (2 Awards)
4. Innovations in General Category (6 Awards)
5. Progress achieved under the Aspirational District Program (2 Awards), and
6. National Mission for Clean Ganga (1 Award).

- The total number of awards for 2020 will be 15.

About Innovation Awards:

- The Awards under the Innovation category have been broad based to recognise excellence at Central Government, State Government and district levels separately.
- In this category awards shall be given to Organisations of Central Government, State Governments and Districts for various innovations like innovations in **environment conservation, water conservation, energy, education, health, women & child centric initiatives, sustainable farming (Organic/Natural farming etc.), promoting livelihoods, boosting economy, improving governance, etc.**

Awards to be conferred on Ekta Diwas:

- The Awards shall be conferred on Rashtriya Ekta Diwas on October 31, 2020 which is also the birth anniversary of Sardar Vallabhai Patel, the first deputy Prime Minister of India who played a key role in integrating princely states with India after independence.
- An **Empowered Committee headed by Cabinet Secretary** recommends the awards and the Prime Minister gives the final approval.
- The award shall consist of a (i) trophy, (ii) scroll, and (iii) an incentive of Rs. Ten lakh.
- The award money should be utilised for implementation of project/ programme or bridging resource gaps in any area of public welfare.
- The awardees will also be given a Certificate of Recognition. A copy of will be placed in the Annual Performance Appraisal Report (APAR) of the officer.

Regulatory Bodies:

Regulation of Over The Top (OTT) Platforms Proposed

- In July 2020, the Information and Broadcasting (I&B) Ministry proposed bringing Over-The-Top (OTT) platforms under its regulation.
- At present, OTT platforms that are digitally streamed fall under the domain of the Ministry of Information and Technology (IT), but they are not regulated by it.

What are over-the-top (OTT) Platforms?

- Over-The-Top (OTT) Platforms are those which stream content using internet. They bypass the traditional platforms like cable, satellite televisions or theatres.

Examples of OTT Platforms:

- Netflix, Amazon Prime, Zee5, ATLBalaji, etc.

Why Regulation of OTT Platforms?

- Out of five different media - print, radio, TV, films and OTT - only OTT is unregulated.
- Off late, OTT platforms are becoming very popular.
- As movie halls are also closed due to lockdown, several production houses have released their movie directly on OTT, bypassing theatrical releases.
- Several OTT platforms such as Netflix, Amazon Prime, Zee5, and ATLBalaji have witnessed a huge jump in their subscription.
- But, currently a film released on OTT is not covered under the Central Board of Film Certification as it not exhibited as a film there.

Hence, the Information and Broadcasting (I&B) Ministry has proposed bringing all the content streamed in over-the-top (OTT) platforms under its purview.

Rural Development:

'Financial Management Index for Rural Development Programmes' Launched

- The Ministry Rural Development is spending around Rs. 1.2 lakh crores annually on various rural development programmes like
 - a) Mahatma Gandhi National Rural Employment Guarantee Scheme,
 - b) Deen Dayal Antyodaya Yojana-National Rural Livelihood Mission,
 - c) Pradhan Mantri Awas Yojana-Grameen. and
 - d) Pradhan Mantri Gram Sadak Yojana etc.
- In 2020-21, the allocation for Mahatma Gandhi National Rural Employment Guarantee Scheme is Rs. 60,000 crore.

Additional Rs. 40, 000 crore has been allocated to mitigate the impact of COVID-19 which led to loss of employment opportunities in urban areas.

Financial Management Index for Rural Development Programmes:

- To ensure transparency, efficient utilisation and promote competition in the implementation of various rural development programmes, the Union Minister of Rural Development Mr. Narendra Singh Tomar, in July 2020, launched "Financial Management Index for Rural Development Programmes" to rank the performance of the States.
- States would be ranked on the basis of following parameters:
 - a) Preparation of annual plan projecting the requirement of funds for the financial year,
 - b) Expeditious release of State's share,
 - c) Timely utilization of the funds and submission of the Utilization Certificates etc.;
 - d) Optimum implementation of Public Financial Management System (PFMS) & Direct Benefit Transfer;
 - e) Internal Audit; and
 - f) Social Audit.
- Public Financial Management System (PFMS) is online common financial management platform for tracking and monitoring the flow of funds under various schemes of central government.
- It provides real time information on funds released and utilised by implementing agencies.

Public Financial Management System (PFMS):

- The Central Government has made the use of Public Financial Management System (PFMS) mandatory for all central sector and centrally sponsored schemes of the Government of India. PFMS reduces paper work and unnecessary parking of funds with the implementing agencies.

Information on funds released by Central Ministries/Departments, Centrally Sponsored, Central Sector and State plan schemes from different Ministries of the Government of India to States.

Internal Audit:

- The Internal Audit process ensures that the irregularities, if any, in implementation and financial management of the funds under these Rural Development Programmes are brought out and consequent remedial actions are initiated immediately.

Social Audit:

- Social Audit is the examination and assessment of a programme/scheme which conducted with the active involvement of people by comparing official records with actual ground realities.

Land Records Modernisation:

Digital India Land Records Modernisation Programme

- On July 31, 2020, Union Minister of Rural Development and Panchayati Raj, Mr. Narendra Singh Tomar released a booklet on "Best Practices in Digital India Land Records Modernization Programme (DILRMP)" which is being implemented by Department of Land Resources (DoLR), Ministry of Rural Development.
- This publication lists various 'good practices' followed in land records modernisation in nine states namely Karnataka, Andhra Pradesh, Gujarat, Haryana, Maharashtra, Tripura, Himachal Pradesh, Jharkhand and Rajasthan.

About Digital India Land Records Modernisation Programme (DILRMP):

- The Government of India is implementing Digital India Land Records Modernisation Programme as a centrally sponsored scheme with the objective of
 1. Survey of lands,
 2. Computerisation of Land Records, and
 3. Computerisation of Registration.

Progress:

- Substantial progress has been achieved under the Digital India Land Record Modernisation Programme (DILRMP) since its inception.
- Computerisation of Land Records has been completed (more than 90%) in 23 States/ UTs and substantial progress has been achieved in 11 States/ UTs.
- Digitisation of Cadastral Maps has been completed (more than 90%) in 19 States/ UTs and substantial progress has been achieved in 9 States/ UTs. Cadastral Maps show the boundaries of subdivisions of land, usually with the directions and lengths and the areas of individual tracts. These are compiled for the purpose of describing and recording ownership.
- Computerisation of Registration in Sub Registrar Office (SRO) has been completed (more than 90%) in 22 States/ UTs and substantial progress has been achieved in 8 States/ UTs.
- Integration of Sub Registrar Office (SRO) with Revenue Office has been completed (more than 90%) in 16 States/ UTs and substantial progress has been achieved in 8 States/ UTs. This integration helps in quick mutation of lands. Mutation means insertion of the name of the new owner in the Record of Rights in the place of the former owner after transferring the ownership of a land.

Benefits of Digital India Land Records Modernisation Programme:

The Land Records Modernisation Programme helps in

1. reducing the scope of land disputes, and
2. enhances transparency in the land records maintenance system.

A comprehensive Integrated Land Information Management System would be developed in the country which provides error-free, tamper proof, and effortlessly accessible land records.

SOCIAL SECTOR:**EDUCATION:****National Educational Policy 2020**

The Government unveiled National Education Policy 2020 in July 2020. It replaces the 34 year old National Educational policy 1986.

What is the Significance of Education for Individual and Society?

Education is fundamental for

1. achieving full human potential,
2. developing an equitable and just society, and
3. promoting national development through scientific advancement, and economic growth.

The good of individual, society, country, and world depends on universal high quality education.

What the National Education Policy 2020 Aims to Achieve?

To develop good human beings

- a) capable of rational thought and action,
- b) possessing compassion and empathy,
- c) courage and resilience,
- d) scientific temper and creative imagination, and
- e) sound ethical values.

Highlights of the National Education Policy 2020:**School Education:**

- Restructuring the current 10+2 school education system into 5+3+3+4 pattern to make it more responsive and relevant to the needs and interests of students,

5+3+3+4 pattern would include

5 years of Foundation Stage: 3years of Primary Education, and Class 1 and Class 2,

3 years of Preparatory Stage: Classes 3, 4, and 5,

Middle Stage: Classes 6, 7 and 8, and

Secondary Stage: Classes 9, 10, 11, and 12

- reduction of curriculum content to enhance essential learning and critical thinking,
- reforms in assessment of outcomes by shifting from summative to formative and regular assessments,
- universalisation of Early Childhood Care and Education by 2030,
- attaining Foundational Literacy and Numeracy (ability to read and write, and perform basic operations with numbers) by 2025,
- recommendation to provide breakfast in addition to midday meals,
- achieving 100% Gross Enrolment Ratio in preschool to secondary level by 2030,
- adopting, wherever possible, mother tongue (local language) as the medium of instruction until at least Grade 5, but preferably till Grade 8 and beyond, and
- declaring regions with large populations from Socio-Economically Disadvantaged Groups (SCs, STs, OBCs, etc.) as Special Education Zones (SEZs) for focussed attention

Higher Education:

- Transforming Higher Education Institutions (HEIs) into multi-disciplinary institutions,
- Setting up of Model Public Universities for holistic and multidisciplinary education,
- phasing out system of 'affiliated colleges' over a period of fifteen years through a system of graded autonomy,
- introduction of flexible structure and lengths of degree programmes (The undergraduate degree will be of either 3 or 4-year duration, with multiple exit options within this period, with appropriate certifications),
- increasing Gross Enrolment Ratio in higher education from 26.3% (2018) to 50% by 2035,
- setting up at least one large multidisciplinary Higher Education Institutions (HEIs) in or near every district by 2030, and
- **setting up National Research Foundation** as an apex body for fostering a strong research culture and building research capacity across higher education, and

Funding:

- increasing the public investment (both the Centre and States) in education to reach 6% of GDP at the earliest from the present 4.4 per cent.

DETAILS:

1. Restructuring School Education:

The current 10+2 school education system will be restructured into 5+3+3+4 pattern to **make it more responsive and relevant to the needs and interests of students.**

Foundational Stage	3 years of Anganwadi/pre-school, and 2 years in primary school in Grades 1-2; both together covering ages 3-8,
Preparatory Stage	Grades 3-5, covering ages 8-11
Middle Stage	Grades 6-8, covering ages 11-14
Secondary Stage	Grades 9-12 in two phases, i.e., 9 and 10 in the first and 11 and 12 in the second, covering ages 14-18

Foundational Stage:

It will consist of five years of flexible, multilevel, play and activity-based learning.

Preparatory Stage:

The Preparatory Stage will comprise three years of education building on the play, discovery, and activity-based pedagogical and curricular style of the Foundational Stage, and will also begin to **incorporate some light text books** as well as aspects of more **formal but interactive classroom learning**, in order to lay a solid groundwork across subjects, including reading, writing, speaking, physical education, art, languages, science, and mathematics.

Middle Stage:

The Middle Stage will comprise three years of education with **the introduction of subject teachers for learning and discussion** of the more abstract concepts in each subject that students will be ready for at this stage across the **sciences, mathematics, arts, social sciences, and humanities.**

Secondary Stage:

The Secondary Stage will comprise of four years of multidisciplinary study with greater depth, greater critical thinking, greater attention to life aspirations, and greater flexibility and student choice of subjects.

2. Reduction of curriculum content to enhance essential learning and critical thinking

School curriculum content will be reduced in each subject to its core essentials.

This will make space for critical thinking and more holistic, inquiry-based, discussion-based, and analysis-based learning.

The mandated content will focus on key concepts, ideas, applications, and problem-solving.

Teaching and learning will be conducted in a more interactive manner; questions will be encouraged.

3. Reforms in Assessment of Outcomes:

Assessment culture of our schooling system will shifted from summative to formative and regular assessments

Summative assessments (term end and year end examinations) primarily test rote memorization skill.

Regular and formative assessment would be

- a) more competency-based,
- b) promotes learning and development for students, and
- c) tests higher-order skills, such as analysis, critical thinking, and conceptual clarity.

The primary purpose of assessment will indeed be for learning. It will help the teacher and student, and the entire schooling system, continuously revise teaching-learning processes to optimize learning and development for all students.

Board exams for Grades 10 and 12 will be continued but, the existing system of Board will be redesigned to test primarily core capacities/competencies rather memorization

In addition, to track progress throughout the school years and not just at the end of Grades 10 and 12 **all students will take school examinations in Grades 3, 5, and 8**. These examinations would test achievement of basic learning outcomes rather than rote memorization. The Grade 3 examination, in particular, would test basic literacy, numeracy, and other foundational skills.

The results of school examinations of Grades 3, 5, and 8 will be used only for developmental purposes of the school education system, assessing schools' overall (anonymised) student outcomes, and for continuous monitoring and improvement of the schooling system.

4. Universalisation of Early Childhood Care and Education by 2030:

Early Childhood Care and Education (ECCE) is significant as over 85% of a child's cumulative brain development occurs prior to the age of 6. Appropriate care and stimulation of the brain in the early years ensures healthy brain development and growth.

Presently, quality ECCE is not available to crores of young children, particularly children from socio-economically disadvantaged backgrounds.

Universal provisioning of quality early childhood development, care, and education must thus be achieved as soon as possible, and no later than 2030.

ECCE would consist of flexible, multi-faceted, multi-level, play-based, activity-based, and inquiry-based learning, comprising of alphabets, languages, numbers, counting, colours, shapes, indoor and outdoor play, puzzles and logical thinking, problem-solving, drawing, painting and other visual art, craft, drama and puppetry, music and movement.

NCERT (National Council for Educational Research and Training) would develop the curriculum for Early Childhood Care and Education (ECCE).

5. Attaining Foundational Literacy and Numeracy by 2025:

The ability to read and write, and perform basic operations with numbers, is a necessary foundation and **an indispensable prerequisite for all future schooling and lifelong learning.**

However, various governmental, as well as non-governmental surveys indicate that we are currently in a **learning crisis**.

A large proportion of students currently in elementary school - estimated to be over 5 crore in number - have not attained foundational literacy and numeracy, i.e., the ability to read and comprehend basic text and the ability to carry out basic addition and subtraction with Indian numerals.

Attaining foundational literacy and numeracy for all children will thus become an urgent national mission.

To this end, a **National Mission on Foundational Literacy and Numeracy** will be set up by the Ministry of Human Resource Development (MHRD) on priority to achieve universal foundational literacy and numeracy in primary school by 2025.

Accordingly, all State/UT governments will immediately prepare an implementation plan for attaining universal foundational literacy and numeracy in all primary schools, identifying stage-wise targets and goals to be achieved by 2025, and closely tracking and monitoring progress of the same.

Teacher vacancies will be filled at the earliest, in a time-bound manner - especially in disadvantaged areas and areas with large pupil-to-teacher ratios or high rates of illiteracy.

Special attention will be given to employing local teachers or those with familiarity with local languages. A pupil-teacher ratio (PTR) of under 30:1 will be ensured at the level of each school; areas having large numbers of socio-economically disadvantaged students will aim for a PTR of under 25:1. Teachers will be trained, encouraged, and supported - with continuous professional development - to impart foundational literacy and numeracy.

Currently, with the lack of universal access to ECCE, a large proportion of children already fall behind within the first few weeks of Grade 1. Thus, to ensure that all students are school ready, an interim 3-month play-based 'school preparation module' for all Grade 1 students, consisting of activities and workbooks around the learning of alphabets, sounds, words, colours, shapes, and numbers, and involving collaborations with peers and parents, will be developed by NCERT and SCERTs.

6. Providing Breakfast in addition to Mid Day Meals:

Morning hours after a nutritious breakfast can be particularly productive for the study of cognitively more demanding subjects. Hence, the policy recommended providing breakfast in addition to midday meals.

All school children shall also undergo regular health check-ups especially for 100% immunization in schools and health cards will be issued to monitor the same.

7. Curtailing Dropout Rates and Ensuring Universal Access to Education at All Levels

One of the primary goals of the schooling system must be to ensure that children are enrolled in and are attending school. Through initiatives such as the Sarva Shiksha Abhiyan (now the Samagra Shiksha) and the Right to Education Act, India has made remarkable strides in recent years in attaining near-universal enrolment in elementary education.

However, the data for later grades indicates some serious issues in retaining children in the schooling system.

The Gross Enrolment Ratio (GER) for

Grades 6-8 was 90.9%,

Grades 9-10 was 79.3%, and

Grades 11-12 was 56.5%.

This indicates that a significant proportion of enrolled students drop out after Grade 5 and especially after Grade 8.

As per the 75th round household survey by NSSO in 2017-18, the number of out of school children in the age group of 6 to 17 years is 3.22 crore.

It will be a top priority to bring these children back into the educational fold as early as possible, and to prevent further students from dropping out, with a goal to **achieve 100% Gross Enrolment Ratio in preschool to secondary level by 2030.**

A concerted national effort will be made to ensure universal access and opportunity to all children of the country to obtain quality holistic education-including vocational education - from pre-school to Grade 12.

Besides providing **regular trained teachers** at each stage, **special care shall be taken to ensure that no school remains deficient on infrastructure support.** The credibility of Government schools shall be re-established and this will be attained by upgrading and enlarging the schools that already exist, building additional quality schools in areas where they do not exist, and **providing safe and practical conveyances and/or hostels, especially for the girl children,** so that all children have the opportunity to attend a quality school and learn at the appropriate level.

Alternative and innovative education centres will be put in place in cooperation with civil society to ensure that children of migrant labourers, and other children who are dropping out of school due to various circumstances are brought back into mainstream education.

8. Medium of Instruction:

Young children learn and grasp more quickly in their home language/mother tongue. **Home language is usually the same language as the mother tongue or that which is spoken by local communities.**

Hence, wherever possible, the medium of instruction until at least Grade 5, but preferably till Grade 8 and beyond, will be the home language/mother tongue/local language/regional language. Thereafter, the home/local language shall continue to be taught as a language wherever possible.

9. Three-Language Formula:

The three-language formula will continue to be implemented while keeping in mind the Constitutional provisions, aspirations of the people, regions, and the Union, and the need to promote multilingualism as well as promote national unity.

However, there will be a greater flexibility in the three-language formula, and no language will be imposed on any State.

The three languages learned by children will be the choices of States, regions, and of course the students themselves, so long as at least two of the three languages are native to India.

10. Socio-Economically Disadvantaged Groups (SEDGs):

Successive government policies have made steady progress towards bridging gender and social category gaps in all levels of school education. However, **large disparities still remain** - especially at the secondary level - particularly for **socio-economically disadvantaged groups** that have been historically underrepresented in education.

Socio-Economically Disadvantaged Groups (SEDGs) can be broadly categorized based on

- a) gender identities (particularly female and transgender individuals),
- b) socio-cultural identities (such as Scheduled Castes, Scheduled Tribes, OBCs, and minorities),
- c) geographical identities (such as students from villages, small towns, and aspirational districts),
- d) disabilities (including learning disabilities), and
- e) socio-economic conditions (such as migrant communities, low income households, children in vulnerable situations, victims of or children of victims of trafficking, orphans including child beggars in urban areas, and the urban poor).

While overall enrolments in schools decline steadily from Grade 1 to Grade 12, **this decline in enrolments is significantly more pronounced for many of these SEDGs,** with even greater declines for female students within each of these SEDGs and often even steeper in higher education.

For instance, as per 2016-17 data, about 19.6% of students belong to Scheduled Castes at the primary level, but this fraction falls to 17.3% at the higher secondary level.

These enrolment drop-offs are more severe for Scheduled Tribes students (10.6% to 6.8% at primary and higher secondary level), and differently-abled children (1.1% to 0.25%), with even greater declines for female students within each of these categories. The decline in enrolment in higher education is even steeper.

Special Education Zones:

Certain geographical areas contain significantly larger proportions of Socio-Economically Disadvantaged Groups (SEDGs). Also, there are geographical locations that have been identified as **Aspirational Districts** which require special interventions for promoting their educational development. Hence, it is **recommended that regions of the country with large populations from educationally-disadvantaged SEDGs should be declared Special Education Zones (SEZs)**, where all the schemes and policies are implemented to the maximum through additional concerted efforts, in order to truly change their educational landscape.

Gender-Inclusion Fund:

Government of India will constitute a 'Gender-Inclusion Fund' to build the nation's capacity to provide equitable quality education for all girls as well as transgender students. The fund will be available to States to implement priorities determined by the Central government critical for assisting female and transgender children in gaining access to education (such as the provisions of sanitation and toilets, bicycles, conditional cash transfers, etc.);

Free boarding facilities will be built - matching the standard of Jawahar Navodaya Vidyalayas - in school locations where students may have to come from far, and particularly for students who from socio-economically disadvantaged backgrounds, with suitable arrangements for the safety of all children, especially girls.

Kasturba Gandhi Balika Vidyalayas will be strengthened and expanded to increase the participation in quality schools (up to Grade 12) of girls from socio-economically disadvantaged backgrounds.

Higher Education

1. Transforming Higher Education Institutions (HEIs) into Multi-Disciplinary Institutions:

Higher Education Institutions (HEIs) are at present mostly fragmented into technical institutions, medical institutions, law institutions, etc. This fragmentation hinders multi-disciplinary research.

Hence, all Higher Educational Institutions will be transformed into multi-disciplinary institutions by 2040 with each institution having at least 3000 students.

2. Model Public Universities for Holistic and Multidisciplinary Education:

Model public universities for holistic and multidisciplinary education, at par with IITs, IIMs, etc., called MERUs (Multidisciplinary Education and Research Universities) will be set up and will aim to attain the highest global standards in quality education. They will also help set the highest standards for multidisciplinary education across India.

3. System of 'affiliated colleges' to be Phased Out:

The system of 'affiliated colleges' would be phased out over a period of fifteen years through a system of graded autonomy.

Each existing affiliating university will be responsible for mentoring its affiliated colleges so that they can develop their capabilities and achieve minimum benchmarks in academic and curricular matters; teaching and assessment; governance reforms; financial robustness; and administrative efficiency.

All colleges currently affiliated to a university shall attain the required benchmarks over time to secure the prescribed accreditation benchmarks and **eventually become autonomous degree-granting colleges.**

Phasing out system of 'affiliated colleges' would reduce the administrative burden on universities and they can focus only on teaching and research. This would also improve standards of the present affiliated colleges as develop their capabilities and achieve accreditation benchmarks in academic and curricular matters.

4. Flexible Structure and Lengths of Degree Programmes:

The undergraduate degree will be of either 3 or 4-year duration, with multiple exit options within this period, with appropriate certifications, e.g., a certificate after completing 1 year in a discipline, or a diploma after 2 years of study, or a Bachelor's degree after a 3-year programme.

The 4-year multidisciplinary Bachelor's programme, however, shall be the preferred option since it allows the opportunity to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per the choices of the student.

Higher Education Institutions (HEIs) will have the flexibility to offer different designs of Master's programmes:

- a) there may be a 2-year programme with the second year devoted entirely to research for those who have completed the 3-year Bachelor's programme;
- b) for students completing a 4-year Bachelor's programme with Research, there could be a 1-year Master's programme; and
- c) there may be an integrated 5-year Bachelor's/Master's programme.

Undertaking a Ph.D. shall require either a Master's degree or a 4-year Bachelor's degree with Research.

The M.Phil. programme shall be discontinued.

5. Gross Enrolment Ratio:

Gross Enrolment Ratio in higher education including vocational education shall be increased from 26.3% (2018) to **50% by 2035**.

3.5 crore seats will be added in higher education.

While a number of new institutions will be set up, a large part of the capacity creation will be achieved by consolidating, substantially expanding, and also improving existing Higher Education Institutions (HEIs).

Higher Education Institutions (HEIs) will have the option to run Open Distance Learning (ODL) and online programmes. These will enhance their offerings, improve access, increase Gross Enrolment Ratio (GER), and provide opportunities for lifelong learning (Sustainable Development Goal 4).

6. Expanding Access for Equity and Inclusion:

More HEIs will be established in underserved regions to **ensure full access, equity, and inclusion**. There shall be at least one large multidisciplinary HEI in or near every district by 2030.

- 7. The National Research Foundation** will be created as an apex body for fostering a strong research culture and building research capacity across higher education.

8. Public Investment in Education:

There is no better investment towards a society's future than the high-quality education of our young people. Unfortunately, public expenditure on education in India has not come close to the recommended level of 6% of GDP, as envisaged by the 1968 Policy, reiterated in the Policy of 1986, and which was further reaffirmed in the 1992 review of the Policy.

The current public (Government - Centre and States) expenditure on education in India has been around **4.43% of GDP** (Analysis of Budgeted Expenditure 2017-18) and only around 10% of the total Government spending towards education (Economic Survey 2017-18).

The Centre and the States will work together to increase the public investment in Education sector to reach 6% of GDP at the earliest.

Debate over Medium of Instruction in Schools

- The National Education Policy 2020 suggested that wherever possible, the medium of instruction in schools until at least Grade 5 (preferably till Grade 8 and beyond), will be the mother tongue/local language.
- This has led to debates over the medium of instruction in schools both public (government) and private schools.
- While most of the Government schools in states teach in mother tongue (regional languages like Tamil, Telugu, Kannada, Marathi, Hindi, etc.), private schools in these states teach in English medium.
- There was a concern mother tongue language may be imposed on states and private schools though the National Educational Policy 2020. **However, the Government of India clarified that it would not impose medium of instruction on states.** The NEP policy on medium of instruction in mother tongue is only advisory and not mandatory.

Why instruction in Mother Tongue is Advocated?

- Early years of school are critical for children in terms of cognitive development.
- **A gap between the language spoken at home and in school** can lead to children losing interest in learning.
- This is particularly true for **first-generation learners**. Ensuring that they are taught in the language they are most familiar with can avoid such a situation.
- Studies also show a strong base in mother tongue builds skills that make learning new languages easier.
- The importance given to the mother tongue must not be viewed as an anti-English mandate. English must be taught as a language in schools from the early years

Why English Medium is Being Preferred?

- While learning in mother tongue has its advantages, English medium education is being preferred by most of the middle class and rich families due to the following reasons.
- In a globalised world, English medium education has become inevitable as it increases employment opportunities for children.
- English language has opened up opportunities for the Indians around the world.

Andhra Pradesh Government Decides to Shift to English Medium Instruction:

- Recently, Andhra Pradesh Government decided to implement English as medium of instruction in Government run schools due to following reasons.
1. Most of the parents are choosing English medium schools because of the advantages English language offers.
 2. Telugu is the medium of instruction in State Government schools. Hence, most of the middle class and rich parents are sending their children to private schools which teach in English medium.
 3. Only children of poor families are studying in Government schools. Continuing with Telugu medium would put the children of poor people at a disadvantage and it is likely to perpetuate inequality in society.
 4. Hence, Andhra Pradesh Government decided to shift to English medium education in all Government run schools so that the children of poor families can also compete with those studying in English medium private schools and get better employment opportunities.

Though English would be medium of instruction, Telugu would be taught as a language.

Opposition to English Medium Instruction:

However, there is also opposition to the Andhra Pradesh Government's decision to implement English medium education in Government schools on the following grounds.

1. No Consent from Students and parents:

The English medium is being **forced on the poor students by the AP Government unilaterally without taking the consent of their parents.**

2. Impact on Learning outcomes:

If poor students who are mostly first generation learners cannot cope up with the demands of English medium education due to gap between mother tongue and medium of instruction, this may increase the dropout rates. Children grasp concepts more quickly in mother tongue.

3. English can be taught as a Language:

Hence, instead of English as medium of instruction, it should be taught as a language in schools from the early years. The importance given to the mother tongue must also not be viewed as anti-English.

4. Lack of Choice:

Alternatively, at least choice should be given to students and parents whether to choose English medium or Telugu medium instruction instead of completely shifting to English medium instruction.

5. Threat to Telugu Language:

There is also another concern being voiced by intellectuals that **Telugu language may be under threat with the Government itself adopting English as medium of instruction.** But, this argument is countered with the opinion that the poor should not be burdened with the responsibility of preserving Telugu language while the middle class and rich do not shoulder this responsibility and prefer English medium education. Continuing with Telugu medium of instruction would increase inequality in job opportunities and there by decent standard of living for poor families.

Matter Pending in the Supreme Court:

- The Andhra Pradesh High Court struck down the decision of the Government to implement compulsory English medium instruction in Government schools. This has been challenged by the Andhra Pradesh Government in Supreme Court where the decision is pending.

IND-SAT 2020:

First-ever Indian Scholastic Assessment Test, IND-SAT 2020, Conducted

- The first-ever Indian Scholastic Assessment Test, IND-SAT 2020 was conducted on July 22, 2020 under MHRD's 'Study in India' programme.
- Nearly 5000 candidates from Nepal, Ethiopia, Bangladesh, Bhutan, Uganda, Tanzania, Rwanda, Sri-Lanka, Kenya, Zambia, Indonesia and Mauritius appeared for the proctored online exam conducted by the National Testing Agency.

About IND-SAT Exam:

- IND-SAT is held for granting scholarships and admissions to foreign students for studying in select Indian universities under the Study in India programme.
- The exam is a 90-minute online proctored test with multiple-choice questions.
- It is conducted in English and has the verbal ability, quant, logical reasoning as sub-sections with 40, 25, and 25 marks each.
- Every right answer gets one mark and there is no negative marking in the exam.
- The IND-SAT scores will serve as a criterion to shortlist the meritorious students for the allocation of scholarships for undergraduate as well as postgraduate programmes under 'Study in India' programme.

About Study in India Programme:

- Study in India is a flagship programme of Ministry of Human Resources and Development (MHRD) launched in 2018.
- It aims at attracting foreign students, mostly from Asian and African countries, to come and study undergraduate and postgraduate programmes. 116 select higher education institutions in the country have been selected to admit foreign students.
- The selection of the students is based on their merit in the Class 12 exams or school leaving exam.
- Around 780 students had taken admission in the first year (2017-18), which was increased to around 3,200 in 2019-20.
- The top 2,000 students are given scholarships, while some others are given fee discounts by the institutions.

Scholarship Details:

- IND-SAT scores would be the basis for Scholarships.
- Each scholarship is valued at US \$ 3500 (around Rs. 2.6 lakh) per student per year.
- Each scholarship will only cover tuition, accommodation, food and admission fees. No other expense listed outside this set will be provided for by this scholarship.
- If the total fees of the course for each year, which includes tuition, accommodation, food and admission, is lesser than the proposed value of USD3500, the lesser amount will be given as scholarship.
- All scholarships are electronically transferred to the institutes.
- Scholarship amount will be transferred to the institute after a verification of the student's attendance.
- All scholarships are renewable on a year-on-year basis until the day of Graduation.
- As scholarships are limited, 116 universities, which have been selected to admit students under Study India Programme, also offer fee waivers of 100 %, 50% and 25 % to the deserving students based on the merit ranking.

HEALTH:**MMR:****India's Maternal Mortality Ratio (MMR) Declines to 113**

- India's **Maternal Mortality Ratio (MMR)** declined to
- 113 in 2016-18 from
- 122 in 2015-17
- as per the Sample Registration System (SRS) data released by the Registrar General of India in July 2020.

Maternal Mortality Ratio:

- It is the number of maternal deaths during a given period for 1,00,000 live births.
- Maternal deaths are mostly preventable, and a high number of maternal deaths indicate inequities in accessing quality healthcare.
- Major causes of maternal deaths are severe bleeding, infections, high blood pressure during pregnancy, and complications from delivery and unsafe abortions.
- Access to antenatal care in pregnancy and skilled care during childbirth as well as support and care after childbirth can prevent maternal deaths.

SDG Goals:

- Sustainable Development Goal (SDG) set by United Nations aims at reducing the global maternal mortality ratio to less than 70 per 100,000 live births.
- Five states - Kerala, Maharashtra, Tamil Nadu, Telangana, and Andhra Pradesh - have achieved the WHO's Sustainable Development Goal of reducing the MMR below 70.

States with Low Maternal Mortality Ratio (MMR):

	MMR
1. Kerala	43
2. Maharashtra	46
3. Tamil Nadu	60
4. Telangana	63
5. Andhra Pradesh	65

States with High Maternal Mortality Ratio:

	MMR
1. Assam	215
2. Uttar Pradesh	197
3. Madhya Pradesh	173
4. Rajasthan	164
5. Chhattisgarh	159

Institutional Deliveries:

Institutional Deliveries Increased in the Past Two Decades

- As per the survey on 'State of India's Health' conducted by the National Statistical Office the proportion of women delivering a child in a hospital (or health care institution) increased over the past two decades by nearly 73 % in rural India and 37 % in urban India. Data comparison was for 1995-96 to 2017-18 period.
- At least **nine of every 10 pregnant women now deliver a child in a hospital** availing better health care facilities.
- But nearly every third woman (28.1 per cent) who delivers a child in a hospital undergoes a caesarean-section (C-section surgery) leading to increase in the child birth delivery expenses.
- According to the World Health Organisation, the ideal rate for C-sections is between 10% and 15%. These surgeries are effective in saving maternal and infant lives but only when they are required for medically indicated reasons.
- Private sector hospitals account for high rate of C-sections in India.
- About 29% of institutional births in India take place in a private sector hospital, but these hospitals conduct nearly 63% of all C-sections in the country. Government hospitals conduct nearly 70% of all deliveries but only 35% of all C-sections.

Reasons for Increasing C-section Deliveries:

- Commercial interests of private hospitals, availability of health insurance scheme, and
- changing preferences of women are responsible for the rising C-section rates.

SOCIAL ISSUES:

Population:

India's Population to Peak by 2048

- As per the analytical study by Lancet, world's leading general medical journal, released in July 2020,
- India's population is likely to peak by 2048 to about 1.61 billion and then decline to 1.03 billion by 2100
- Higher access to education for females and contraception will hasten declines in fertility and slow population growth.

Total Fertility Rate (TFR):

- India's **Total Fertility Rate (TFR)** is projected to have a steep decline until about 2040, **reaching 1.29 in 2100.**
- Total Fertility Rate (TFR) is the total number of children born or likely to be born to a woman in her life time.
- A TFR of 2.1 is needed to replace one generation of population with another generation. A TFR lower than 2.1 leads to a decline in a country's population.

Other Projections for India:

- The number of working-age adults (20-64 years) in India is projected to fall from around 748 million in 2017 to around 578 million in 2100.
- However, this will still be the largest working-age population in the world by 2100.
- In the mid-2020s, India is expected to surpass China's workforce population (950 million in 2017, and 357 million in 2100).
- From 2017 to 2100, India is projected to rise up the list of countries with the largest GDP, from 7th to 3rd.

Trends for World Population:

- World population will peak at **9.73 billion in 2064** and decline to **8.79 billion in 2100.**
- Global Total Fertility Rate (TFR) is predicted to steadily decline from 2.37 in 2017 to 1.66 in 2100.
- 183 of the 195 countries will have TFRs below the replacement level of 2.1 births per woman in 2100.
- Wealthy countries such as the UK and the USA could counteract the impact of these changes through net migration of working-age adults from the countries with growing populations

Top 10 Countries in Population by 2100:

Country	Population
1. India	1.09 Billion
2. Nigeria	791 Million
3. China	732 Million
4. USA	336 Million
5. Pakistan	248 Million
6. DR Congo	246 Million
7. Indonesia	229 Million
8. Ethiopia	223 Million
9. Egypt	199 Million
10. Tanzania	186 Million

Housing:

Affordable Rental Housing Complexes for the Poor

- In July 2020, the Union Government approved a scheme for developing of Affordable Rental Housing Complexes (AHRCs) for urban migrants and the poor as a sub-scheme under Pradhan Mantri Awas Yojana - Urban (PMAY - U).
- The scheme would have two models:
 1. Converting existing vacant government funded housing complexes, and
 2. Incentives to public and private entities to develop Affordable Rental Housing Complexes (AHRCs) on their own available vacant land
- Approximately, 3 Lakh beneficiaries will be covered initially under ARHCs.

Target Beneficiaries:

- Workforce in manufacturing industries, service providers in hospitality, health, domestic/commercial establishments, and construction or other sectors, labourers, students etc. who come from rural areas or small towns seeking better opportunities.

Details:

1. Converting Existing Vacant Government Funded Housing Complexes:

Existing vacant government funded housing complexes will be converted into of Affordable Rental Housing Complexes (AHRCs) through Concession Agreements for 25 years.

Concessionaire will make the complexes livable by repair/retrofit and maintenance of rooms and filling up infrastructure gaps like water, sewer/ septage, sanitation, road etc.

States/UTs will select concessionaire through transparent bidding.

2. Special incentives for developing ARHCs on Own Lands:

50% additional Floor Space Index (FSI) (higher FSI allows building more floors on a given land than usually permitted), concessional loan at priority sector lending rate, tax reliefs, will be offered to private/public entities to develop ARHCs on their own available vacant land for 25 years.

Significance of the Scheme:

Affordable Rental Housing Complexes (AHRCs) scheme

1. encourages investment opportunities for entrepreneurs in the rental housing sector, and
2. expands the availability of affordable housing units for the urban migrants and the poor.

FOREIGN RELATIONS

Indo-EU:

15th India-EU Summit Held Virtually

The 15th India-European Union Summit was held in virtual format on July 15, 2020.

The European Union is an economic and political union between 27 EU countries. Economically, it is a single market. It is the world's biggest exporter of manufactured goods and services, and the biggest import market for over 100 countries.

India was represented by Prime Minister Narendra Modi and EU was represented by Mr. Charles Michel, President of the European Council, and Ms. Ursula von der Leyen, President of the European Commission at the 15th India-EU Summit.

Details of the Summit:

1. India-EU Strategic Partnership:

The leaders decided to strengthen the India-EU Strategic Partnership, based on shared principles and values of democracy, freedom, rule of law, and respect for human rights.

The leaders adopted the "**India-EU Strategic Partnership: A Roadmap to 2025**" to guide cooperation between India and the EU over the next five years.

2. Nuclear Energy Cooperation:

India-EURATOM Agreement was also signed for research and development cooperation in the peaceful uses of nuclear energy.

3. Promoting Multilateralism:

As the world's two largest democracies, India and EU affirmed their determination to promote effective multilateralism and a rules-based multilateral order with the United Nations (UN) and the World Trade Organisation (WTO) at its core.

4. Fighting the COVID-19 Pandemic:

As the world is fighting the COVID-19 pandemic, the leaders agreed that global cooperation and solidarity are essential to protect lives and to mitigate the socio-economic consequences of the pandemic.

They agreed to intensify cooperation between India and the EU on health security and pandemic crisis preparedness and response, in particular linked to the COVID-19 pandemic.

5. Technology Cooperation:

India and the EU will upgrade their dialogue and cooperation on technology. They will engage on **5G and artificial intelligence** including to promote global standards and to foster their safe and ethical deployment.

6. Connectivity Projects:

In the context of China's Belt and Road Initiative which is leading to unsustainable debt levels in participating countries, the leaders agreed to jointly promote a **transparent, viable, inclusive, sustainable, comprehensive, and rules-based approach to connectivity** to ensure that **projects are environmentally, socially and fiscally sustainable** and provide a level playing field for businesses.

They recalled in this regard the importance of the G20 Principles for Quality Infrastructure Investment and the G20 Operational Guidelines for Sustainable Financing.

They agreed to explore concrete initiatives, including a **possible future comprehensive connectivity partnership**, to improve **connectivity between India and the EU** and seek **synergies between their cooperation on connectivity with third countries** including in the Indo-Pacific region.

They welcomed the ongoing activity in India of the European Investment Bank and the upcoming planned investments of **•550 million in the Pune and Bhopal Metro Rail Projects**.

7. Sustainable Modernisation:

India and the EU will enhance their partnership in support of sustainable modernisation. They will boost cooperation to support **clean energy transition, resource efficiency and circular economy**.

India and the EU will further develop cooperation on **smart and sustainable urbanisation, information and communication technology, transport, and space and health security**.

They agreed to jointly tackle water issues, **air pollution, plastic and marine litter**. Exchanges on research and innovation will be increased to further underpin progress in these areas.

The leaders welcomed the continued fusion research cooperation within the ITER project. ITER means 'The Way' in Latin. It is a collaborative international project to develop fusion energy for peaceful purposes

India and the EU will reinforce their cooperation in the **International Solar Alliance (ISA)** to promote the deployment of solar energy, and in the International Platform on Sustainable Finance (IPSF) to mobilise private capital towards environmentally sustainable investments.

The EU also stated that it looks forward to cooperating with **the Coalition for Disaster Resilient Infrastructure (CDRI)** launched by India to ensure that infrastructures are resilient to climate change.

8. Trade and Investment:

They reaffirmed their commitment to work towards **balanced, ambitious and mutually-beneficial trade and investment agreements**, opening markets and creating a level playing field on both sides.

They also agreed to establish a regular **High Level Dialogue at ministerial level** to provide guidance to the bilateral trade and investment relations and to address multilateral issues of mutual interest.

The High Level Dialogue will aim **at fostering progress on the trade and investment agreements, addressing trade irritants and improving conditions for traders and investors** on both sides.

Negotiations for a free trade pact, formally called a broad-based trade and investment agreement (BTIA), between the EU and India started in 2007, but were unofficially suspended in 2013 when both sides realised that no movement was happening on contentious matters.

EU wants India to reduce duties on automobiles and whines while India wants EU to give 'data secure' status to India as it opens opportunities in Information technology, telemedicine and business process outsourcing (BPO).

EU bans transfer of personal data to a non-EU country unless the nation ensures adequate privacy protection. India is among the countries not considered data secure by the EU.

There is an exception to this ban by adhering to standard contractual clauses that place strict obligations on both parties to ensure privacy of data, but these are onerous and considered as disincentive for business. In spite of these restrictions, EU accounts for 30 per cent of IT revenues. Data secure status will further expand business opportunities in IT and BPO sector.

9. Global Peace and Security:

They reaffirmed their strong commitment to global peace and security, disarmament and non-proliferation and to combat terrorism in all its forms and manifestations, including its financing and countering radicalization. India and the EU will intensify exchanges and cooperation in this regard.

10. International and Regional Issues:

India and the EU will continue to cooperate on international and regional issues of common interest including Iran and Afghanistan.

11. Human Rights and Women Empowerment:

India and the EU reiterated their commitment to human rights, including gender equality and women empowerment in all spheres of life

Indo-USA:

US Remains India's Top Trading Partner

- The United States (US) remained India's top trading partner for the second consecutive fiscal in 2019-20 as per the data released by the Union Commerce Ministry in July 2020.
- In 2018-19, the US first surpassed China to become India's top trading partner.
- China was India's top trading partner from 2013-14 to 2017-18.

- Trade between India and US:

Year	Bilateral Trade (in US \$ Billion)
2018-19	88.75
2019-20	87.96

-
- India has a trade surplus with US.
 - Trade Surplus increased to \$17.42 billion in 2019-20 from \$16.86 billion in 2018-19.
 - US wants greater market access for its farm and manufacturing products, dairy items, medical devices, apart from cut on import duties on some information and communication technology products.
 - India is seeking exemption from high duties imposed by the US on certain steel and aluminium products, and greater market access for its products from sectors such as agriculture, automobile, automobile components and engineering.

Trade Deficit with China:

- While India has trade surplus with largest trading partner US, it has trade deficit with second largest trading partner China.

Year	Bilateral Trade (in US \$ Billion)
2018-19	87.08
2019-20	81.87

- Trade deficit was \$48.66 billion in 2019-20 and \$53.57 billion in 2018-19.

Indo-Bhutan:

New Trade Route Between India and Bhutan

- On July 15, 2020, India and Bhutan launched a new trade route between Jaigaon in West Bengal and Ahllay in Bhutan.
- The new will decongest vehicular traffic along the Jaigaon-Phuentsholing route.
- It will also boost bilateral trade and commerce.
- Apart from opening and identifying more border trade points, India is also conducting a feasibility study for a rail link between the two neighbouring countries - between Mujnai in West Bengal and Nyoenpaling in Bhutan
- India is Bhutan's largest trading partner.
- The bilateral trade stood at Rs 9,227 crore in 2018.
- Bhutan imports mineral products, machinery and mechanical appliances, electrical equipment, base metals, vehicles, vegetable products, plastics, etc from India.
- Bhutan exports electricity, portland cement, dolomite, timber and wood products, potatoes, cardamom and fruit products to India.

Indo-Mauritius:

Supreme Court of Mauritius Built with India's Assistance Inaugurated

- On July 30, 2020, Prime Minister Narendra Modi and Prime Minister of Mauritius Mr. Pravind Jugnauth, jointly inaugurated **the new Supreme Court building in Mauritius built with India's grant assistance of USD 28.12 million (around 210 crores)** through video conference.
- The Supreme Court building is one of five projects implemented under a \$353-million special economic package extended by India in 2016.
- India has also assisted **Mauritius in Metro rail project and state of the art new hospital**. Work on construction of a social housing project is underway. India has also committed to supply digital tablets to primary school children.

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- Speaking at the occasion, Prime Minister Modi stated that History has taught us that in the name of development partnerships, nations were forced into dependence partnerships. It gave rise to colonial and imperial rule. But, India's development cooperation is human-centric.
 - He stressed that **India's development cooperation does not come with any conditions**, nor is it influenced by **any political or commercial considerations**. India's core principle for development cooperation is respect for our partners and the central motivation is sharing of our development lessons.
 - The Prime Minister stated that **India's development partnerships are diverse**. From Energy to engineering, Health to housing, IT to infrastructure, Sports to science, India is working with nations across the globe.
 - Some of the projects taken up across the globe are
Construction of Parliament building in Afghanistan,
Mahatma Gandhi Convention Centre in Niger, construction of an emergency and trauma hospital and oil pipeline (ensure the availability of petroleum products) in Nepal,
support to Sri Lanka to establish emergency ambulance services in all nine provinces,
providing drinking water and sanitation in thirty-four islands of the Maldives,
assistance to build stadiums and other facilities to make cricket popular in countries as diverse as Afghanistan and Guyana, and
training and skill development initiative to make the youth in partner countries self-reliant.
 - The Prime Minister stated that India's development partnerships reflect the development priorities of its partner nations.

About Mauritius:

- Mauritius is an island country in the Indian Ocean and is located off the eastern coast of Africa.
- Approximately two-thirds of the population is of Indian origin. They are descendants of indentured labourers who were brought to work in the sugar industry by the British during the 19th and early 20th centuries.
- Maldives was once predominantly dependent on sugar exports but later diversified its economy by focussing on tourism and financial services.

INTERNATIONAL RELATIONS

USA:

USA Gives Notice to Withdraw from World Health Organisation

- United States of America (USA) formally started the process of withdrawal from the World Health Organisation (WHO).
- On July 6, 2020, USA sent withdrawal notice to UN Secretary General Antonio Guterres. It would come into effect on July 6, 2021 as a member who wishes to withdraw has to give notice one year in advance.

Reasons for Withdrawal of USA from WHO:

- WHO has severely mismanaged the COVID-19 crisis which originated in China.
- WHO did not declare COVID as a public health emergency of international concern and also did not suggest travel bans on China at the early onset of COVID.

It failed to adequately obtain and vet information about the COVID-19 from China in the early stages and share the information in a timely and transparent manner with the rest of the world.

It declared COVID-19 a public health emergency of international concern very late on January 30, 2020 where as the infection was noticed on December 1, 2019.

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- As a result, COVID-19, highly contagious respiratory illness, spread rapidly across the world.
 - Had the WHO acted early on and suggested travel bans on China, the impact of COVID would have been contained.

Impact of USA Withdrawal on WHO:

- USA withdrawal from WHO will have dire consequences for global public health.
- USA is the biggest contributor to World Health Organisation.
- Annually, it contributes US \$ 400 million to WHO Budget. This is around 15 per cent of WHO annual budget.
- Halting funding at a crucial time will not only impact the functioning of the global body but also hurt the entire humanity.
- WHO has been leading fight on maladies from polio to measles to mental health - as well as COVID-19
- Many low and middle-income countries that look up to WHO for guidance and advice, and even for essentials such as testing kits and masks, will be badly hit for no fault of theirs.
- The WHO has been appealing for more than \$1 billion to fund operations against the pandemic.
- Apart from funding, the departure of the U.S. will be a significant blow to the WHO in terms of **loss of technical expertise**.

Limitation in the Working of WHO:

- WHO cannot independently investigate into pandemics.
- It can only rely on individual member-states to share information.

Impact of Withdrawal on USA:

- USA loses opportunity to play a role in strengthening the WHO.
- It will have no access to new influenza virus samples for research in future.
- With no more U.S. scientists in the WHO in key roles, including outbreak response teams like the one that visited Wuhan, it will lose access to **health intelligence**. This will compromise the country's response to international disease outbreaks.

Criticism on USA Withdrawal:

- The US administration's move to formally withdraw from WHO amid the greatest public health crisis that Americans and the world have faced in a century has been criticised as a short-sighted and dangerous decision.
- WHO is the only body capable of leading and coordinating the global response to COVID-19.
- Withdrawing from the World Health Organization amidst an unprecedented global would undermine the global effort to beat this virus and puts the safety of all Americans and the world at risk.
- The US should use its influence to strengthen and reform the WHO, not abandon it as none gains from a further weakened WHO.

About World Health Organisation:

- It is one of the specialised agencies of the United Nations set up in 1948.
- Headquarters: Geneva, Switzerland.
- It has membership of 194 countries.
- It has 150 offices around the world.
- **Funds:** WHO gets its funding from two sources 1) Assessed contributions, and 2) Voluntary contributions.

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- **Assessed contributions** are mandatory contributions which have to be paid by the 194 member countries. The amount each Member State must pay is calculated relative to the country's GDP and population.
 - **Voluntary contributions** are from member States and intergovernmental organisations, private partners like philanthropic foundations, private sector and individual donors. Wealthy countries like USA, UK, Norway, and Japan fund WHO through both Assessed contributions and Voluntary contributions.
 - Assessed contributions form around 25 per cent of overall WHO budget. The remaining is through voluntary contributions.
 - WHO Budget is approved by for a two year period by the World Health Assembly, the decision making body of WHO which consists of all WHO member states.

Top Contributors to WHO Budget (Both Assessed and Voluntary Contributions):

- US with 14.67 per cent of total contribution is the **largest funding source for the United Nations health agency**.
- The next big contributors are the Bill and Melinda Gates Foundation (9.76 per cent) and GAVI Alliance (8.39 per cent). The GAVI Alliance is a Geneva-based public-private partnership organisation to which Bill and Melinda Gates Foundation makes a sizeable contribution.
- The UK (7.79 per cent) and Germany (5.68 per cent) are the only other country after the US to make over 5 per cent of total financial budget of the WHO.
- The UN Office for the Coordination of Humanitarian Affairs (UNOCHA) is other body to make over 5 per cent contribution. The World Bank (3.42 per cent), the Rotary International (3.3 per cent), the European Commission (3.3 per cent) and Japan (2.7 per cent) are among other major contributors to the WHO's finances.
- **Contributions in Actual Amounts (2018 and 2019 Biennial Budget).** WHO budget is from January 1st to December 31st.

Country/Organisation	Contribution (in US \$ Million)
USA	851
United Kingdom	463
Bill & Melinda Gates Foundation	455
GAVI	388
Germany	358
UNOCHA	285
Japan	233
European Commission	213
Rotary International	168
National Philanthropic Trust	115

Kuwait:

Kuwait to Reduce Expat Population

- In July 2020, Kuwait's National Assembly's legal and legislative committee approved a draft expat quota bill seeking to reduce the number of foreign workers in Kuwait.
- Kuwait, an oil rich nation in the gulf, has a total population of 4.3 million.
- While Kuwaitis make up 1.3 million, 3 million are foreign workers.
- In other words, while Kuwaitis account for 30 per cent population, foreign workers account for 70 per cent population.

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- Kuwait's Prime Minister Sheikh Sabah Al Khalid Al Sabah proposed reducing the number of expats from 70% to 30% of the population gradually particularly the unskilled workers.
 - Kuwait is a wealthy country. Hence, many rich people employ unskilled foreign workers as domestic help.
 - At least 650,000 expatriates, mostly from the Philippines, India, Bangladesh and Sri Lanka, are employed as domestic workers.
 - Corona virus pandemic (COVID-19) and the slump in oil prices are being seen as the reasons for the decision to reduce expat population.
 - Foreigners have accounted for the majority of Kuwait's COVID-19 cases as the disease spread among migrant workers living in overcrowded housing.

Impact on India:

- Currently, there are around 1.4 million (14 lakh) Indians in Kuwait.
- The draft bill proposed limiting Indian workers to 15 per cent of national population (Kuwaitis).
- The Bill proposes similar quotas for other nationalities.
- If the Bill is approved, around 8 lakh Indian workers would be affected.
- Kuwait is a top source of remittances for India.
- In 2018, India received nearly \$4.8 billion from Kuwait as remittances.
- Indians are working for the Kuwaiti Government in various jobs like nurses, engineers in national oil companies and a few as scientists besides in private sector. Many Indian workers also work as domestic workers in rich Kuwait families.

ICCPR:

Article 21 of the International Covenant on Civil and Political Rights Interpreted

- On July 29, 2020, United Nations Human Rights Committee released the interpretation for Article 21 of the International Covenant on Civil and Political Rights which guarantees right to peaceful assembly.
- The development comes at a time of worldwide protests in support of the Black Lives Matter Movement and clarifies how "peaceful assembly" should be understood by the 173 countries which have ratified the Covenant.
- **Interpretation of Article 21 (Right to Peaceful Assembly) under International Covenant on Civil and Political Rights:**
- It is a "fundamental human right" for people to gather to celebrate or to air grievances in **public and in private spaces, outdoors, indoors and online.**
- Everyone, including **children, foreign nationals, women, migrant workers, asylum seekers and refugees**, can exercise the right of peaceful assembly.
- Peaceful assemblies may take many forms, including **demonstrations, protests, meetings, processions, rallies, sit-ins, candlelit vigils and flash-mobs.**
- Protesters have the right to wear masks or hoods to cover their face and that **Governments should not collect personal data to harass or intimidate participants.**
- **Right to peaceful assembly also extends to digital activities.** Governments also cannot **block internet networks or close down any website** because of their roles in organising or soliciting a peaceful assembly.
- **Journalists and human rights observers have right** to monitor and document any assembly, including violent and unlawful ones.

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- Governments could not prohibit protests by making "**generalised references to public order or public safety, or an unspecified risk of potential violence.**
 - **Any restrictions on participation in peaceful assemblies** should be based on a **differentiated or individualised assessment** of the conduct of the participants and the assembly concerned. The onus remains on the authorities to justify any such restriction **on a case-by-case basis**
 - **Blanket restrictions on peaceful assemblies** are **presumptively disproportionate.**

Significance of Article 21 interpretation:

- Government around the world use law and order as pretext to suppress even peaceful protests. They use wide discretion in imposing such restrictions.
- But, such blanket power to impose restrictions hinders the rights of people to articulate their collective interests peacefully.
- The fundamental human right of peaceful assembly enables individuals to express themselves collectively and to participate in shaping their societies.
- Peaceful assemblies can play a **critical role in allowing participants to advance ideas and aspirational goals in the public domain**, and to establish the extent of support for or opposition to those ideas and goals.
- The right of peaceful assembly is, moreover, a valuable tool that can and has been used to recognize and realize a wide range of other rights, including **economic, social and cultural rights.**
- Peaceful assembly is of particular importance to **marginalised individuals and groups.** A failure to respect and ensure the right of peaceful assembly is typically a marker of repression.
- The interpretation of UN Human Rights Committee provides guidance to countries as to rights of the protestors regarding peaceful assembly.

About UN Human Rights Committee:

- The Human Rights Committee is the body of independent experts that **monitors implementation of the International Covenant on Civil and Political Rights by its State parties.**
- All States parties are obliged to submit regular reports to the Committee on how the rights are being implemented.
- States must report initially one year after acceding to the Covenant and then whenever the Committee requests (usually every four years).
- The Committee examines each report and addresses its concerns and recommendations to the State party in the form of "concluding observations".

International Covenant on Civil and Political Rights:

- International Covenant on Civil and Political Rights came into force in 1976.
- The covenant **commits its parties to respect the civil and political rights of individuals**, including the right to life, freedom of religion, freedom of speech, freedom of assembly, electoral rights and rights to due process and a fair trial.
- 173 countries have ratified the treaty which means they are bound by the provisions of the treaty.
- India is also a party to the treaty.

UN ECOSOC:

Prime Minister Addresses UN ECOSOC Meet

- On July 17, 2020, Minister Narendra Modi delivered a keynote address virtually at the High-Level Segment of the **United Nations Economic and Social Council (ECOSOC)** session on the theme "Multilateralism after COVID19: What kind of UN do we need at the 75th anniversary".
- Prime Minister reiterated India's call for a '**reformed multilateralism**' in a **post-COVID-19 world, which reflects the realities of the contemporary world.**

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- Prime Minister recalled India's long association with the ECOSOC and the UN's developmental work, including for the **Sustainable Development Goals**. He noted that India's developmental motto of 'SabkaSaath, SabkaVikaas, Sabka Vishwas' resonates with the core SDG principle of leaving no one behind.
 - Prime Minister pointed out that India's success in improving the socio-economic indicators of its vast population has a significant impact on global SDG targets.
 - He elaborated India's ongoing development efforts, including for improving access to sanitation through the "**Swacch Bharat Abhiyan**", empowering women, ensuring financial inclusion, and expanding availability of housing and healthcare through flagship schemes such as the "**Housing for All**" programme and the "**Ayushman Bharat**" scheme.
 - Prime Minister also highlighted India's focus on environmental sustainability and bio-diversity conservation, and recalled India's leading role in the establishment of the **International Solar Alliance** and the **Coalition for Disaster Resilient Infrastructure**.
 - India also set a **target of 450 Gigawatt of renewable energy and restoring 26 million hectares of degraded land by 2030**.
 - Speaking about India's role in its region as a first responder, Prime Minister recalled the support provided by the Indian government and Indian pharma companies for ensuring medicine supplies to different countries, and for coordinating a joint response strategy among SAARC countries.

About United Nations Economic and Social Council (ECOSOC):

- The **Economic and Social Council (ECOSOC)** is one of the six main organs of the United Nations when it was founded in 1945.
(General Assembly, Security Council, Trusteeship Council, the International Court of Justice, and the UN Secretariat are the other five organs).
- Its role is to advance the three dimensions of sustainable development - **economic, social and environmental**.
- It is also responsible for the follow-up to major UN conferences and summits.
- The **Economic and Social Council** consists of 54 member countries.
- Members are elected by the General Assembly for three-year terms.
- Seats on the Council are allotted based on geographical representation with fourteen allocated to African States, eleven to Asian States, six to Eastern European States, ten to Latin American and Caribbean States, and thirteen to Western European and other States.
- India is the founding member of ECOSOC. Ramaswami Mudaliar served as the first president of ECOSOC.

SCIENCE & TECHNOLOGY

HEALTH:

Covid-19:

Serological Surveys for COVID19

- The National Centre for Disease Control, which works under the Union Health Ministry and is responsible for monitoring pandemics, conducted a district-wise serological survey (also called sero-prevalence survey) for COVID-19 across Delhi from June 27 to July 10.

What is Serological Survey?

- It is blood sample survey done to detect the presence of specific antibodies that are produced against virus.
- It is conducted to assess the prevalence of a disease in a population.

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- Antibodies are detected through **Enzyme-Linked Immunosorbent Assay (ELISA) test**.
 - ELISA test for COVID-19 was developed by pune based National Institute of Virology and approved by Indian Council of Medical Research (ICMR).
 - ICMR has transferred that test technology to Zydus Cadila, an Indian pharmaceutical company based in Ahmedabad, Gujarat, for **mass-scale production** of the ELISA test kits. The test kits have been named as COVID KAVACH ELISA test kits

Results of the Serological Tests in Delhi:

- In Delhi, serological survey was done to detect antibodies against COVID-19.
- Blood samples of 21,387 people were taken at randomly across 11 districts of Delhi.
- Findings of the Survey:
 - 23.48% of Delhi's population had been exposed to the COVID-19 virus and have developed antibodies.
 - A large number of those infected were asymptomatic.

Implications of the Serological Survey:

1. Low Fatality Rate:

COVID-19 is not as fatal as it is expected to be. The fatality rate due to COVID-19 is around 1.5 to 2 per cent. It comes down further if people with antibodies are taken into account as COVID patients. At present, only those who were confirmed through RT-PCR tests, antigen tests were counted for COVID cases.

2. More Asymptomatic People:

Many people are asymptomatic and recovered on their own without medical intervention.

3. Herd Immunity:

It is also an indicator that herd immunity is gaining among people.

The Delhi government stated that it will keep repeating these surveys at **periodic intervals to gauge the spread of the pandemic from time to time**.

Serological Surveys in Other States and Cities:

- Serological Surveys have been conducted in Mumbai, Ahmedabad.
- 57% of those tested in slums in Mumbai had been exposed to the virus and had developed antibodies.
- 16% of those tested in residential societies in Mumbai have developed antibodies for COVID-19.
- In Ahmedabad, Gujarat, 17% of the people had been exposed to the COVID virus and developed antibodies.

Additional information:

How are Serological Surveys different from RT-PCR and Antigen Tests?

- Real Time RT-PCR (reverse transcription-polymerase chain reaction) tests or Antigen tests scan for the presence of the coronavirus in the body.
- The sero-prevalence survey looks for the presence of antibodies, produced in response to the coronavirus, in the blood.
- On an average, antibodies can be detected five days after an infection sets in. The coronavirus, in general, diminishes after 21 days.

How Long Antibodies will Last ?

- Antibodies, for a host of other viral infections, are normally expected to linger for many months and confer protection against fresh infections by the same virus.
- However, it is yet to be known how long the antibodies developed against COVID-19 will last.

Airborne Transmission of COVID19

- Understanding how, when and in what types of settings COVID-19 spreads between people is critical to develop effective public health and infection prevention measures to break chains of transmission.
- So far, respiratory droplets were seen as the main source for the spread of COVID-19 from person to person either directly or indirectly. Respiratory droplets are expelled when an infected person coughs, and sneezes.

Direct Transmission:

- It spreads through respiratory droplets when a healthy person is in close contact with the infected person i.e. less than 3 feet. Respiratory droplets can reach the mouth, nose or eyes of a susceptible person and can result in infection.

Indirect Transmission:

- Respiratory droplets from infected individuals can also land on objects, creating fomites (contaminated surfaces). People can be infected by touching these surfaces and touching their eyes, nose or mouth before cleaning their hands.

Aerosol Transmission:

- In July 2020, 239 scientists from 32 countries in an open letter stated that in their collective assessment there is potential for COVID -19 virus to be airborne and it could spread through aerosols (aerosols transmission) and called the World Health Organization to revise recommendations.
- In the context of viruses, aerosols are micro droplets that are of the size of 5 microns or less.
- While aerosols of the size of more than 5 microns settle down on the ground after exhalation from an infected person, those that are 5 microns or less can be airborne.
- Aerosols can be released through exhalation, talking or coughing.

Response of World Health Organisation (WHO):

- The WHO stated that more robust evidence is needed to confirm the airborne transmission of the COVID-19 virus.
- However, it stated that airborne transmission of COVID-19 through aerosols can occur during medical procedures that generate aerosols (called aerosol generating procedures) such as chest physiotherapy, sputum induction, etc.
- In some cases, the possibility of airborne transmission exists in crowded indoor places like restaurants, Churches, etc. But, this transmission cannot be conclusively stated that as the possibility of respiratory droplet transmission cannot be ruled out. In other words, the transmission in crowded indoor places could be due to aerosol transmission as well as respiratory droplets of infected persons.

Recommendations:

- Limiting close contact between infected people and others is central to breaking chains of transmission of the virus causing COVID-19.
1. **Isolation:** The prevention of transmission is best achieved by identifying suspect cases as quickly as possible, testing, and isolating infectious cases.
 2. **Quarantine:** In addition, it is critical to identify all close contacts of infected people so that they can be quarantined to limit onward spread and break chains of transmission.

By quarantining close contacts, potential secondary cases will already be separated from others before they develop symptoms or they start shedding virus if they are infected, thus preventing the opportunity for further onward spread.

The incubation period of COVID-19, which is the time between exposure to the virus and symptom onset, is on average 5-6 days, but can be as long as 14 days. Thus, quarantine should be in place for 14 days from the last exposure to a confirmed case.

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3. **Face masks** should be used in public spaces as well as crowded indoor places as face masks can reduce the risk of transmission. Crowded places should be avoided to the extent possible.
 4. Other **preventive measures** like **frequent hand hygiene, physical distancing** should be followed.

Itolizumab Drug Approved for Emergency Use to Treat COVID19

- In July 2020, the Drug Controller General of India approved the use of Itolizumab for treating moderate to severe COVID-19 patients.
- is an existing drug used for psoriasis, a chronic skin disease involving unregulated growth of some skin cells that develop into red patches.
- The drug, developed by Bengaluru-based Biocon, was approved in 2013. It is considered safe and effective for the treatment of psoriasis.

Why Itolizumab was Approved for COVID-19 Treatment?

- The COVID-19 virus induces an overreaction of the immune system in some patients generating cytokine storms that causes severe damage to the lungs and other organs and leads to deaths.
- Itolizumab drug controls the hyper-activation of the immune system in response to COVID-19 virus and prevents morbidity and mortality related to the cytokine storm.

Randomised, Controlled Clinical Trial :

- DCGI gave approval based on the results from the conclusion of a randomised, controlled clinical trial at hospitals in Mumbai and New Delhi. The study focused on the **safety and efficacy** of Itolizumab in **preventing cardio-renal complications** in Covid-19 patients who also have acute respiratory distress. The drug has been found to **reduce these complications in such patients**.
- The clinical trial showed that the drug is best administered when the cytokine build up is starting and the patient is experiencing shortness of breath and exhibiting abnormal chest images.
- It prevents progression to the hyper inflammation phase (cytokine storm) and other complications like coagulation and organ failure
- The cost of Itolizumab is Rs.7,950per vial. Most patients need 4 vials. So the cost comes around Rs. 32,000.

Vaccines:

GAVI Launched COVAX Facility Programme

- GAVI (Global Alliance on Vaccine and Immunisation), an international public private partnership working to provide affordable vaccines to poor and developing countries, launched the COVAX Facility Programme in July 2020.

About the COVAX Facility:

- It is aimed at securing doses of Covid-19 vaccines for 92 low and middle-income countries which have per capita income of less than US \$ 4000 including India, at the same time as wealthier nations.
- These countries will have limited resources to access future Covid-19 vaccines. Without support, the majority of the world's population will continue to suffer from this disease even after vaccine is developed to tackle it.

COVAX Advance Market Commitment:

- A minimum of \$3.4 billion is estimated to procure around one billion doses by the end of 2021.
- Hence, GAVI launched COVAX Advance Market Commitment (AMC) to mobilise the required funds. 92 low and middle-income countries will also have to contribute party as Advance Market Commitment

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- Once a vaccine has been approved by regulatory agencies and prequalified by the WHO, the COVAX Facility will then purchase these vaccines and initially provide doses for an average of 20 per cent of each country's population, focusing on health care workers and the most vulnerable groups.
 - Further doses will be made available based on financing, country need, vulnerability and potential threat. A buffer of doses will also be maintained for emergency and humanitarian use.
 - Prime Minister Narendra Modi had pledged \$15-million as India's contribution.

About GAVI (Global Alliance on Vaccine and Immunisation):

- GAVI was launched in 2020 to reduce child mortality by improving access to these vaccines to children in low income countries.
- Bill & Melinda Gates Foundation played a key role in setting up GAVI.

Why was GAVI started?

- Vaccine development involves a lot of time and significant funds.
- Hence, they are costly in the initial years after entering into the market. As a result, only children in developed countries have access to them. Children in poor and developing countries were not fully covered under the vaccine programmes.
- Hence, the Bill and Melinda Gates Foundation and a group of founding partners founded the Global Alliance for Vaccines and Immunisation (GAVI).
- The aim of GAVI is to make vaccines affordable and available for all.
- For this, it aggregates the demand from all countries and enters into agreements with the vaccine manufactures for production. The cost of vaccines is reduced when they are produced on a large scale and when there are long term commitments for procurement.
- The GAVI procures these vaccines and distributes them to the poor and developing countries.
- The cost of vaccines is borne by both GAVI and the receiving countries in the initial years. Over a period of time, they should self finance their vaccination programmes as vaccine costs come down and become more affordable
- GAVI receives funding from developed countries, private sector foundations, and corporate partners. For the 2016-20 period, donors contributed US \$ 9.2 billion. The major donors are United Kingdom (2.3 billion), USA (1 billion), Bill and Melinda Gates Foundation (1.5 billion), Norway (872 Million), Germany (697 Million) and France (495 Milion).

Impact of GAVI:

- GAVI now vaccinates almost half of the world's children of the poorest countries at affordable prices.
- Because of GAVI's efforts, the cost of fully-immunising a child with all 11 WHO-recommended childhood vaccines now costs US\$ 28 in Gavi-supported countries, compared to about US\$ 1,100 in the USA.
- GAVI shares the cost developing countries pay for vaccines, which has resulted in more than 460 vaccine campaigns and dramatically boosted immunisation against virulent diseases.
- For example, in 2000, 3% of low-income countries administered the Haemophilus influenzae type b vaccine that protects against diseases like pneumonia and meningitis. Today, Gavi has enabled all low-income countries to introduce this vaccine.
- So far, 15 countries that were formerly supported by Gavi have begun to fully self-finance their national vaccination programmes.

ENVIRONMENT:***Tiger Population:*****India Home to 70 Per cent of World Tiger Population**

- An updated report on the India's Tiger Survey 2018 was released on July 29, 2020 on the occasion of Global Tiger Day.
- India's tiger population now stands at 2967.
- India is home to 70 per cent of the world's tiger population.
- 30 per cent of the tiger population in India lives outside tiger reserves. India has 50 tiger reserves.
- Madhya Pradesh has the highest number of tigers at 526, closely followed by Karnataka (524) and Uttarakhand (442).
- Chhattisgarh and Mizoram saw a decline in tiger population

About Global Tiger Day:

- By 2010, the number of wild tigers in the world had dropped to an all time low of 3,200 and reduced to just 5% of their historical range. Hence, their conservation of this endangered species became important.
- The Global Tiger Day (July 29th every year) was founded in 2010 by 13 tiger range countries: Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Russia, Thailand and Vietnam.
- These 13 countries also resolved to double the wild tiger population by 2022.
- India has achieved its target of doubling the number of tigers. Their number increased from 1411 in 2010 to 2967 in 2018, two years before the committed date of 2022.

Why Tiger should be conserved?

- The tiger plays a pivotal role in the health and diversity of forest ecosystem.
- Being the dominant predators of the ecosystem, tigers ensure that the numbers of herbivores like deer, wild boar, water buffalo, blue bull, etc are kept balanced.
- A steep fall in tiger population could lead to a rise in herbivore population. This would potentially destroy forests as these herbivores consume the trees and plants. Forests have a huge role to play in preserving ecosystem services clean air, water, pollination, temperature regulation etc
- In India, tigers inhabit a wide variety of habitats ranging from the high mountains, mangrove swamps, tall grasslands, to dry and moist deciduous forests, as well as evergreen and shola forest systems. By virtue of this, tiger is not only a conservation icon but also acts as an umbrella species for majority of eco-regions in the Indian subcontinent.

Project Tiger:

- Realising the significance of tiger conservation, Government of India started 'Project Tiger' in 1973.
- Under the 'Project Tiger' initiative, the number of tiger reserves has been increased from 9 to 50 tiger reserves at present. These cover 2.2 per cent of India's geographical area.

What measures contributed to the increase in number of Tigers?

- Increase in the number of tiger reserves. The number of tiger reserves was 18 in 2006. By 2018, these went up to 50.
- Greater vigilance by forest officials to check poaching (illegal killing) of tigers. They are killed for their skin, meat, bones, teeth, and claws.

Skin, teeth, claws are used as status symbols. Bones are used in traditional medicine in countries like China. Meat is consumed.

Are Tigers a Threat to Humans?

- Tigers have occasionally been known to kill and eat people, too.
- This usually only happens when a tiger is old, ill or injured, and therefore unable to catch their normal prey.
- But once a tiger has a taste for human meat, they have to be killed to protect the local people.

Turtle Conservation:

KURMA, a Mobile App for Turtle Conservation

- KURMA, a mobile application, has been developed by the Indian Turtle Conservation Action Network (ITCAN) in collaboration with the Turtle Survival Alliance-India and Wildlife Conservation Society-India.
- Indian Turtle Conservation Action Network (ITCAN) has been launched by group of leading turtle conservation activists.
- India has a rich turtle biodiversity. But, illegal trade and habitat degradation threaten turtles across the country.
- KURMA App provides users the database to identify a species and also location of the nearest rescue centre for turtles across the country.
- Information about 29 **species of freshwater turtles and tortoises of India**, distribution, vernacular names, and threats are provided in the App.
- Wildlife enthusiasts can now help scientists and conservationists by updating photos and information on turtles on the Kurma mobile application.
- The application is available on both Android and iOS platforms.

Trafficking:

- Tortoise and freshwater turtles are among the most trafficked in the country.
- (Tortoise and turtles belong to the same order Testudines i.e. reptiles having bodies encased in a bony shell. The major difference is while tortoise are land based, turtles are sea based. Tortoises are generally vegetarians, while turtles are omnivorous.)
- A report released in 2019 by TRAFFIC, an international wildlife trade monitoring organisation, showed that at least 200 tortoises and freshwater turtles fall prey to illicit poaching and smuggling every week, or 11,000 each year.
- Sea turtles continue to be harvested unsustainably both for human consumption and trade of their parts.
- Turtle meat and eggs are a source of food and income for many people around the world.
- Some also kill turtles for medicine and religious ceremonies.
- Killing of turtles for both domestic and international markets continues as well.
- International trade in all sea turtle species and their parts is prohibited under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), a global agreement among governments to regulate or ban international trade in species under threat.
- Still, illegal trafficking persists.

Turtle Species in India:

- There are five species in Indian waters - Leatherback, Loggerhead, Hawksbill, Green and Olive Ridley.
- In India, though sea turtles are protected under the Indian Wildlife Protection Act of 1972, under the Schedule I Part II, they face grave threats. Bycatch is one such example, which is the name given to ocean animals that are unintentionally caught by fishing gear.

Breeding Season:

- The turtle breeding season is usually between November and December.
- In Tamil Nadu, for example, the Olive Ridley nests between December and April along the Chennai-Kancheepuram coastline.
- The eastern coastline is the feeding area for Olive Ridley, juvenile Hawksbills and Green turtles.

Role in Marine Ecosystem:

- Sea turtles, especially the leatherback, keep jellyfish under control, thereby helping to maintain healthy fish stocks in the oceans.
- The Green turtle feeds on sea grass beds and by cropping the grass provide a nursery for numerous species of fish, shellfish and crustaceans.
- The Hawksbill feeds on sponges in the reef ecosystem and opens up crevices for other marine life to live in.
- Turtles are also transporters of nutrients and energy to coastal areas.

Other Threats to Turtles:**Habitat Loss:**

- Sea turtles are dependent on beaches for nesting.
- Uncontrolled coastal development, vehicle traffic on beaches, and other human activities have directly destroyed or disturbed sea turtle nesting beaches around the world.
- For example, lights from roads and buildings disorient hatchlings away from the sea, and vehicle traffic on beaches compacts the sand, making it impossible for female turtles to dig nests.
- Turtle feeding grounds such as coral reefs and seagrass beds are damaged and destroyed by activities onshore, including sedimentation from clearing of land and nutrient run-off from agriculture.

Pollution:

- Sea turtles can mistake floating plastic materials for jellyfish and can choke on them when they try to eat them. These encounters are often fatal.

Woolly Whitefly Pests:**Controlling Woolly Whitefly Pests Through Natural Predators**

- According to the Indian Council of Agricultural Research (ICAR), pests (harmful insects) damage 30-35% of crops in the country annually.
- 118 exotic and invasive pests are troubling farmers in India. Exotic pests are those which are native to the region. Exotic and invasive species are two types of non-native species. Exotic species is harmless to the ecosystem whereas invasive species is harmful to the ecosystem.
- The woolly whitefly pest, which is an exotic and invasive pest, has become a major concern for fruit growers in India.
- It is found across the warmer parts of the world. It was first found in Jamaica in 1896 and later in Florida, U.S. in 1909.
- This woolly whitefly is invasive (harmful to crops and ecosystem) and polyphagous i.e. feeds on various kinds of food.
- Woolly whitefly has been found to attack some 20 plant families in India, exhibiting a strong preference for guava.

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- In 2019, **National Bureau of Agricultural Insect Resources in Bengaluru** had reported the spread of the woolly whitefly pest from the Caribbean island through transportation of infested seedlings.
 - In 2020, woolly whitefly was found in **guava plantations** in Kozhikode district of Kerala, Ramanagara, Mandya and Bengaluru Rural districts of Karnataka and Coimbatore district of Tamil Nadu.

Controlling Woolly Whitefly Pests:

- Management of invasive pests like woolly whitefly is crucial for India's farm economy, but it is important to employ economically viable and environmentally sound measures. So the scientists focussed on native predators for natural control of the woolly whiteflies.
- A team of entomologists (scientists who study insects) from the Centre for Plant Protection Studies at the Coimbatore-based Tamil Nadu Agricultural University identified three indigenous insects which can control the woolly whitefly pests by eating them.
- Two of these **indigenous natural predators** were **ladybird beetles** of the Coccinellidae family and one was the **green lacewing fly** from the Neuroptera order.
- These insects having four life stages - egg, grub, pupa and adult- complete their life cycle in 30-40 days. These insects fed on the woolly whiteflies during the active grub stage for 10-12 days, devouring more of the flies as they grew.
- A tiny predator can eat 200-300 woolly whiteflies throughout its growing stage.
- Scientists are making an attempt to **mass multiply these insects for controlling the dominance of the invasive woolly whitefly pest.**

Lichen Park:

India's First Lichen Park Opened in Uttarakhand

- Uttarakhand developed "the country's first lichen park" in Munsiyari in Pithoragarh district.

What is Lichen?

- Lichen appears like a plant but it is **not a single organism**. It is a **composite organism** i.e. two organisms function as a single, stable unit. Lichens comprise a fungus living in a symbiotic relationship with an alga or cyanobacterium . The dominant partner is the fungus, which gives the lichen the majority of its characteristics
- But, fungi are incapable of photosynthesis because they lack the green pigment chlorophyll. On the other hand, algae and cyanobacteria can conduct photosynthesis, similar to plants. Together, they form lichen. Fungi forms a protective shell with pigments that absorb ultraviolet light.
- Lichens live on many surfaces which provided them space to grow like **trees, rocks, soil, houses, etc.**
- Lichens absorb most of their mineral nutrients from the air and rainfall.
- They reproduce both sexually and asexually.
- There are about 20,000 species of lichen worldwide.
- India is home to 2714 of the lichen species. Uttarakhand is home to more than 600 species of lichens.

Uses of Lichens:

- These are used in preparation of perfumes, sunscreen creams, dyes and some medicines.
- It is also used an ingredient in Hyderabadi Biryani.

Pied Cuckoo:

Migratory Pattern of 'Pied Cuckoo' To Be Studied

- The Wildlife Institute of India (WII), along with the Indian Institute of Remote Sensing (IIRS) and the Government of India's Department of Biotechnology, began a study of the migration of **the pied cuckoo from Africa to India and back**, by tagging two of the birds with satellite transmitters.

About Pied Cuckoo:

- It is a small migratory bird found in Africa and India.
- It is also a brood parasite in that it does not make its own nest and instead lays its egg in the nest of other birds, particularly the Jungle Babbler.
- There are three subspecies of the Pied Cuckoo.
- One is resident in Africa while another is resident in South India.
- The third is a migratory bird moving between India and Africa. It moves to India during the summer.
- The arrival of the pied cuckoos in the Himalayan foothills has traditionally been seen as heralding the onset of the monsoon.

Tracking Migration:

- Scientists want to find out the migratory pattern of the pied cuckoo from Africa to India and back.
- These birds have high site fidelity i.e. they come back to the same location year after year.
- Being a small, terrestrial bird, a sea crossing holds a lot of risk for this cuckoo.
- Before it migrates back to its home in the southern African region, by flying over the Arabian Sea and the Indian Ocean, it must be stopping somewhere. Scientists want to find out these stopovers.
- In the long term, the scientists hope to **find out how the birds respond to climatic variation**.
- On July 12 and July 14, 2020, two Pied Cuckoos were captured in the agricultural fields near the WII campus in Dehradun and fitted with a 2-gram tag, with permits from the Uttarakhand State Forest Department. The cuckoos were named Megh, meaning cloud and Chatak.
- Adult cuckoos weigh between 65 to 75 grams and so any tracking device to be put on them needs to be really very small or the thumb rule is it has to be less than three per cent of the body weight. Hence, scientists got 2-gram transmitter, a solar powered one, from a US-based firm, Microwave Telemetry Inc USA and fitted on the birds.
- Signals from Megh and Chatak have been coming in regularly, and the birds are moving around the site they were captured. The two cuckoos, Megh and Chatak are expected to stay in the Doon valley till the end of the monsoon season and start their southbound migration in late September 2020.

Indian Bioresource Information Portal:

- The Pied Cuckoo migration study is part of a larger project - **Indian Bioresource Information portal (IBIN)** funded by the Department of Biotechnology, under the Union Ministry of Science and Technology, that aims to deliver relevant bioresources (plant, animal and other biological organisms) information of India through a web portal.

Mausam App:

Ministry of Earth Sciences Launches Mobile App "Mausam"

- On July 27, 2020, Ministry of Earth Sciences launched Mobile App "Mausam", a dedicated Mobile App designed to communicate the weather information and forecasts in a lucid manner without technical jargons to the general public.
- This mobile app is available both on Playstore and Appstore.
- Users can access observed weather, forecasts, radar images and be proactively warned of impending weather events.

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- The MAUSAM mobile App has the following 5 services:

Current Weather:

- Current temperature, humidity, wind speed and direction for 200 cities updated 8 times a day. Information on Sunrise/ sunset and moonrise/ moonset are also given.

Nowcast:

- Three hourly warnings of localized weather phenomena and their intensity issued for about 800 stations, and districts of India by State Meteorological Centres of IMD. In case of severe weather, its impact also is included in the warning.

City Forecast:

- Past 24 hours and 7 day forecast of weather conditions around 450 cities in India.

Warnings:

- Alerts would be issued twice a day for all districts for the next five days in colour code (Red, Orange and Yellow) to warn citizens of approaching dangerous weather.
- The colour code Red is the most severe category urging authorities to take action, Orange code prompts authorities and public to be alert and Yellow code prompts authorities and public to keep themselves updated.

Radar Weather products:

- Latest Station wise radar products would be updated every 10 minutes. These are weather surveillance products that show information regarding location of precipitation, its type (rain, snow, and ice) and its recent movement.
- The mobile app has been designed and developed jointly by ICRISAT's Digital Agriculture & Youth (DAY) team, Indian Institute of Tropical Meteorology (IITM), Pune and India Meteorological Department.

DEFENCE:

Rafales:

Five Rafale Fighter Jets Arrive in India

- The first five of 36 Rafale fighter jets landed in India on July 29, 2020. The delivery of all 36 aircraft will be completed on schedule by the end of 2021.
- Rafale jet is a **multi-role aircraft**, capable of carrying out long-range missions, including highly accurate sea and ground attacks.
- Its multi role capabilities include electronic warfare, air defence, ground support and in-depth strikes,
- It travels at a top speed of 1.8 Mach. Its maximum takeoff weight is 24.5 tonnes.
- **Rafale** fighter jet with full fuel tank and fully loaded combat weapons can travel up to 3,200-3,700 km.

Rs. 59,000-crore Deal:

- The NDA government had signed a Rs. 59,000-crore deal in September 2016 to procure 36 Rafale jets from French aerospace major Dassault Aviation.
- Rafales are India's first major acquisition of fighter planes in 23 year after the Sukhoi jets were imported from Russia.
- Rafale jets have an undisputed track record and considered one of the most potent combat jets globally.
- The Rafale jets are known for air-superiority and precision strikes. They are combat proven, having been used by the French Air Force for its missions in Afghanistan, Libya and Mali. It has also been used for missions in Central African Republic, Iraq and Syria.

Weapons in the Rafale Fighter Jet:

- The Rafale aircraft is capable of carrying a range of potent weapons.
- Apart from the **HAMMER missiles**, the Rafale aircraft will also be armed with beyond-visual range missiles like **Meteor, SCALP, and MICA**, increasing their ability to take on incoming targets from a distance.

Meteor:

- It is the **next generation of Beyond Visual Range air-to-air missile (BVRAAM) designed to revolutionise air-to-air combat.**
- Guided by an advanced active radar seeker, Meteor provides all-weather capability to engage a wide variety of targets from fast jets to small unmanned aerial vehicles and cruise missiles.
- The 190-kg missile has a Beyond Visual Range (BVR) of over 100 km, travelling at a top speed of Mach 4. The F16 jets, used by Pakistan, carry the Advanced Medium-Range Air-to-Air Missile AMRAAM missile, which has a Beyond Visual Range (BVR) of 75 km. Rafale can also outperform F16 in dogfights.

SCALP Cruise Missile:

- It is an **air-to-ground cruise missile** with a range over 300 km. It is a **long-range deep strike missile.**

MICA Missile:

- It is an **air-to-air missile** on Rafale is for both, close-quarter dogfights, and for Beyond Visual Range (BVR).

Hammer (Highly Agile Modular Munition Extended Range):

- It is an **air-to-ground precision guided missile** produced by French defence company, Safran. It can be used against bunker-type hardened targets within the range of 70 km.

Background and Additional Information:

- India began the process to buy a fleet of 126 Medium Multi-Role Combat Aircraft (MMRCA) in 2007 after the defence ministry, headed then by AK Antony, cleared the proposal from the IAF.
- The contenders for the mega deal were Lockheed Martin's F-16s, Eurofighter Typhoon, Russia's MiG-35, Sweden's Gripen, Boeing's F/A-18s and Dassault Aviation's Rafale.
- After a long-drawn process, bids were opened in December 2012 and Dassault Aviation emerged as L-1 (lowest bidder). In the original proposal, 18 planes were to be manufactured in France and 108 in India in collaboration with the Hindustan Aeronautics Ltd.
- There were lengthy negotiations between the then UPA government and Dassault on prices and transfer of technology. The final negotiations continued till early 2014 but the deal could not go through.
- The NDA government had inked a Rs. 59,000-crore deal on September 23, 2016 to procure 36 Rafale jets from French aerospace major Dassault Aviation.
- The emergency acquisition was made primarily to check the depleting combat capability of the IAF as the number of its fighter squadrons had come down to a worrying 31 against the authorised strength of at least 42. Each squadron consists of 18 fighter jets.
- The first squadron of the Rafale aircraft will be stationed at Ambala air force station, considered one of the most strategically located bases of the IAF. The Indo-Pak border is around 220 km from there.
- The second squadron of Rafale will be stationed at Hasimara base in West Bengal.
- The IAF spent around Rs. 400 crore to develop required infrastructure like shelters, hangars and maintenance facilities at the two bases.

Other Fighter Jets with India:

- Apart from Rafales, India at present has following fighter jets.
- **SU-30 MKI:** Multi-role fighter jet purchased from Russia
- **Mirage-2000:** Multi-role fighter jet purchased from France
- **MIG-29; MIG 27; MIG-21Bison:** Purchased from Russia
- **Jaguar:** Purchased from Anglo-French company. It was jointly developed and manufactured by Breguet of France (now part of Dassault) and the UK-based British Aircraft Corporation (BAC).

Defence Purchases:

Defence Acquisition Council Approves Purchases Worth Rs. 38,900 Crore

- In July 2020, the Defence Acquisition Council (DAC) meeting chaired by Defence Minister Rajnath Singh approved procurement proposals worth around Rs. 38,900 crore for various platforms and equipment required by the Armed Forces.
- These approvals **include acquisitions worth Rs. 31,130 crore from Indian entities** which will be manufactured in India, involving the domestic defence industry, with participation from several Micro, Small and Medium Enterprises (MSMEs) as prime vendors.
- This has been made possible due to transfer of technology by the **Defence Research and Development Organisation (DRDO)** to the indigenous industry such as Pinaka missiles, long range land attack cruise missile (LRLACM) systems and Astra missiles for the Navy and the Air Force.
- The acquisition of new and additional missile systems will add to the fire power of the three armed services.
- While the acquisition of Pinaka missile systems will enable raising additional regiments over and above the ones already inducted, the addition of LRLACM systems with a firing range of 1,000 km to the existing arsenal will bolster the attack capabilities of the Navy and the Air Force.
- Similarly, the induction of Astra missiles with beyond-visual-range capability will serve as a force multiplier and immensely add to the strike capability of the Navy and Air Force.

Procurement and upgradation of MIG-29:

- Further, addressing the long felt need of the Air Force to increase its fighter squadrons, the Defence Acquisition Council (DAC) has approved a proposal to procure 21 MIG-29 along with upgradation of the existing 59 Mig-29 aircraft.
- DAC has also cleared the procurement of 12 Su-30 MKI aircraft.
- While the MIG-29 procurement and upgradation from Russia is estimated to cost ₹7,418 crore, the Su-30 MKI will be procured from Hindustan Aeronautics Limited (HAL) at an estimated cost of Rs. 10,730 crore.

Dhruvastra:

'Dhruvastra', Indigenous Anti-tank Guided Missile, Successfully Test-fired

- India successfully conducted three flight tests of its **indigenously developed anti-tank guided missile "Dhruvastra"** from the Integrated Test Range at Chandipur in Odisha in July 2020.
- It is developed by the Defence Research and Development Organisation (DRDO).
- It is helicopter-launched anti-tank guided missile (ATGM) and one of the most advanced anti-tank weapons in the world.
- The primary purpose of antitank guided missiles (ATGMs), which can be both medium and long-range, is to destroy armoured vehicles including tanks.

DISASTER MANAGEMENT:***NDRF:*****Individual Contributions to NDRF Allowed**

- In July 2020, the Union Finance Ministry gave approval to a proposal by the Union Home Secretary to **allow individuals and institutions to contribute directly to the National Disaster Relief Fund (NDRF).**

Background:

- Many RTI activists expressed concerns about donations sent to the PM CARES Fund or the Prime Minister's National Relief Fund, as they are not public authorities subject to questions under the Right to Information Act.
- The National Disaster Relief Fund (NDRF) was set up in accordance with Section 46 of the Disaster Management Act, 2005. The Central Government contributes money to this Fund. It is meant to "meet the expenses for emergency response, relief and rehabilitation" for any threatening disaster situation.
- Section 46 also includes a clause which provides for receiving grants by any person or institution. But, provisions for such donations had not been made by the Government.
- Over the last two months, RTI activist Lokesh Batra wrote to the Home and Finance Ministries demanding that such provisions be created.
- If citizens contribute to National Disaster Relief Fund (NDRF), the amount spent would be audited by Comptroller and Auditor General (CAG).
- Citizens can also keep watch to ensure the money is spent judiciously through RTI Act.

SPACE:***Perseverance Rover:*****NASA Launches 'Perseverance' Rover to Mars**

- On July 30, 2020, NASA (National Aeronautics and Space Administration) of USA launched the most sophisticated rover ever to Mars planet named 'Perseverance' as part of its Mars Exploration Programme with Atlas V rocket from Cape Canaveral Air Force Station in Florida.
- The rover is a six wheeled robot and weighs about 1040 kilograms. It is equipped with 25 cameras, a pair of microphones, drills and lasers. It is also equipped with a small helicopter called '**Ingenuity**' that will attempt to fly - a first on another planet
- The rover would land on the **Jezero Crater** on Mars on after a journey of seven months on February 18, 2021.
- The Jezero Crater was selected for its diverse geology; boulders, cliffs, dunes and possibly rocks bearing signs of microbes from what was once a lake more than 3 billion years ago.

The rover has four main objectives:

- Looking for signs of ancient microbial life,
- knowing about the geology and climate of Mars planet,
- collecting the rock sediments of the planet, and
- test oxygen production for future human exploration.
- The rover has MOXIE (Mars Oxygen In-Situ Resource Utilization Experiment) instrument.
- It is designed to demonstrate the possibility of converting Martian carbon dioxide into oxygen.

Other Rovers on Mars:

- Two other NASA landers are also operating on Mars - **2018's InSight and 2012's Curiosity rover.**

Six other spacecraft are exploring the planet from orbit: three from the U.S., two from Europe and one from India.

Tianwen 1:

China Launches Its Mars Mission 'Tianwen 1'

- On July 23, 2020, China successfully launched its first Mars probe, aiming to complete **orbiting, landing and roving in a single mission.**
- The Chinese Mars probe has been named **Tianwen 1 (Quest for Heavenly Truth 1)**, will fulfil three scientific objectives:
 - a) orbiting the red planet for comprehensive observation,
 - b) landing on Martian soil, and
 - c) sending a rover to roam the landing site.
- The orbiter would arrive in orbit around the Mars planet in February 2021 after seven month journey.
- The rover will conduct scientific investigations into the planet's soil, geological structure, environment, atmosphere and water. The rover has six wheels and four solar panels and carries six scientific instruments. It weighs over 200 kilogrammes and will work for about three months on the planet.
- **Scientific objectives** of Tianwen-1 include
 - mapping the morphology and geological structure,
 - investigating the surface soil characteristics and water-ice distribution,
 - analysing the surface material composition,
 - measuring the ionosphere and the characteristics of the Martian climate and environment at the surface, and
 - knowing the physical fields (electromagnetic, gravitational) and internal structure of Mars.

A major Breakthrough for China if Mission is Successful:

- If this triple task expedition (orbit, land and release of the rover) is successful, it would be a major scientific breakthrough for China. No planetary missions have ever been implemented all the three. NASA sent multiple orbiters to Mars before ever attempting a landing. Pulling off the landing is a far more difficult task.

China Aims to Catch up with US, Russia, EU and India:

- China aims to catch up with India, the US, Russia and the European Union to reach the Mars planet.
- The US, Russia, India and the EU have succeeded in sending missions to Mars regarded as the most complex space mission.
- India became the first Asian country to have successfully launched its Mars orbiter mission Mangalyaan which entered the orbit of the red planet in 2014. India also became the first country to have entered the Martian orbit in its first attempt.
- China's previous attempt to send an exploratory probe to Mars called Yinghuo-1, in a Russian spacecraft in 2011 failed as shortly after the launch it was declared lost.
- The China National Space Agency (CNSA) stated that all of China's planetary exploration missions in the future will be named on Tianwen series, signifying the Chinese nation's perseverance in pursuing truth and science and exploring nature and the universe.

Three Mission to Mars:

- In July 2020, three missions have been launched to Mars (by China, UAE and USA).
- The opportunity to fly between Earth and Mars comes around only once every 26 months when the planets are on the same side of the sun and about as close as they can get.

Hope Probe:

United Arab Emirates Launches First Mission 'Hope Probe' to Mars

- The United Arab Emirates launches its first mission to Mars planet with orbiter Amal (Hope Probe) from Japan's Tanegashima Space Center on Japan on July 20, 2020.
- The Hope Probe is the **Arab world's first interplanetary mission.**
- Mitsubishi Heavy Industries of Japan provided the rocket for the Hope Probe.
- It would take 7 months for the orbiter to reach the Mars. It will travel 493 million kilometres to reach Mars
- After reaching Mars, the orbiter will orbit the Mars planet for one full Martian year (687 days) to collect the data about atmosphere in Mars.
- It will send data on daily and seasonal changes in the atmosphere in Mars.
- The mission has cost the UAE around US \$ 200 million.
- The UAE, an oil rich nation, is making efforts to diversify from oil economy. Mars mission aims to build scientific capabilities in the country.
- The UAE first announced plans for the Mars mission in 2014 and launched a National Space Programme in 2017 to develop local expertise.
- It has an ambitious plan for a Mars settlement by 2117.
- Hazza al-Mansouri became the first Emirati in space last September when he flew to the International Space Station.

RC REDDY IAS STUDY CIRCLE

Questions for Practice:

Mains Practice Question:

1. Implementation of police reforms as per the Supreme Court judgement in the Prakash Singh Vs Union of India case would break the politician-criminal-police nexus and ensure professionalism in the working of the police. Discuss.
2. What is Plea bargaining. Explain the reasons for its introduction and its advantages.
3. Elaborate the role of GAVI (Global Alliance on Vaccine and Immunisation) in making vaccines affordable for low income countries like India.
4. The National Education Policy 2020 advocated restructuring of 10+2 school education system into 5+3+3+4 pattern. Enumerate the reasons and its benefits.
5. Explain the need for and objective of National Mission on Foundational Literacy and Numeracy advocated by National Education Policy 2020?
6. Explain the significance of Early Childhood Care and Education and the need for its universalisation.
7. Comment on the reforms suggested by the National Education Policy 2020 regarding reforms in assessment of learning outcomes in school education.
8. What are serological surveys? What are its advantages and limitations?

Prelims Practice Questions:

1. Prime Minister's Awards for Excellence in Public Administration are recommended by
 - a) Prime Minister's Office (PMO)
 - b) Empowered Committee headed by Cabinet Secretary
 - c) NITI Aayog
 - d) Ministry of Personnel.
2. In which of the following categories, Prime Minister's Awards for Excellence in Public Administration are given
 1. Aspirational Districts Programme
 2. Clean Ganga Mission
 3. Improving Service Delivery and Redressal of Public Grievances
 4. Promoting peoples participation in Swachh Bharat Mission

Choose the correct answer using codes given below.

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

3. Consider the following statements regarding sources of funding for World Health Organisation (WHO).
 1. WHO gets its entire funding through Assessed Contributions from member states.
 2. United States is the largest fund contributor to WHO.

Which of the above statements is/or correct?

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

-
4. Consider the following statements regarding UN Economic and Social and Council (ECOSOC)
1. It is a specialised agency of the United Nations set up in 1966.
 2. Its role is to advance the three dimensions of sustainable development - economic, social and environmental.
 3. It consists of 54 member countries.

Which of the above statements is/or correct?

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

5. Article 21 of the International Covenant on Civil and Political Right deals with

- a) Right to freedom of expression
- b) Basic Human Rights
- c) Right to peaceful assembly
- d) Right to universal primary education

6. Consider the following statements.

1. US is India's largest trading partner
2. India has trade deficit with US
3. India has trade surplus with China

Which of the above statements is/or correct?

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

7. Which of the following tests is conducted for COVID-19 Serological survey?

- a) Real Time RT-PCR (reverse transcription-polymerase chain reaction) tests
- b) Rapid Antigen Tests
- c) Enzyme-Linked Immunosorbent Assay (ELISA) test.
- d) None of the Above

8. Serological surveys are conducted during pandemics to

- a) Know the percentage of people with herd immunity
- b) develop relevant vaccine for the virus
- c) to quarantine the close contacts of infected persons
- d) gauge the spread of pandemic from time to time

9. Why tiger species should be conserved.

- 1) It plays a pivotal role in the health and diversity of forest ecosystem.
- 2) It provides protection to the herbivores deer, wild boar, water buffalo, and blue bull.

Choose the correct answer using codes given below.

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

10. In India, Tiger habitats are found in

1. High mountains
2. Mangrove swamps

-
3. Tall grasslands
 4. Dry and moist deciduous forests
 5. Evergreen and shola forest systems

Choose the correct answer using codes given below.

- a) 1, 4, 5 b) 2, 3, 4, 5
c) 1, 2, 3, 4, 5 d) 3, 4, 5

11. Perseverance, InSight and Curiosity are

- a) Scientific instruments sent by European space agency to International Space Station
- b) Names of the recently discovered stars
- c) Rovers sent by NASA to Mars Planet
- d) Orbiters launched by France on Moon

12. Consider the following which were in news recently.

1. Perseverance : Rover sent to International Space Station
2. Hope Probe : United Arab Emirates first mission to Mars planet
3. Tianwen 1 : China's second mission to Moon

Choose the correct answer using the codes given below.

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

13. Consider the following statements which were in news recently.

- 1) KURMA is a Mobile App developed for turtle conservation in India
- 2) Mausam is a Mobile App designed to communicate the weather information and forecasts in a lucid manner without technical jargons to the general public by Ministry of Science and Technology.

Choose the correct answer using codes given below.

- a) 1 Only b) 2 Only
c) Both 1 and 2 d) Neither 1 Nor 2

14. The National Disaster Relief Fund (NDRF) consists of funds contributed by

1. Government of India
2. Individuals and Organisations.

Choose the correct answer using codes given below.

- a) 1 Only b) 2 Only
c) Both 1 and 2 d) Neither 1 Nor 2

15. Which of the following is correctly matched

1. Woolly whitefly : Invasive pest
2. Pied Cuckoo : A composite organism of Fungi and Algae
3. Lichens : Migratory Birds

Choose the correct answer using codes given below.

- a) 1 Only b) 1 and 3
c) 2 Only d) 2 and 3

MISCELLANEOUS (PERSONS, AWARDS, SPORTS)

INTERNATIONAL PERSONS

John Lewis (80), Member of US House of Representatives and Civil Rights icon, died on July 17, 2020. Mr. Lewis was a valiant stalwart of the civil rights movement and the last surviving speaker at the historic 'March on Washington for Jobs and Freedom' in 1963. He remained an advocate for civil rights through the end of his life.

Lewis was awarded the Presidential Medal of Freedom by Mr. Obama in 2011. He wrote a graphic novel, "March," about his life and the civil rights movement in 2013. Its sequel, "Run," was published in 2018.

Najib Abdul Razak, Malaysia's former Prime Minister, was sentenced to 12 years in jail and a \$49-million fine for money laundering, criminal breach of trust and abuse of power on July 28, 2020.

Mr. Najib Razak set up '1 Malaysia Development Berhad (1MDB)', a sovereign wealth fund in 2009 with revenues were from oil exports. An amount of US \$ 700 million was siphoned off into private accounts owned by Najib Razak.

Najib served as the 6th prime minister of Malaysia from April 2019 to May 2018. He is the son of former Prime Minister Abul Razak Hussein.

Zindzi Mandela (59), daughter of former South African President and liberation hero Nelson Mandela, died on July 13, 2020 in Johannesburg. Ms. Zindzi served as South Africa's Ambassador to Denmark.

Zindzi Mandela, the youngest daughter of anti-apartheid activist Winnie Madikizela-Mandela and Nelson Mandela, rose to international prominence when she read out Nelson Mandela's rejection of then-President P.W. Botha's offer of a conditional release from prison in 1985.

Ennio Morricone (91), Italian music composer who won the Oscar Lifetime Achievement Award in 2007, passed away on July 6, 2020.

During a career that spanned decades, Morricone collaborated with some of the most renowned Italian and Hollywood directors, in movies including 'The Untouchables' by Brian de Palma, "The Hateful Eight" by Quentin Tarantino and 'The Battle of Algiers' by Gillo Pontecorvo.

Olivia de Havilland (104), two time Oscar winning actress, passed away in Paris on July 26, 2020. She starred in blockbusters like The Heiress, Gone with the Wind, The Adventure of Robinhood, To Each His Own, etc. She won the Oscar awards for two films: To Each His Own (1946) and The Heiress (1949).

NATIONAL PERSONS

C.S. Seshadri (88), one of the leaders of Indian mathematics in the post-Independence era, passed away in Chennai on July 17, 2020. He was widely considered a leader in algebraic geometry.

He played a key role in shaping the Mumbai's Tata Institute of Fundamental Research (TIFR) School of Mathematics into a premier institute, and also founded the Chennai Mathematical Institute, where he remained Director-Emeritus until his death. Seshadri was awarded the Padma Bhushan in 2009.

Lalji Tandon (85), Madhya Pradesh Governor, passed away on July 21, 2020 in Lucknow.

Lalji Tandon began his political journey as a member of the Legislative Council, went on to become a minister and then Member of Parliament before he was appointed Governor in Bihar and then Madhya Pradesh.

U. Sambasiva Rao (70), well-known poet, writer, activist and intellectual from the Leftist-Ambedkarite school of thought who was popular by his pen name Usa, passed away in Hyderabad due to COVID-19 on July 25, 2020.

He was a member of Democratic Students Organisation, and later became a full time member of Unity Centre of Communist Revolutionaries of India (Marxist-Leninist) of which Communist stalwart Tarimela Nagi Reddy was an important functionary.

Saroj Khan (71), renowned choreographer of Hindi films, passed away due to cardiac arrest in Mumbai on July 3, 2020.

In a career spanning four decades, Khan choreographed nearly 2000 songs. She was a recipient of three National Awards for films Devdas, Jab We Met and Srirangam (Tamil). She also won Filmfare Awards for movies like Hum Dil De Chuke Sanam, Guru, Khalnayak and Chaalbaaz. Her last film was Kalank (2019).

Jagdeep (81), veteran bollywood actor known for his work in films such as Sholay, Andaz Apna Apna and Purana Mandir, passed away on July 8, 2020. He worked in over 400 films.

SPORTS PERSONS

Everton Weekes (95), West Indies legendary batsman, the last of the famed 'Three Ws' of West Indies cricket, passed away on July 1, 2020 in Bridgetown, Barbados. Alongside Sir Clyde Walcott and Sir Frank Worrell, Weekes formed a formidable batting unit in the West Indies team.

Weekes played 48 Tests between 1948 and 1958, scoring 4,455 runs at an average of 58.61. His highest Test score was 207. He made 15 centuries including five in an extraordinary sequence that remains a record today.

Lin Dan (37), China's two-time Olympic champion and arguably the greatest ever badminton player, announced his retirement on July 4, 2020. He won gold at the Beijing 2008 and London 2012 Games. He also won five world championships' gold medals.

Shashank Manohar formally stepped down as International Cricket Council (ICC) chairman after heading the sport's global governing body for four years on July 1, 2020. Singapore's Imran Khwaja has been elevated as interim chairman until the process for the next chairman's election is finalised.

NATIONAL AWARDS

Mahalanobis National Award:

Former Reserve Bank of India Governor **C. Rangarajan** has been conferred the **first 'P.C. Mahalanobis National Award for Lifetime Achievement'** in recognition of his contribution to official statistics. Dr. Rangarajan was given the award on June 29, Statistics Day, at a function held in virtual mode. Dr. Rangarajan had also held the posts of Chairman, Economic Advisory Council to the Prime Minister, and Chairman, Madras School of Economics.

International Award:

The Government of India had also instituted 'The Mahalanobis International Award for Statistician from a Developing Country'.

This initiative serves the **dual purpose** of honouring Professor P. C. Mahalanobis for his lifetime contributions and achievements in Statistics, and recognising and stimulating progress in Statistics in developing countries and inspiring and motivating statisticians across the developing world to increase the quantity and improve the quality of their contributions to development of statistics and its applications.

The award is presented biennially during the International Statistical Institute (ISI) World Statistics Congress held in London.

The first award was given in 2003 to C.R. Rao (India).

In 2019, the Award was given to Professor Arellano-Valle from Chile.

The previous winners of the Award include Professor Benjamin Kiregyera (Uganda), Dr. Isidoro P. David (Philippines), and Professor Pedro Morettin (Brazil), etc.

About Professor P.C. Mahalanobis:

Professor P.C. Mahalanobis (1893-1972) was a highly distinguished statistician who made extensive contributions to methodology, applications, statistical development, and public policy.

He founded the **Indian Statistical Institute** and served as an advisor to the Government of India.

SPORTS

Chess:

Chessable Masters Online Tournament (July 2020)

Magnus Carlsen (Norway) - Winner

Anish Giri (Netherlands) - Runner

Beil International Chess Festival (Switzerland, July 2020)

Radoslaw Wojtaszek (Poland) - Winner

Harikrishna (India) - Runner

Cricket:

England - West Indies Test Series (Manchester, July 2020)

England - Winner

West Indies - Runner

Formula One:

Austrian Grand Prix (Spielberg, July 2020)

Valtteri Bottas - Winner

Charles Leclerc - Runner

Styrian Grand Prix (July 2020)

Lewis Hamilton - Winner

Valtteri Bottas - Runner

Hungarina Grand Prix (Budapest, 2020 July)

Lewis Hamilton - Winner

Verstappen - Runner

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