APPOLO STUDY CENTRE

TNPSC GROUP I MAIN 2021
SOURCE MATERIAL FOR TEST XX
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UNIT- I : Modern history of India and Indian culture

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Note: Refer Modern India Notes

UNIT- II : Social issues in India and Tamil Nadu

1.   New Education Policy - 2020

The Union Cabinet chaired by the Prime Minister Narendra Modi on 29 July approved the National Education Policy 2020. The new policy aims to pave way for transformational reforms in school and higher education systems in the country. This policy will replace the 34 your old National Policy on Education (NPE), 1986.

The NEP 2020 aims at making "India a global knowledge superpower."

The Cabinet has also approved the renaming of the Ministry of Human Resource Development to the Ministry of Education.

The NEP cleared by the Cabinet is only the third major revamp of the framework of education in India since independence.

The two earlier education policies were brought in 1968 and 1986.

Highlights
School Education

- Universalization of education from pre-school to secondary level with 100% Gross Enrolment Ratio (GER) in school education by 2030.
- NEP 2020 will bring 2 crore out of school children back into the main stream through open schooling system.
- The current 10+2 system to be replaced by a new 5+3+3+4 curricular structure corresponding to age 3-8, 8-11, 11-14, and 14-18 years respectively.
- It will bring the hitherto uncovered age group of 3-6 years under school curriculum, which has been recognized globally as the crucial stage for development of mental faculties of a child. The new system will have 12 years of schooling with three years of Angan-wadi/ pre schooling.

- Emphasis on Foundational Literacy and Numeracy, no rigid separation between academic streams, extracurricular, vocational streams in schools; Vocational Education start from Class 6 with Internships
- Teaching up to at least Grade 5 to be in mother tongue/ regional language. No language will be imposed on any student.
- Assessment reforms with 360 degree Holistic Progress Card, tracking Student Progress for achieving Learning Outcomes
- A new and comprehensive National Curriculum Framework for Teacher Education, NCFTE 2021, will be formulated by the NCTE in consultation with NCERT. By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree.

Higher Education

- Gross Enrolment Ratio in higher education to be raised to 50% by 2035; 3.5 crore seats to be added in higher education.
- The policy envisages broad based, multi-disciplinary, holistic Under Graduate education with flexible curricula, creative combinations of subjects, integration of vocational education and multiple entry and exit points with appropriate certification. UG education can be of 3 or 4 years with multiple exit options and appropriate certification within this period.
- Academic Bank of Credits to be established to facilitate Transfer of Credits
- Multidisciplinary Education and Research Universities (MERUs), at par with IITs, IIMs, to be set up as models of best multidisciplinary education of global standard in the country.
- The National Research Foundation will be created as an apex body for fostering a strong research culture and building research capacity across higher education.
- Higher Education Commission of India (HECI) will be set up as a single overarching umbrella body for the entire higher education, excluding medical and legal education. HECI to have four independent verticals - National Higher Education Regulatory Council (NHERC) for regulation, General Education Council (GEC) for standard setting, Higher Education Grants Council (HEGC) for funding, and National Accreditation Council (NAC) for accreditation. Public and private higher education institutions will be governed by the same set of norms for regulation, accreditation and academic standards.
- Affiliation of colleges is to be phased out in 15 years and a stage-wise mechanism is to be established for granting graded autonomy to colleges. Over a period of time, it is envisaged that every college would develop into either an Autonomous degree-granting College, or a constituent college of a university.

Other Changes
- An autonomous body, the National Educational Technology Forum (NETF), will be created to provide a platform for the free exchange of ideas on on the use of technology to enhance learning, assessment, planning, administration.
- NEP 2020 emphasizes setting up of Gender Inclusion Fund, Special Education Zones for disadvantaged regions and groups
- New Policy promotes Multilingualism in both schools and higher education. National Institute for Pali, Persian and Prakrit, Indian Institute of Translation and Interpretation to be set up
- The Centre and the States will work together to increase the public investment in Education sector to reach 6% of GDP at the earliest.

Unprecedented Consultations

NEP 2020 has been formulated after an unprecedented process of consultation that involved nearly over 2 lakh suggestions from 2.5 lakhs Gram Panchayats, 6600 Blocks, 6000 ULBs, 676 Districts. The MHRD initiated an unprecedented collaborative, inclusive, and highly participatory consultation process from January 2015.

In May 2016, 'Committee for Evolution of the New Education Policy' under the Chairmanship of Late Shri T.S.R. Subramanian, Former Cabinet Secretary, submitted its report. Based on this, the Ministry prepared 'Some Inputs for the Draft National Education Policy 2016'.

In June 2017 a 'Committee for the Draft National Education Policy' was constituted under the Chairmanship of eminent scientist Dr.K.Kasturirangan, which submitted the Draft National Education Policy, 2019 to the Hon'ble Human Resource Development Minister on 31st May, 2019. The Draft National Education Policy 2019 was uploaded on MHRD's website and at 'MyGov Innovate' portal eliciting views/suggestions/comments of stakeholders, including public.

NEP 2020: Transformational Reforms in Education

> The NEP 2020 is a bold effort to provide the framework for sweeping changes in the whole education system in the nation, keeping in mind the need for access, equity, excellence and employment. The NEP proposes sweeping changes in the education system from pre-primary to PhD to skill development

"We are focussing on the quality of education in India. Our attempts have been to make our education system the most advanced and modern for students of our country. 21st century is the era of knowledge. This is the time for increased focus on learning, research, innovation," Prime Minister Narendra Modi said. He stressed that the New Education Policy emphasises on inter-disciplinary study and "will ensure focus is on what student wants to learn".

The National Education Policy 2020 strikes a balance between the importance of economic prosperity through the development of a knowledge economy and social role of education. "The purpose of the education system is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, sound ethical moorings and values," states the policy document approved by the Union Cabinet. The changes envisaged are such that India will be able to meet the educational challenges of the 21st century and derive the benefits of the demographic divided. But the success of the new policy will depend on its implementation in letter and spirit.

Sweeping Changes in School Education System

The first education policy, based on the suggestions of the D S Kothari Commission, was formulated in 1968 and it was revised in 1986 and 1992.

In the 28 years since then, the world has changed beyond recognition. The growth of technology, speedy travel and the knowledge revolution demanded changes in what to teach, how to teach and how to test. The rest of the world brought about such changes in education that had not taken place in the previous hundred years. India, on the other hand, sailed along by its old

academic vessel, tinkering it here and there to keep it floating. We had brilliant academicians, entrepreneurs administrators and politicians, who brought about changes, but without a comprehensive national scheme. The NEP 2020 is a bold effort to provide the framework for sweeping changes in the whole education system in the nation, keeping in mind the need for access, equity, excellence and employment.

The NEP proposes sweeping changes in the education system from pre-primary to PhD and skill development. The cumulative effect of the reform will be the creation of a liberal, choice-based education on the lines of the best practices in the world, making use of modern technology, international linkages and projections of employment opportunities and compulsions of the post Covid world. Unlike most resources that deplete when used, information and knowledge can be shared, and actually grow through application.

NEP has addressed several issues such as employability, streesful examination, insularity, lack of practical knowledge, language policy, excess of regulatory bodies, new opportunities for drop outs, internal assessment, opportunity for improving grades, banking of credits, role of the private sector and funding. The solutions suggested are expected to be in place in the next ten years through a process of consultation and consensus building.

Changes in the Pattern of School Education
In school education, the policy focuses on overhauling the curriculum, "easier" Board exams, a reduction in the syllabus to retain" core essentials" and thrust on "experiential learning and critical thinking". In a significant shift from the 1986 policy, which created a 10+2 structure of school education, the new NEP pitches of school education, the new NEP pitches for a "5+3+3+4" design corresponding to the age 8-11 (preparatory), 11-14 (middle), and 14-18 (secondary). This brings early childhood education (also known as pre-school education for children of ages 3 to 5) under the ambit of formal schooling. The mid-day meal programme will be extended to pre-school children. There are other proposals for quality improvement, the most important of which is the proposal to improve teacher training by shifting it away from standalone training colleges, which are mediocre and often corrupt, to universities. The most controversial proposal is that "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." The Supreme Court has ruled that parents have the right to choose the medium of instruction irrespective of the mother tongue of the child. A recent estimate suggests that the proportion of children studying in English almost doubled from 12 per cent to 23 per cent between 2007-08 and 2017-18.

The first five years of flexible, multilevel, play or activity-based learning will accord "the highest priority to achieving Foundational Literacy and Numeracy by all students by Grade 3". The key to this lies in the ambitious goal of providing pre-primary schooling for all children. The NEP seems to be counting on converting Anganwadis, to which poor families have access, into pre-primary schools by providing them with "high-quality infrastructure, play equipment, and well-trained Anganwadi teachers." However, upgrading 1.38 million Anganwadi centres and training the 2.4 million workers and helpers to become kindergarten teachers is going to be a formidable challenge.

The description of the subsequent stages is more or less what it has always been except for a strong emphasis on introducing vocational education in all schools when students are in Class 6-8. Thus, the NEP promises that "every student will take a fun course, during Grades 6-8, that gives a survey and hands-on experience of a sampling of important vocational crafts, such as carpentry, electric work, metal work, gardening, pottery making, etc." Perhaps, it is too early to

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introduce vocational training from class 6, but that is a matter to be left flexible to suit local conditions.

Importance of Autonomy
The promise of autonomy for school education seems difficult to achieve. Most schools are controlled by the Central and state governments directly and recruitment, postings and transfer of teachers are a matter of political patronage. The principal in nominal charge of the school has little authority over teachers and enforcing any sort of discipline or performance standards is difficult. There is a window of opportunity in the NEP proposal to set up school complexes, which is partly a response to the spread of schools with few students and only one or two teachers. This complex would connect schools over a compact geographical area and be governed by a committee of parents, teachers and other stake holders. This could be the beginning of a drive to reduce political interference in school management.

Multi-disciplinary Universities
In higher education, a significant reform is that the Universities will multidisciplinary in character. The IITs are already moving in that direction. IIT-Delhi has a humanities department and set up a public policy department recently. IIT-Kharagpur has a School of Medical Science and Technology. This has been justified on the ground that engineers should know more than just engineering. For instance, a good engineer needs to know the environmental and social impact of the things he builds. Many engineers are also becoming entrepreneurs, requiring knowledge of economics.

NEP 2020 states that universities from among the top 100 in the world will be able to set up campuses in India. While it doesn't elaborate the parameters to define the top 100, the Government may use the 'QS World University Rankings' as it has relied on these in the past while selecting universities for the 'Institute of Eminence' status. However, none can start unless the new Ministry of Education brings in new law that includes details of how foreign universities will operate in India. It is not clear whether the pending law will enthuse world class universities to come to India, particularly since the suggestion is that the universities cannot repatriate profits. But some top class universities may come, not for profits in cash, but in terms of knowledge and wisdom. Participation of foreign universities in India is currently limited to them entering into collaborative twinning programmes, sharing faculty with partnering institutions and offering distance education. Over 650 foreign education providers have such arrangements in India.

Flexibility in Degree Programmes
In another major reform, the four-year degree programme proposed in the new NEP, students can exit after one year with a certificate, after two years with a diploma, and after three years with a bachelor's degree.

"Four-year bachelor's programmes generally include a certain amount of research work and the student will get deeper knowledge in the subject he or she decides to major in. After four years, a BA student should be able to enter a research degree programme directly depending on how well he or she has performed. When the four year degree programme was first introduced in the Delhi University, the criticism was that it was meant to satisfy the requirement of US universities and the proposal was dropped because of the controversy.

The Minister of Education has clarified that NEP only provides a broad direction and it is not mandatory. Since education is a concurrent subject (both the Centre and the state government

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can make laws on it), the reforms proposed can only be implemented collaboratively by the Centre and the States. This will not happen immediately. The Government has set a target of 2040 to implement the entire policy. Sufficient funding is also crucial in implementation of the whole policy. The government plans to set up subject-wise committees with members from relevant ministers at both the central and state levels to develop implementation plans for each aspect of the NEP.

With the addition of considerable private investment in education, NEP expects that India will achieve 50% GER by 2030. The outlay for education will be raised to 6% of the GDP. The present system of affiliation of colleges with Universities will be phased out, as has been done in most countries of the world. Higher Education Institutions will have the facility to award their own degrees. It is up to them to decide whether the examinations should be external or internal.

Steps Towards Quality Improvement
The NEP proposals for higher education seem to be aimed at containing the proliferation of private universities that offer a limited range of courses in subjects with attractive job prospects. The aim of the NEP is to create "large, multidisciplinary universities and colleges" and improve the link with research by establishing "a National Research Foundation… to actively seed research in universities and colleges". There are some references to greater independence for higher education institutions with what the NEP calls "light but tight" regulation by one umbrella body—Higher Education Commission of India. But the NEP has nothing credible about how quality improvement can be secured, particularly in existing universities lumbered with poor quality staff and intense politicization.

It is a matter of satisfaction that a comprehensive road map presented to the Kerala Government in 2011 by the Kerala State Higher Education Council with me as Vice Chairman, covering infrastructure, teachers training, use of technology, autonomy for colleges and setting up of private universities, productive research and internationalization have been incorporated in one form or another in the CEP 2020. But gender justice that KSHEC had stressed is conspicuous by its absence in NEP 2020.

A Global Education Meet, held in January 2016 in Thiruvananthapuram made recommendations to make Kerala an Educational Hub through these measures and the establishment of an Academic City and Higher Education Zones. But the strong political objection from the opposition towards the end of the term of the previous Government ended the reforms process. Very recently, the present Government has picked up for study a few of the old proposals like autonomous colleges and Education Zones.

Reorganization of Regulatory Bodies
A through reorganization of the various regulatory bodies has been suggested, but much will depend on the shape and composition of the new bodies, about which there are apprehensions. Though the National Assessment and Accreditation Council (NAAC) is to be merged with UGC and AICTE, it will function more or less independently. Presently, NAAC has a reputation of riding roughshod over institutions and teachers by their arbitrary ways. Hopefully, this will change under the new dispensation.

Public Expenditure on Education
On the matter of public expenditure on education, the NEP does not present any proposal for achieving the long standing goal of public expenditure on education getting to 6 per cent of GDP.

In fact, with the drive to prioritise expenditure on the health crisis, defense and internal security and the political pressures to expend direct benefit antipoverty programmes, public expenditure on education will continue to fall short of the 6 per cent target.

The major financial challenge will be the required infrastructure for 73 million kids who have to be provided with pre-primary education and the 25 million additional university goers when the proportion of the relevant age group going in for higher education doubles to 50 per cent.

Kerala has complained that none of the submissions made by it has been included in NEP. Some of the educationists in Kerala are of the view that NEP 2020 will create an increase in private and autonomous institutions, with the state having little control of its functioning. "Education is soon set to turn into a business that will be expensive and for the elite, "said the Vice Chairman of the Kerala State Higher Education Council. "It would also prove a death knell for public education, which developed in democratic and secular tradition," said the Minister for Public Education. The Vice Chairman of the Kerala State Higher Education Council has also severely criticized the concept of "knowledge Economy" as he believes that corporates will manipulate it to their advantage. Questions have been raised about "traditional knowledge systems" being include in the curriculum and teaching of Sanskrit, looking for elements of "saffronisation." But the Government has pledged that it "will try to take everyone along in the process of making a vibrant India."

Major Drawbacks of NEP
Some critics of the NEP 2020 have pointed out that the biggest gap is the absence of any proposal for the liberation of education from political control. Nor is the talk of autonomy and flexibility sufficiently credible. The NEP misses out on the reforms, which are essential for nurturing our democracy and benefiting from India's diversity, and to provide the innovative educational system we need for our future.

Prime Minister Narendra Modi said at a "School Education Conclave" on September 11, 2020 that school students should have a new curriculum, which is in sync with the new National Education Policy, by 2022 when the nation celebrates its 75th year of independence. Nothing that mark-sheet has become "pressure sheet" for students and "prestige sheet" for families, the Prime Minister said the new policy aims to remove this pressure. The NEP will reduce the syllabus and make learning a fun-based and complete experience, he said.

It is inevitable that a policy which seeks to bring in fundamental changes in an "established enterprise" will raise questions and doubts. Changes will be expensive, risky and disruptive of comfort zones. But the alternative is to keep our antiquated system of education shackled in chains when the rest of the world gallops ahead. The policy should be seen as ushering in a new era of education in the country with its attendant birth pangs, which must be faced for the sake of the coming generations of students. The way to do it is to pluck the low hanging fruits initially and deal with more difficult issues later. The Government has indicated a ten year period for full implementation, but the effort should be to make it sooner.

2. Digital Education Report

✓ The Ministry of Human Resource Development (MHRD) has launched **India Report on Digital Education, 2020.**

✓ Recently the MHRD has been **renamed as the Ministry of Education.**

The Report:

✓ It has been prepared by the **digital education division of MHRD** in consultation with education departments of the states and union territories.

✓ It **elaborates the innovative methods** adopted by the MHRD, for **ensuring accessible and inclusive education** to children at home and reducing learning gaps during the **Covid-19 pandemic**.

MHRD Initiatives:

✓ It has initiated many projects to assist teachers, scholars and students in their pursuit of learning like **DIKSHA platform**, **Swayam Prabha TV Channel**, **On Air - Shiksha Vani**, **e-PathShala** and telecast through TV channels.

✓ It also released **guidelines on digital education** called **'PRAGYATA'.**

State Initiatives:

✓ States and Union Territories have provided digital education at the doorstep of the students. Some of them are:

- Online Practice tests with detailed analysis are available for Government and Government Aided Students of **TAMIL NADU** preparing for **NEET** exam**.**

- **Social Media Interface for Learning Engagement (SMILE)** in Rajasthan.

- **Project Home Classes** in Jammu.

- **Padhai Tunhar Duvaar** (Education at your doorstep) in Chhattisgarh.

- **Unnayan Initiatives** in Bihar.

- **Mission Buniyaad** in NCT of Delhi.

- **Kerala's own educational TV channel (KITE VICTERS).**

- **E-scholar portal** as well as free online courses for teachers in Meghalaya.

✓ They **used social media tools** like WhatsApp Group, Online classes through YouTube channel and Google meet to connect to the students.

✓ Some of the states/UTs like Lakshadweep, Nagaland and Jammu & Kashmir have also **distributed tablets, DVDs and pendrives, equipped with e-contents** to students.

- ✓ They have **also distributed textbooks at children's doorsteps to ensure inclusive learning** in remote areas where internet connectivity and electricity is poor.
- ✓ Several states have also focussed on the **mental well-being of the children e.g Delhi conducted happiness classes.**
  - MHRD has also launched the **'Manodarpan' initiative**, which aims to provide psychosocial support to students, family members and teachers for their mental health and well-being during the times of Covid-19

Conclusion

- ✓ The report will serve the purpose of cross-learning, adapting and adopting best practices across the country.
- ✓ While the education is moving towards blended learning through online and offline mode, it shall be the endeavour of all the stakeholders in the field of education to ensure that no student is left behind for want of affordability and accessibility of quality education.

TAMIL NADU - Digital Education

- ✓ Tamil Nadu Government is pioneering the use of digital technology to improve governance, to empower teachers and to enhance resource utilization leading to excellent student outcomes.
- ✓ The School Education Department of Government of Tamil Nadu has launched several initiatives supporting the students and teachers during the lockdown.
- ✓ The list of major e–learning initiatives provided by the School Education Department in response to the current crisis is as follows.
  1. **E-Learn Platform for Students**
     - Online Practice tests with detailed analysis are available for Government and Government Aided Students preparing for NEET exam.
  2. **TN-DIKSHA for Students & Teachers**
     - All Textbooks are energized with QR codes
  3. **Tamil Nadu Teachers Platform (TNTP)**
     - Tamil Nadu Teachers Platform empowers teachers with training and support material to deliver high-quality engaging content in their classrooms.
     - Each teacher is provided with an individual login to the portal.

4. **KalviTholaikatchi (Television Channel for Students)**

   - It is an exclusive education channel which streams programmes related to state curriculum for teachers and students to access seamlessly.

   - It encourages student learning beyond classroom hours and in the comfort of their homes.

5. **TNSCERT YouTube channel**

   - TN SCERT YouTube channel hosts around 3390+ videos which cover a wide range of topics related to education.

6. **FACEBOOK – WORKPLACE**

   - TN Schools Facebook Workplace provides a platform for teachers to learn through collaboration and sharing.

7. **Student Mental Wellbeing in Partnership with UNICEF**

   - Launched a program to support the mental wellbeing of students taking board exams this year amidst the crisis, in partnership with UNICEF.

8. **Tamil Nadu VagupparaiNokkin (Classroom Observation module)**

   - One of the modules of the TN-EMIS mobile application is the classroom observation module for Block Resource Teacher Educators.

   - This is used to capture the teacher practices, student learning levels and other classroom related data to identify best practices and to improve classroom experience for the students as well as for the teachers.

9. **NEET – Online Practice tests & Crash Course**

   - As a part of the e-Learn portal for students, online Practice tests is offered for Government and Government Aided Students preparing for NEET exam.

3. Schemes

Women Welfare Schemes

1. Free Checkup for Pregnant women

Launched On: 31st July 2016

Why this scheme?

While India has made considerable progress in the reduction of maternal and infant mortality, but every year approximately 44000 women still die due to pregnancy-related causes and approximately 6.6 lakh infants die within the first 28 days of life. Many of these deaths are preventable and many lives can be saved if quality health care is provided to pregnant women.

Scheme Benefits:

The free checkup for pregnant women (Pradhan Mantri Surakshit Matritva Abhiyan) has been launched by Modi government, aims to provide assured, comprehensive and quality antenatal care, free of cost, universally to all pregnant women on the 9th of every month at government hospitals/ Health Centre.

Scheme guarantees a minimum free package of antenatal care services to women in their pregnancy at designated government health facilities.

- Lab Investigations: Hemoglobin, Urine Albumin and Sugar, Malaria, VDRL, HIV, Blood Grouping, Screening for GDM using OGTT etc.

- Ultrasonography (USG): All PMSMA beneficiaries who have registered would receive an examination by an Obstetrician / medical officer with the report of their investigations. Based on the examination and reports of investigations & USG reports.

- Injection Tetanus Toxoid, Tablet Iron Folic Acid, Tablet Calcium and any other medication prescribed by the Medical Officer

- Counselling: All pregnant women would receive group counseling (in groups of 10-12) on diet, sleep, regular ANC checkup, institutional delivery, breast feeding, contraceptives etc.
- Transportation facilities would be provided to pregnant women residing in difficult / inaccessible areas where public transport is either not available or very poor, PW from vulnerable communities and in blocks with home deliveries > 20%

The programme follows a systematic approach for engagement with private sector which includes motivating private practitioners to volunteer for the campaign; developing strategies for generating awareness and appealing to the private sector to participate in the Abhiyan at government health facilities.

2. Pregnant Women Health Care Scheme

Launched On: 01-Jan-2017

Why this scheme?

India accounts for 17% of all maternal deaths in the world. The primary causes of high maternal and infant mortality are poor nutrition and inadequate medical care during pregnancy and childbirth Under-nutrition continues toadversely affectmajority of women in India. In India, every third woman is undernourished, and every second woman is anemic. An undernourished mother almost inevitably gives birth to a low birth weight baby& impact the life of baby.

Scheme Benefits:

- Financial assistance upto 6,000 INR for pregnant women (before & after) child birth at government hospitals.

- Women can improve healthy diet and proper medication during & after pregnancy period

- Give birth to better healthy baby & provide health support to babies post delivery

- Cash to be transferred directly to woman account in 3 installments (3,000 INR, 1500 INR, 1500 INR)

3. Swachh Bharat – Toilets Construction

Launched On: 2nd **October 2014**

Why this scheme?

In India, many poor women & children suffer due to lack of adequate toilets. In fact, many girls drop out from school due to lack of toilets, especially in rural areas.

A report by the international charity said more than 56% of Indians lacked access to basic sanitation. "Clean India" was the vision of Mahatma Gandhi. Our Hon'ble PM believes "It is our social responsibility as citizens of India to help fulfil Gandhiji`s vision of Clean India, by his 150th birth anniversary in 2019".

Scheme Benefits:

Any individual, who needs toilet to be constructed at his home, gets subsidy amount up to Rs 12,000 INR or 15,000 INR (SC/STs) from government.

4. Prime Minister's Small & Micro Industries Development Scheme (MUDRA)

Launched On: April **2015**

Why this scheme?

India is a land of talent. Crores of people are talented to become small entrepreneurs, especially women. But these small entrepreneurs find difficult to get financial loans through normal channel & often take money from market at very high interest rate.Small scale industries are reducing in India & people struggle to survive in the industry.

There is no formal financial support provided to people to empower their live hood.

Scheme Benefits:

- All non-farm sector income generating activities such as manufacturing, trading and services whose financial assitance needs below Rs.10 lakh are known as MUDRA Loans

  1. Shishu : loans upto Rs. 50,000/-
  2. Kishor : loans above Rs. 50,000/- and upto Rs. 5 lakh
  3. Tarun : loans above Rs. 5 lakh to Rs.10 lakh

- Any type of income generating businesses are supported under Mudra

- Very low interest with flexible repayment period.

- A hassle free and flexible credit product with no collateral & processing fees

- Example: Business requirements like Tailoring shops, Food centre, Manufacturing setup, beauty parlor, RO plant installation, Carpentry, autorickshaw.etc are supported under Mudra.

- Any type of income generating businesses are supported under Mudra

5. Prime Minister's Ujjwala Yojana (PMUY)

Launched On: 1st May 2016

Why this scheme?

India is home to more than 24 Crore households out of which about 10 Crore households are still deprived of LPG as cooking fuel and must rely on firewood, coal, dung – cakes etcas primary source of cooking

The smoke from burning such fuels causes alarming household pollution and adversely affects the health of Women & children causing several respiratory diseases/ disorders

Smoke inhaled by women from unclean fuel is equivalent to burning 400 cigarettes in an hour.

Scheme Benefits:

To safeguard the health of women & children by providing them with a clean cooking fuel – LPG, so that they don't have to compromise their health in smoky kitchens.

Under this scheme, 5 Cr LPG connections (additional 3 Cr target extended) will be provided to BPL families with a support of Rs.1600 per connection

Ensuring women's empowerment, especially in rural India, the connections will be issued in the name of women of the households

6. Prime Minister's Housing for All Scheme (Urban & Rural)

Launched On: 25th June 2015

Why this scheme?

When India completes 75 years (2022) of Independence, every poor family should own a pucca house with water connection, toilet facilities, 24 x 7 electricity supply and access.

Poor people living in urban cities/towns& rural villages do not own homes & cannot afford high interest for housing loans.

Own house can improve the livelihood of poor people and reduce poor people family burden & provide affordable housing for all

Scheme Benefits:

Urban:

- 5 Crore houses across entire urban area of 4041 statutory towns with initial focus Class I 500 cities in three phases. The scheme is from 2015 to 2022.

- Slum rehabilitation of Slum Dwellers,
  Promotion of Affordable Housing for weaker section providing affordable loans,
  Affordable Housing in Partnership with Public & Private sectors, Subsidy for beneficiary-led individual house construction

- Scheme beneficiaries Economically weaker section (EWS), Low Income Groups (LIG) &Middle-Income Groups (MIG)

- EWS – Annual income upto 3 Lakhs (Banks loans at 6.5% interest for 6 Lakhs loans)

  LIG – Annual income from 3 lakhs to 6 Lakhs
  MIG I – annual income from 6 Lakhs to 12 Lakhs
  MIG II – annual income from 9 Lakhs to 18 Lakhs

- Bank loans upto 6 Lakhs at 6.5% interest (EWS & LIG) and

- Bank loans upto 6 Lakhs at 9% interest (MIG I & II)

Rural:

- 1Crore houses across rural areas where people living in kutcha houses

- Upto 1.2 Lakhs (plain areas) & upto 1.3 Lakhs (hilly areas) of financial assistance

- Assistance for toilet construction can be leveraged under Swachh Bharat Mission (Gramin)

- The beneficiary is entitled to 90.95-person day of unskilled labour from MGNREGS

7. Prime Minister's Empowerment of Women Entrepreneurs (Stand-up India)

Launched On: 5 April 2016

Why this scheme?

Women are pillars of development India. SC, ST and women entrepreneurs face challenges in setting up enterprises, obtaining loans and other support needed for succeeding in business.

Empowering women entrepreneurship is critical for up-liftment of women in the society & women can contribute significantly for India's economic development.

Scheme Benefits:

- Provides bank loan between 10L INR to 1 Cr INR for setting up first time green field (new) enterprises in manufacturing, services or trading sector (age of 18 years & above)

- Composite loan of 75% of project cost inclusive of term loan and working capital with lowest interest rate

- Loan is repayable in 7 years

- Besides primary security, the loan may be secured by collateral security as per banks.

Youths Welfare Schemes

1. Prime Minister's Skill India (PMKVY)

Launched On: 15th July 2015

Why this scheme?

Only small proportion of India's workforce have any formal skill trainings. India has world's largest youth population & need skills and training for better job & self-employment opportunities. India's economy to grow, every sector needs skilled workforce to improve productivity.

India has potential to become top skilled workforce provider in world for ageing developed world. Enable and mobilize many Indian youth to take up skill training and become employable and earn their livelihood especially from rural areas.

Increase productivity of the existing workforce and align the training and certification to the needs of the country

Scheme Benefits:

• 1 Cr youths to be trained under this scheme & all required trainings fees to be paid by Govt with budget of Rs 12,000 Cr

• 8461 training centres, 2249 training partners & more than 3 Lakhs youths were trained

• Short Term Trainings for school/college drop outs or unemployed youths. Free trainings upto 300 hours with job placement assistance. 7117 training center, 2193 training partners & more than 2 lakhs youths trained.

2. Prime Minister's New Entrepreneurs Development Scheme (Startup India)

Launched On: 15th August, 2015

Why this scheme?

Indian people have great potential, talent and ability to contribute for our economy. Many talented youth entrepreneurs wanted to start own business, but due to lack of financial support & other regularities, people not able to start business.

65% of our population is youth & they need to create job opportunities rather looking for job.

Scheme Benefits:

• Dedicated funds of 10,000 Cr INR to promote startups with 12,589 startups recognized

- E-registration &self-certification compliance

- No inspection for first 3 years

- No income tax on profits for first 3 years

- Mobile app for start-up registration in one day

- Startup India as hub as single point of contact

- Easy Exit policy

- Special arrangement for female applicants

3. Prime Minister's Research Fellowship (PMRF)

Launched in: 2018

Why this scheme?

This scheme is aimed at attracting the talent pool of the country to doctoral (Ph.D.) programs of Indian Institutes of Technology (IITs) and Indian Institute of Science (IISc) for carrying out research in cutting edge science and technology domains, with focus on national priorities.

Scheme Benefits:

- The following will be fellowship sponsor for PMRF

Year	Amount (INR)
Year 1	70,000
Year 2	70,000
Year 3	75,000
Year 4	80,000
Year 5	80,000

- Apart from this, each Fellow would be eligible for a research grant of Rs. 2 lakhs per year for 5 years (total Rs. 10 lakh)

- The tenure of fellowship will be four years for students from integrated courses and five years for B. Tech. students.

- Industry participation in the PMRF programme would be explored through CSR funding to enable industry to sponsor maximum number of fellows.

4. Prime Minister's Atal Innovation Mission (AIM)

Why this scheme?

With huge youth population & energy, Indian industries need lot of innovation in various fields to excel & cut down external dependency. Innovation only can transform our country from developing to developed nation.

A flagship initiative set up by the NITI Aayog to promote innovation and entrepreneurship across the length and breadth of the country.

Promotion of an ecosystem of innovation and entrepreneurship at various levels - higher secondary schools, science, engineering and higher academic institutions, and SME/MSME industry, corporate and NGO levels

Scheme Benefits:

- Atal Tinkering Labs (ATL) – are dedicated innovation workspaces at schools of 1200-1500 square feet where do-it-yourself (DIY) kits on latest technologies like 3D Printers, Robotics, Internet of Things (IOT), Miniaturized electronics are installed using a grant of Rs 20 Lakhs from the government so that students from Grade VI to Grade XII can tinker with these technologies and learn to create innovative solutions using these technologies

- Atal Incubation Center (AIC) – Promoting world class entrepreneurship in universities & industries. A fund of Rs 10 Cr will be provided to successful applicant

- Atal New India Challenges and Atal Grand Challenges – to promote technology driven innovations and product creation for social and commercial impact. Successful applicants will get a grant of Rs 1 Cr & Rs 30 Cr for Grand Challenges

5. Prime Minister's Khelo India

Launched in: 2017

Why this scheme?

Sports are extremely important component for the overall development of our nation.

The importance of sports and fitness in one's life is invaluable. Playing sports inculcates team spirit and develops strategic thinking, analytical thinking, leadership skills, goal setting and risk taking. A fit and healthy individual leads to an equally healthy society and strong nation.

Scheme Benefits:

Talented school players identified in priority across many sports disciplines at various levels by the High-Powered Committee will be provided annual financial assistance of INR 5 lakh per annum for 8 years

Farmers Welfare Schemes

1. Prime Minister's Farmer's Crop Insurance (PMFBY)

Launched On: 13th January 2016

Why this scheme?

Agriculture is the primary source of livelihood for 58% of India population & 85% of farming land are less than 2 hectares. Farmers from drought districts &irregular rainfall affected districts across India suffered great economic losses on crop cultivation.

To improve farmers, live hood & protect his crop investment. To provide complete insurance coverage and financial support to the farmers in the event of failure of any of the notified crop because of natural calamities, pests & diseases

To encourage farmers to adopt innovative and modern agricultural practices. To ensure flow of credit to the agriculture sector & reduce insurance premium burden for farmers

Scheme Benefits:

- Farmers get insured for all types of crops like food crops (Cereals, Millets & pulses), Oil Seeds and annual commercial /Annual Horticultural crops

- Insurance premium will be only 2% of sum insured for Karif season crops, Rabi season crops (1.5%) and 5 % for commercial crops & horticulture crops

- Example: for 2 acres of land with rice cultivation is insured for 1 Lakh INR, the insurance premium is only 2000 INR.

- All farmers (with loan or without loan) are eligible for this scheme

- The entire insurance scheme process, right from joining of farmers to disbursement of claim i made electronically to make it a fraud free and effective scheme

- Insurance covers following risks such as

  - Yield losses

  - Prevented Sowing

  - Post-harvest losses

  - Localized calamities

  - Pests, Diseases

2. Prime Minister's Farmer's Soil Health Card Scheme (SHC)

Launched On: 19th February 2015

Why this scheme?

Many poor farmers not able to improve productivity; because they do not know the soil health condition, required fertilizers & other soil advisory inputs

The scheme aims at promoting soil test based and balanced use of fertilizers to enable farmers realize higher yields at lower cost

Scheme Benefits:

- Government issues soil cards to farmers which will carry crop-wise recommendations of nutrients and fertilizers required for the individual farms to help farmers to improve productivity through judicious use of inputs.

- Soil Health Card - A printed report that a farmer will be handed over for each of his holdings. It will contain the status of his soil with respect to 12 parameters. will also indicate fertilizer recommendations and soil amendment required for the farm

- Soil health card is free for Farmers& covers collection of soil sample, its test, generation and distribution of soil health card to the farmer. Modi govt. pays to state govt. for all services rendered to farmers.

- The Soil Health Card will be issued once in 3 years.

3. Prime Minister's Farmer's Irrigation Scheme (PMKSY)

Launched On: 1st July, 2015

Why this scheme?

Every farmer's land should get water and produce more crop per drop. India has 142 million hectares of cultivable land. Irrigation serves only 45% of agricultural land & 55% depends on nature.

This scheme providesdrip irrigation facility to agriculture lands & increase water usage efficiency on farms & minimize wastage of water. Under this scheme, Investment for irrigation projects to be made directly at field level & adopt advanced technology for saving water

Scheme Benefits:

• Creation of new water sources, repair, restoration and renovation of defunct water sources.

• Construction of water harvesting structures, secondary & micro storage, groundwater development, enhancing potentials of traditional water bodies at village level

• Irrigation for all lands will improve agriculture production, keep prices of food items under control

• Secondary water storage structures at end of canal system to store water when available in abundance (rainy season)

• Diversion of water from source of different location where it is plenty to nearby water scarce areas

4. Prime Minister's National Agriculture Market (eNAM)

Launched On: April 2016

Why this scheme?

eNAM is an online trading platform for agricultural commodities in India. The market facilitates farmers, traders and buyers with online trading in commodities. The market is helping in better price discovery and provide facilities for smooth marketing of their produce; thus, eliminating the middleman.

90 commodities including staple food grains, vegetables and fruits are currently listed in its list of commodities available for trade.

Scheme Benefits:

- The crops are weighed immediately, and the stock is lifted on the same day and the payments are cleared online.

- The trading is done online, with trading computers or through mobile app (available in 8 languages) in all e-NAM markets.

- **Farmers:** They can sell produce without the interference of any brokers or middlemen thereby making competitive returns out of their investment.

- **Traders:** Traders will be able to do secondary trading from one APMC to another one anywhere in India. Local traders can get access to larger national market for secondary trading.

- **Buyers, Processors &Exporters:** Buyers like large retailers, processors or exporters will be able to source commodities from any mandi in India thereby reducing the inter-mediation cost.

- **Consumers:** eNAM will increase the number of traders and the competition among them increases. This translates into stable prices and availability to the consumers

- **Mandis:** There will be reduction in book keeping and reporting system as it will be generated automatically. Monitoring and regulation of traders and commission agents becomes easy.

5. Prime Minister's Minimum Support Price (MSP) Hike

Why this scheme?

Major objectives are to support the poor farmers from distress sales and to procure food grains for public distribution. In case the market price for the commodity falls below the announced minimum price due to excess production and glut in the market, government agencies purchase the entire quantity offered by the farmers at the announced minimum price.

Helping farmers to double agriculture income by 2022

Scheme Benefits:

- As per NITI Aayog study, MSP declared by the Government has encouraged 78 % of the farmers under the study for adopting improved methods of farming.

- Financial stability to poor farmers & gives minimum 50% margin of profit

Sl. No	Crops	Projected Cost* KMS 2020-21	MSP for Kharif 2020-21	Increase in MSP (Absolute)	Return over Cost (in %)
1	**Paddy (Common)**	1,245	**1,868**	53	50
2	**Paddy (Grade A)^**	-	**1,888**	53	-
3	**Jowar (Hybrid)**	1,746	**2,620**	70	50
4	**Jowar (Maldandi)^**	-	**2,640**	70	-
5	**Bajra**	1,175	**2,150**	150	83
6	**Ragi**	2,194	**3,295**	145	50
7	**Maize**	1,213	**1,850**	90	53
8	**Tur (Arhar)**	3,796	**6,000**	200	58
9	**Moong**	4,797	**7,196**	146	50
10	**Urad**	3,660	**6,000**	300	64
11	**Groundnut**	3,515	**5,275**	185	50
12	**Sunflower Seed**	3,921	**5,885**	235	50
13	**Soybean (yellow)**	2,587	**3,880**	170	50
14	**Sesamum**	4,570	**6,855**	370	50
15	**Nigerseed**	4,462	**6,695**	755	50
16	**Cotton (Medium Staple)**	3,676	**5,515**	260	50
17	**Cotton (Long Staple)^**	-	**5,825**	275	-

6. Prime Minister's Blue Revolution Scheme (Fishermen)

Why this scheme?

Fisheries is an important sector with varied resources and potential, engaging over 1.4 Cr people at the primary level and many more along the value chain across Inland & Marine.

India has potential resources in the form of rivers and canals (1.95 lakh km); floodplain lakes (7.98 lakh hectare); ponds and tanks (24.33 lakh hectare); reservoirs (29.26 lakh hectares) and brackish water (11.55 lakh hectares).

Country's long coastline of 8118 km with 2.02 million square km Exclusive Economic Zone (EEZ) and continental shelf area of 0.53 million sq.km provides a big opportunity for development & empowerment for fishermen.

This scheme is targeted to double fishermen income & to enhance food and nutritional security for India.

Scheme Benefits:

- Financial assistance to procure new Motor boats for fishermen who owns traditional craft boats (upto Rs 1.2 Lakhs, wooden boats (upto Rs 4 Lakhs INR)

- Safety kit for fishermen - consists of GPS, communication equipment, echo sounder ,lifejackets, lifebuoys, Distress Alert Transmitter(DAT), life-saving appliances, fish finder, backup battery, search & rescue beacon etc

- Discount on Sales Tax for High Speed Diesel for fishermen (for BPL) upto 500 Litres per fishing boat per month for 9 months/year.

- Financial assistance for fish transport infrastructure (refrigerated trucks, autorickshaw & motorbikes with icebox)

PAPER – II

UNIT- I: Indian Polity and emerging political trends across the world affecting India

1. Indian Foreign Policy

Foreign Policy

India's foreign policy is shaped by several factors including its history, culture, geography and economy, it is shaped on the basis of the requirements of 20th C and 21st G.

Our first Prime Minister, Jawaharlal Nehru, gave a definite shape to the country's foreign policy. So did Manmohan Singh. Presently PM Narendra Modi is steering it with a new outlook and his visits to about 90 countries gives India a new look. India's foreign policy from, the post-WW-II, Cold War period, has evolved from being pro-Soviet, contrasted to Western interests, to currently becoming a Western strategic partner and providing a counterweight to China.

Panchsheel (The Five Principles (Signed on April 28,1954) - It is the centre-piece of the Confidence and Security Building Measures (CSBMs).

- Respect to each other's territorial integrity and sovereignty
- Non-aggression against anyone
- Non-interference in each other's internal affair
- Equality and mutual benefit
- Peaceful co-existence. (Chinese intruded into the Indian territory 3 months after signing the agreement).

Non-alignment

Non-alignment, avoiding any politico-military alliance with USA or Soviet Union, {but taking an independent stand on international issues according to the merits of each case.) is regarded as one of the most important features of India's foreign policy.

Cold War was intense rivalry between USA and Soviet Union without fighting a direct war to attract allies in Africa, Asia and Latin America, it started soon after the Second World War and continued for 45 years These two big county blocs became two opposite poles known as East and West. The world politics revolved around these two poles-making the world bipolar.

Era of Globalization

Globalization and the rapid emergence of market economies all over the world, from Southeast Asia to Latin America, resulted in the spectacular emergence of regional cooperation, integration and the widespread emergence of market economies.

Post Cold War Foreign Policy

- India's search for its identity in the international order which is largely dominated by the US;
- An accommodation with the global nuclear order as the international system comes to terms with 'nuclear' India;
- India's balancing act of tackling the challenge of global terrorism without alienating its Islamic minority;
- And India's search for energy security to ensure its current rate of economic growth.

The Gujral Doctrine

This doctrine was an expression of the foreign policy initiated by Inder Kumar Gujral, the Foreign Minister in Deve Gowda Government which assumed office in June 1996. The Gujral Doctrine is a set of five principles to guide the conduct of foreign relations with India's immediate neighbours as spelt out by IK Gujral, first as India's External Affairs Minister and later as the Prime Minister.

These Principles are:

- With neighbours like Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka, India does not ask for reciprocity, but gives and accommodates what it can in good faith and trust.
- No South Asian country should allow its territory to be used against the interest of another country of the region.
- Non interference in the internal affairs of another.
- All South Asian countries must respect each other's territorial integrity and sovereignty.
- Settle all disputes through peaceful bilateral negotiations.

Digital Diplomacy

The consistent efforts to use of digital technologies and social media platforms to engage with the public has helped in shaping up the foreign policy narrative, communicating with the interlocutors, connecting with Indian diaspora, extending support in crisis situations and interaction with several partners. Indian diplomacy handle is also focused on creating a positive cultural narrative for Brand India. It follows an eclectic mix of content comprising of press statements, speeches, joint statements, appointments of new ambassadors, soft stories on Indian arts and culture, achievements by Indians across the world, bilateral and international relations, strides by India across various platforms as well as plethora of human-interest stories that captures the interests of its visitors and followers.

The Modi Doctrine

The foreign policy and the policy initiatives made towards other countries by the Indian government since Prime Minister Narendra Modi assumed office on 26 May 2014, is focused on improving relations with neighbouring countries in South Asia, engaging the extended neighbourhood in Southeast Asia and the major global powers.

The Doctrine: is one of "strategic incoherence", executed without an "overarching conceptual framework."

The Keys:

- Improving relations with immediate neighbours for peace and tranquility in South Asia for realising faster development.
- The concept of para diplomacy envisages each state and city to have liberty to forge special relation with foreign countries or federal states or even cities of their interest.
- Bilateral trade to improve relations with most countries except few important global powers with which India shares a strategic partnership.

Policy Initiative

Fast-track Diplomacy: (Three angles -proactive, strong and sensitive)

- Para Diplomacy
- Link West policy
- Asian Foreign Policy (*Act East policy contrary to India's previous "Look East Policy"); *South Asia policy; *West Asia policy; *Overseas Indian crisis)
- Neighbourhood first policy
- Indian Ocean outreach; Project Mausam (trade and cultural linkages and stress on future maritime cooperation). "Cooperation with Pacific Islands
- Forum for India-Pacific Islands cooperation: To partner with the region to advance their development and improve their quality of life.

Multilateral Engagements: India plays an active role in multilateral forums like UN, WTO, G20, East Asia Summit, BRICS summit. Commonwealth of Nations besides regional groupings like the BASIC, SCO, IORA, SAARC, BIMSTEC, etc

PM's Foreign Policy Team

Minister of External Affairs - Subrah-manyam Jaishankar

- Minister of State for External Affairs - V Muraleedharan
- Foreign Secretary - VK Gokhate
- National Security Advisor - Ajit Doval. PM's secondary aides also include Deputy NSA Advisors Rajinder Khanna (Rtd. IPS) and Pankaj Saran (IPS).

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2. National Recruitment Agency

✓ The Union Cabinet chaired by Prime Minister Modi has decided to set up a National Recruitment Agency (NRA).

✓ The proposed NRA will conduct a common preliminary examination for various recruitments in the central government.

✓ At present, candidates seeking government jobs have to appear for separate examinations conducted by multiple recruiting agencies for various posts.

✓ After the advent of the NRA, the whole process would be unified and will make the cumbersome process easy for students and the agencies.

National Recruitment Agency (NRA)

✓ NRA is a testing agency which would conduct the Common Eligibility Examination (CET) for non-gazetted Group B and C posts.

✓ Initially it will conduct the recruitment examinations for Railway Recruitment Boards (RRBs), Institute of Banking Personnel Selection (IBPS) and Staff Selection Commission (SSC) and would gradually expand its operations.

✓ National Recruitment Agency will be a Society registered under the Societies Registration Act,1860.

✓ The NRA will be a specialist body bringing the state-of-the-art technology and best practices to the field of Central Government recruitment.

✓ However, the present recruitment agencies i.e, IBPS, RRB and SSC will remain in place.

✓ Based on the screening done at the CET score level, final selection for recruitment shall be made through separate specialised Tiers (II, III, etc.) of examination which shall be conducted by these respective recruitment agencies.

The Process

✓ The examinations will be conducted in 12 languages and will be based on a common curriculum.

✓ There will be a common registration, single fee and gradually the candidates need not travel outside the district to appear for the examination.

✓ There will be a special focus on creating examination infrastructure in the 117 Aspirational Districts.

✓ A standardised question bank with multiple questions of similar difficulty levels will be created in a central server.

✓ An algorithm will be used to jumble and dole out different questions, so that each candidate receives a different question paper, reducing the chances of cheating and paper leakage.

✓ Scores will be generated quickly, delivered online and be valid for a three-year period.

✓ Students can write the test multiple times as long as they are within the eligible age limit, with their best score being taken into account.

✓ The test will be conducted for three levels i.e, graduate, higher secondary (12th pass) and the matriculate (10th pass) candidates.

The Need

✓ As of now, aspirants have to take different exams that are conducted by various agencies for central government jobs.

✓ According to the Department of Personnel and Training, on an average 2.5 crore to 3 crore aspirants appear for about 1.25 lakh vacancies in the central government every year.

✓ At present, candidates seeking government jobs have to appear for separate examinations conducted by multiple recruiting agencies for various posts.

✓ Candidates have to pay fees to multiple recruiting agencies and also have to travel long distances for appearing in various exams.

✓ Women candidates especially from rural areas face constraints in appearing in multiple examinations as they have to arrange for transportation and places to stay in places that are far away.

Benefits

✓ Aspirants **do not have to apply and appear separately for multiple recruitment** exams.

✓ They will be able to apply once for a single or multiple recruitment exams in various departments and take the Common Eligibility Test (CET).

✓ CET would significantly **reduce the lengthy recruitment cycle** as some of the recruitment departments might decide to skip their tier 2 or second level test and go ahead with the recruitment based on CET score followed by physical tests and medical examination.

✓ This will reduce the time taken by the agencies to hire the candidates.

✓ Candidates who clear CET once, will be eligible to attempt for the second level exam thrice (once every year).

- Currently, those who pass the PT and fail in Main exam (tier 2) have to again appear for the PT next year and start afresh.

- This way, CET will **save their time and energy and will also improve their quality** as they would devote their time for mains exam and not screening exam.

✓ Candidates will have the facility to give a **choice of centres** and they would be allotted the chosen centres, based on availability. They will be given an option to schedule their own tests at their choice centres.

- The ultimate aim is to reach a stage wherein candidates can schedule their own tests at Centres of their choice.

✓ Government has sanctioned a sum of Rs 1517.57 crore for the NRA. The expenditure will be undertaken over a period of three years.

✓ The cost will also be incurred for setting up exam infrastructure in 117 districts with large numbers of aspirants.

✓ The proposal is expected to ease the access to aspirants residing in rural areas.

✓ Candidates especially residing in **hilly and rural areas** will not have to incur additional expenses for travel, boarding, lodging to reach their exam centres that are usually far from their hometown.

✓ Single exam will reduce the financial burden on candidates.

✓ Girls generally depend on a guardian (father/brother/ husband) to accompany them in reaching their exam centres if it is far away from their hometown.

✓ The location of test centres in every district **would benefit the candidates, particularly women**.

✓ CET would be **available in a number of languages,** benefitting aspirants from different regions of the country. Presently, most of the exams are conducted in English and Hindi languages.

Challenges

✓ With growing emphasis on transferring services to the private sector, there may be fewer government jobs on offer in the future.

- ✓ Only 14% of public employment comes under the purview of the Centre (predominantly in railways & defence), with the rest falling within the purview of States.
- ✓ Similar reform is needed at State level.
- ✓ The long-term relevance of such reforms will depend on the commitment of governments to raise the level of public employment and expand services to the public.

Conclusion

- ✓ The NRA stands out as a unique model as it marks a paradigm shift in the government recruitment process.
- ✓ It's also in tune with the Modi government's mantra of **"Ease of Living for the Young Job Aspirants"** by facilitating ease of recruitment, selection and job placement.
- ✓ The NRA is a combination of convenience and cost-effectiveness for candidates.
- ✓ Moreover, the multiple recruitment examinations are a burden on the candidates, as also on the respective recruitment agencies, involving avoidable/repetitive expenditure, law and order, security related issues and venue-related problems.

UNIT- II : Role and impact of Science and Technology in the development of India

1. COVID-19

Outbreak, Impact, and Prevention

- ✓ The novel coronavirus outbreak in 2019-2020 with nickname COVID-19 is a new strain of viruses which can cause fever, cough, breathing difficulties, pneumonia and even death in humans.
- ✓ The new coronavirus – COVID-19 – was first identified in Wuhan, China in Dec 2019.
- ✓ The global outbreak of COVID-19 is still ongoing.
- ✓ The novel Coronavirus has affected more than 50,00,000 people all over the world and has resulted in more than 3,00,000 deaths.
- ✓ The World Health Organization (WHO) has declared the coronavirus outbreak 2019–20 a Public Health Emergency of International Concern (PHEIC) initially, and later declared it as a pandemic.

Coronaviruses

- ✓ **Coronaviruses** belong to a family of viruses called Coronaviridae and order Nidovirales.
- ✓ Coronaviruses get their name from their crown-like shape (corona is Latin for crown).
- ✓ They are found in animals and birds and are zoonotic – as they are transmitted between animals and people.
- ✓ Some types of coronavirus are dangerous for humans and result in severe diseases such as respiratory syndromes (**MERS** – Middle East Respiratory Syndrome and **SARS** – Severe Acute Respiratory Syndrome).

Novel Coronavirus (COVID-19)

- ✓ A new strain of the coronavirus that has not been identified previously is called a **novel coronavirus (nCov)**.
- ✓ **Coronavirus disease 2019** is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), a virus closely related to the SARS virus.
- ✓ The 2019-nCov has been given the official name as **COVID-19.**
- ✓ WHO declared COVID-19 infections as a public health emergency of international concern and later called it a pandemic.

- ✓ Though the novel coronavirus is highly infectious and spreads rapidly, the death rate is low – only about **3.7%.**

- ✓ However, because of the possibility of a global-scale infection, all possible steps should be taken to prevent the fast spreading of the outbreak.

- ✓ Most people recover from the COVID-19 infection within 28 days, when proper supportive care is given.

Viruses and Viral Infections

- Viruses are found everywhere and their origins are unclear.

- Viruses are neither dead nor alive, but to be considered inhabiting 'the edge of life'.

- They have a simple structure – a genetic material, DNA or RNA, surrounded by a protein called the capsid. Although viruses have genes, they don't have a cellular structure and hence **viruses cannot reproduce without infecting a cell**.

- Once inside, they assemble inside the cell and using the machinery of the host cell they produce copies of themselves.

- Release of the virus from the host cell causes bursting of its membrane and cell wall, thus killing the cell.

- ✓ Broadly viruses can be classified as **DNA virus and RNA virus** based on the genetic material within them.

- ✓ A DNA virus enters the **nucleus** of the host cell and using the cell's enzymes, it'll replicate the viral DNA.

- ✓ An RNA virus will inject the RNA into the **cytoplasm** (the material inside a living cell excluding the nucleus) to synthesize proteins and form replica viruses.

- ✓ Alternately the RNA can be converted to DNA using a process called reverse transcription.

- ✓ This DNA will be integrated with that of the host DNA in a process similar to a DNA virus.

Coronavirus Genome

- ✓ Coronavirus consists of an **RNA genome** and is one of the largest in the RNA family.

- ✓ Coronaviruses are enveloped and contain single-stranded positive-sense RNA.

- ✓ The RNA attaches to the host cell's ribosome for translation.

- ✓ Positive sense RNA can function as messenger RNA, meaning that viral RNA sequence may be directly translated into the desired viral proteins.

Origin and Transmission

- ✓ Coronaviruses originate in animals like camels and bats and are zoonotic diseases as it passes from animals to humans occasionally.

- ✓ The source of a zoonotic disease is called reservoir species. (For SARS, the reservoir species was identified as bats).

- ✓ The first known case of COVID-19 was reported in the Chinese city of Wuhan in December 2019 and was traced to an animal market in the city.

- ✓ Research is ongoing on how COVID-19 spreads. However, as per WHO, the disease spreads in humans via exposure to respiratory secretions – the small droplets from the nose or mouth of an infected person – either directly or indirectly.

- ✓ The basic reproduction number (R_0) is a measure of transmissibility that aims to describe the average number of people a new case will infect.

- ✓ For COVID-19, WHO estimates R_0 = **1.4 to 2.5**. However, many researchers think this figure is under-estimated.

- ✓ Compared to earlier outbreaks of SARS and MERS, COVID-19 has a greater global spread and researchers think that mutation in the virus strain is enabling it to be more efficiently transmitted.

Clinical Manifestations

- ✓ In humans, it affects the upper respiratory tract with varying severity.

- ✓ Respiratory infections ranging from the common cold to bronchiolitis. Pneumonia, gastroenteritis and neurological disorders can also occur.

- ✓ Other symptoms headache, chills, sore throat and cough.

- ✓ The incubation period is from 2 to 5 days and symptoms have a range of 3 to 18 days.

Prevention and Treatment

- ✓ No vaccine is currently available to prevent COVID-19.

- ✓ Avoiding exposure is the only way for prevention.

- ✓ Preventive actions include:

  - Avoiding close contact with infected people.

  - Avoiding touching eyes, nose, and mouth.

  - Staying home when infected and using a facemask.

  - Covering while coughing or sneezing.

  - Disinfecting frequently touched objects and surfaces.

- ✓ No specific antiviral treatment is recommended for COVID-19.

✓ Infected people should receive supportive care based on symptoms and for severe cases, treatment should support vital organ functions.

Other Human Coronaviruses

✓ Two other human coronaviruses, MERS-CoV and SARS-CoV were previously identified.

- **Middle East Respiratory Syndrome (MERS)**
- **Severe acute respiratory syndrome (SARS)**

2. 5G Technology

Introduction

5G is the fifth generation cellular technology that apart from increasing the downloading and uploading speed also reduces the latency.

Features of 5G Technology

1. **Millimeter wave spectrum** (30-300GHZ) advantage of sending large amount of data with little interference.

2. **Upgraded LTE**
   5G is the latest upgrade in the long term evolution (LTE) mobile broadband network.

3. **Internet Speed**
   20 Gbps compared to maximum internet speed in 4G recorded at 1 Gbps.

4. **Bands in 5G**
   5G works mainly in 3 bands namely the low, mid and high frequency spectrum.

5. **Reduced latency**
   The time taken by a network to respond is latency.

5G in India

1. AJ Paul raj committee to suggest roadmap for 5G adoption in 2017.

2. The committee has asked for setting up a standing committee with 5 years term to advice on building spectrum Technology infrastructure.

3. India a traditional late adopter of advanced technologies, still struggling to achieve the speed which 4G offers.

4. TRAI started the process of auctioning the 5G spectrum.

Applications of 5G

1. High speed mobile network
2. Entertainment and multimedia
3. Internet of things
4. Smart farming
5. Telemedicine services
6. Controlling of critical infrastructure and vehicles

Government Initiatives on 5G

1. National Electronics Policy 2019 which promotes emerging technologies like 5G, IOT, Artificial Intelligence.
2. Bharat Net project.
   Provides affordable broadband connectivity of 2 to 20 Mbps to all households.
3. National Telecom policy which aims to reach 100% tele density and high speed internet.
4. Government has created a corpus of 500 crores on research and development of 5G technology in India.

Challenges

1. Many old devices will need to be replaced as they are not supporting 5G.
2. In India average downloading speed is 9.12 Mbps which is very less to global average of 23.54 Mbps.
3. Development of infrastructure for 5G is very expensive.
4. New challenge to manage, analyze, store and protect data.
5. Number of users in India also poses huge challenge in terms of swift upsurge in mobile broadband consumption.

Way forward

Development of robust telecom infrastructure, making 5G financially viable and well defined data protection law are the roadmap for 5G technology in India.

3. ISRO

ISRO's Missions Programmes

ISRO Vision & Objectives
ISRO's vision is stated as "Harness space technology for national development while pursuing space science research and planetary exploration."

ISRO Mission:
- Design and development of launch vehicles and related technologies for providing access to space.

- Design and development of satellites and related technologies for earth observation, communication, navigation, meteorology and space science.

- Indian National Satellite (INSAT) programme for meeting telecommunication, television broadcasting and developmental applications.

- Indian Remote Sensing Satellite (IRS) programme for management of natural resources and monitoring of environment using space-based imagery.

- Space-based Applications for Societal development.

- Research and Development in space science and planetary exploration

Planned Missions of ISRO in the coming years
1- Chandrayan-3:
- It is expected to launch in 2021 and is a successor to the Chandrayan-2 mission.
- The mission will attempt a soft landing on the lunar surface and will have Lunar lander and rover.

- According to ISRO, the total cost of the Chandrayan-3 mission will be more than 600 crores.

- Chandrayaan-3: ISRO's another bid to land on Moon

2- Gaganyaan:
- India's first human spaceflight mission is expected to launch in the year 2021.

- The Gaganyaan orbital vehicle will carry three Indian astronauts to the low earth orbit — an orbit of 2,000km or less — for a period of five to seven days.

- The spacecraft is jointly made by ISRO and HAL.

- Gaganyaan: 12 potential astronauts selected for training in Russia

3- LUPEX:
- ISRO's Lunar Polar Exploration Mission in collaboration with JAXA (Japan Aerospace Exploration Agency) will be launched in the year 2024.

- The mission aims at obtaining the actual data related to the quantity and forms of water present on the surface of the Moon to determine the feasibility of utilizing such resources for sustainable space exploration activities in the future.

- India-Japan Moon Mission: All you need to know about the ISRO and JAXA's joint lunar mission

4- Aditya-L1:
- It is India's first solar mission and was expected to launch in the year 2020 but due to the COVID-19 pandemic, the launch has been delayed and is now expected in the year 2022.

- The mission aims at studying solar corona in visible and near IR bands.

- Aditya L1: Know Everything about ISRO's First Solar Mission

5- RISAT-1A:

- It is expected to launch in the year 2021 by ISRO.

- It is a radar-imaging satellite and will be similar to RISAT-1 satellite in terms of configuration.

- It is a land-based mission for terrain mapping and analysis of land, ocean and water surface for soil moisture.

- RISAT-2BR1 Launch: All you need to know

6- NISAR:
- NASA-ISRO Synthetic Aperture Radar (NISAR) is expected to be launched in the year 2022 by ISRO in collaboration with NASA (US Space Agency).

- It aims at studying global environmental change and natural disasters and will be the first dual-band (L & S) radar imaging satellite.

- NISAR satellite is likely to be the world's most expensive Earth-imaging satellite to date with an expected cost of $1.5 billion.

- The mission is expected to have a life of three years.

- NASA and ISRO jointly working on NISAR mission

7- Mangalyaan-2:

- Mars Orbiter Mission 2 (MOM 2) also called Mangalyaan 2 is expected to launch in the year 2024.

- It is India's second interplanetary mission to Mars by ISRO.

- It will consist of an orbiter and may include a lander and a rover.

- ISRO's Mars Orbiter captures an image of the largest moon of Mars

8- Shukrayaan-1:
- The inter-planetary mission is expected to launch in the year 2025 by ISRO in collaboration with CNES (National Centre for Space Studies; French Space Agency).
- It is a proposed mission to study the atmosphere of the planet Venus-- the second planet from Sun and the hottest planet of our solar system.

- In the year 2018, India and France issued a 'Joint Vision for Space Cooperation'.

4. Tamilnadu Cyber Security Policy 2020

Introduction

"Cyber Security are the techniques of protecting computers, networks, programs and data from unauthorized access or attacks that are aimed for exploitation". -
Definition of CERT – IN

MISSION

1. To protect information assets of Government and maximize their availability to Government and the citizens.
2. Develop a comprehensive security Risk Reduction strategy.
3. Establish enterprise approach to security policy and governance.
4. Establish security capabilities and infrastructure.
5. Foster a security awareness and adoption among the Government workforce.

Security Architecture Framework – Tamil Nadu (SAF – TN)

1. Cyber Security Architecture of Tamil Nadu
   i. Executed by ELCOT in association with centre for development of advanced computing.
   ii. Components of Cyber Security Architecture.
      1. Security Architecture Framework.
      2. Security operations Centre.
      3. Cyber crisis Management plan.
      4. Computer Emergency Response Team.

CERT - TN

1. Nodal agency for implementing of security Architecture Framework.
2. Monitoring, Detecting, Assessing and Responding to cyber Vulnerability and demonstrate cyber Resilience.
3. In compliance with National and state law.
4. CERT – TN shall act as a statutory body issuing guidelines to enforce cyber security practices to the Government Departments.
5. Co-ordination Centre shall be nodal intermediary between CERT – TN and Government Departments.
6. Security assessment of Department Assets.
7. Training and Awareness policy.
8. Proposes Cyber Crisis Management Plan for state.

Cyber Crisis Management Plan

1. To counter cyber attacks and cyber terrorism.
2. Proposed by CERT – IN Ministry of Electronics and Information Technology.
3. Establishes strategic framework and actions to prepare for, respond to a cyber incident.
4. Crisis Management Group is setup in each department with secretary to Government as Chairman.

Conclusion

The secure delivery of Government services will enable the State's Digital Transformation and manage a large gamut of information.

5.   Tamil Nadu Block Chain Policy 2020

Introduction

World countries like Estonia, Singapore have introduced Blockchain technology in governance to bring transparency and efficiency in governance.

Blockchain in e-Governance

1. Seamless data exchange between departments is critical to provide efficient service delivery. Smart contract enabled workflows and shared ledger can track inter departmental process.
2. Used as a source of authentication and verification.
3. Storing the digital copy of document in a Blockchain instead of a centralized server.
4. Exchanging encrypted inter departmental communication.
5. Maintain health records of citizens.

Objectives of Policy

1. To make Tamil Nadu a global leader in Blockchain technology.
2. Provide faster, efficient, secure and transparent delivery of services to the people .
3. To generate awareness about Blockchain Technology in executives of government.
4. Help create a thriving ecosystem like Blockchain entrepreneurs and community development.
5. To promote and encourage mars adoption and implementation of Blockchain technology in the state.

State wide Blockchain Backbone

1. This infrastructure would function as a single source of truth and trust anchor for all government processes and data.
2. It would be capable of creating and deploying blockchain applications for all departments.

Prioritization of Blockchain technology/Applications

1. Data integrity and audit trails for government data and documents.
2. Creating a portable digital identify and implementing privacy protection for resident of Tamil Nadu.
3. Securing government websites and portals from cyber security threats.
4. Securing land registration transaction.
5. Tracking agriculture produce and increasing Profitability of farmers.
6. Creating a secure healthcare platform.

Oversight Mechanism

1. **Tamil Nadu Block chain policy implementation committee**

   It would shape the vision of implementing Blockchain in Tamil Nadu and monitor the projects and create future roadmaps.

2. **Protocols and standard committee**

   It would create and enforce security, architecture coding and smart contract standards for operating government Blockchain application.

3. **Legal and Regulatory Committee**

   i. Makes recommendations on upgrading the regulatory framework to derive maximum benefit from Blockchain technology.
   ii. Defining a legal framework for arbitration and settling disputes arising from smart contracts.
   iii. Establish a clear data privacy policy and ensure citizen's right to privacy.

Conclusion

   The policy aims to strengthen Tamil Nadu Prowers in Blockchain technology and make it a leader globally and deliver citizen centric services faster, efficient and secure.

6. Tamil Nadu Safe and Ethical Artificial Intelligence Policy 2020

Introduction

   Artificial intelligence contribution to global economy at 13 trillion US dollars by 2030.
                                   - Mckinsey Institute report

Definition

   "It's the ability of a computer or a computer based robotic system to process information and produce outcomes in a manner similar to that of the thought process of humans in learning decision making and problem solving".

Characteristics of AI based systems

   i. Learning from experience
   ii. Knowledge based and Rule based reasoning
   iii. Image recognition
   iv. Complex problem solving with uncertainty
   v. Natural Language understanding

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Objectives of the policy

1. To provide a framework for inclusive, safe and ethical use of AI in Government domain to build fairness, equity transparency in AI assisted decision making system.
2. To establish guide lines for the evaluation of an AI system.
3. To train and skill people in Tamil Nadu in Artificial Intelligence.
4. To build a mature and self-sustaining Artificial Intelligence community.
5. To build a regulatory sand box that can be used for researching, building and deploying AI based applications.
6. To promote investments in Artificial intelligence in Tamil Nadu.

Major challenges to AI implementation (TAM – DEF Framework)

1. Transparency and Audit
2. Accountability and legal issues
3. Misuse protection
4. Digital Divide and Data Deficit
5. Ethics – Privacy and Data protection
6. Fairness and Equity

AI – Oversight Mechanism

i. Effective implementation of guidelines shall be monitored by safe and Ethical AI monitoring committee headed by chief secretary.

AI – Awareness, capacity Building and Training

1. Updating school and college curriculum.
2. Supporting large scale AI training and skill building for youth.
3. Awareness for public.
4. Government to setup experts group to identify application opportunities for Artificial Intelligence.
5. The Government would create an AI sand box for startups for encouraging innovation at the grass root level in Tamil Nadu.

Implementing Agency

1. Department of Information Technology of Government of Tamil Nadu shall co-ordinate the overall implementation of policy.
2. It shall also issue necessary guidelines and revisions to policy from time to time.
3. DEEP MAY Scorecard to make AI safe and Ethicat for people.
4. Centre of Excellence in Emerging Technologies (CEET) under the aegis of TNeGA. (Tamil Nadu e-Governance Fgency).

Conclusion

Artificial intelligence is estimated to boost the India's annual growth rate to double digit by 2035 and its estimated that about 70% of companies would be using AI by 2030.

7. Tamil Nadu Electronic & Hardware Manufacturing Policy

Vision

✓ To transform Tamil Nadu into an innovative and a globally competitive Electronics System Design and Manufacturing (ESDM) destination.

Mission

✓ Provide adequate infrastructure and supporting ecosystem to ESDM companies

✓ Attract global major ESDM players to invest in Tamil Nadu

✓ Incentivize home-grown start-ups in the ESDM sector both in the component and Original Equipment / product manufacturing subsectors

✓ Catalyse the growth of innovation led enterprises involved in the manufacturing of hardware products & solutions

✓ To develop the semiconductor fabrication (FAB) industry in Tamil Nadu

Objectives

✓ The following targets are set for Tamil Nadu Electronics & Hardware manufacturing policy:

- To increase Tamil Nadu's electronics industry output to USD 100 billion by 2025

- To contribute 25% of India's total electronic exports to the world by 2025

- To undertake skill training for more than 1,00,000 people (semi-skilled and skilled) by 2024 to meet the incremental human resource requirement projected by NSDC for Tamil Nadu in Electronics and Hardware Manufacturing sector

- To increase the level of value addition that is done in Tamil Nadu, especially across focus sectors such as Mobile Handsets, LED Products, Fabless Chip Design, PCBs, Solar Photovoltaic Cells, Medical Electronics, and Automotive Electronics

- To undertake a focused research and development program to achieve the above objectives, and foster an environment of research and innovation

- To foster a conducive environment for ESDM Start-ups, especially promoting the rapid growth of innovation-led technology enterprises involved in the design, development and manufacturing of technologically advanced solutions

- To attract at least two major FAB investments to Tamil Nadu in the next three years

Priority sectors

✓ Aligned to the National Policy of Electronics 2019, Government of Tamil Nadu shall provide special support for developing core competencies in the following sub sectors:

- Semiconductor fabrication (FAB)

- Assembly, Test, Marking and Packaging (ATMP)

- Fabless Chip Design

- Medical Electronics…etc..,

Policy-2020 aims to provide:

✓ 30-percent capital subsidy

✓ 50 percent grant for taking land on lease

✓ 5-percent interest grant for term loans

✓ Monthly financial aid for the first-time trainees in the sector for six months at the rate of Rs 4,000 for men and Rs. 6,000 for women.

The policy has identified districts in three categories for core investments:

✓ For investments worth Rs 200-500 crore- Capital subsidy in category A district would be 15 per cent, category B district would be 20 percent and category C district would be 25 percent.

✓ For investments over Rs 500 crore- Capital Subsidy in category A district would be 18 percent, B district would be 24 percent and C district would be 30 percent.

✓ For eligible projects in ELCOT /SIPCOT/ SIDCO or any government-owned industrial park in category C districts- The land allotment will be done at 50 percent subsidized rate for land up to 20 percent of EFA.

PAPER - II
UNIT- III : Tamil Society - Its Culture and Heritage

1. Keeladi

Introduction:

The work done by both Foreign and Indian Archaeologists, who shaped the field are to be recorded and recognized. The fathers of Indian Archaeology - Alexander Cunningham, Robert Bruce Foote, Lord Curzon, Sir John Marshall, Sir Mortimer Wheeler and other Indian scholars have done significant work in the field of excavation.

The Archaeological Survey of India as the central body regulates the various activities in the field of Archaeology while at the State level, the State Governments Archaeology Departments, Universities and other private organizations carry out excavations in their respective domain.

In Tamil Nadu, the Archaeological Survey of India, Southern circle; State Department of Archaeology; University of Madras; Tamil University, Thanjavur; Sharma Centre for Heritage Education; Sir Chandra Sekharendra Saraswathi Viswa Maha vidyalaya (Deemed   University) Enathur, Kancheepuram and Kerala University have undertaken excavations over the years and contributed significantly to the development of Archaeology in the State.

Archaeological Explorations

It was Dr. K.V. Raman, then at Southern Circle, Archaeological Survey of India in late 1950's undertook systematic village to village survey in Madurai, Tirumangalam, Melur and Periyakulam taluks and reported number of archaeological sites and remains. In 2006 Dr. K. Rajan and his students reported good number of sites along the Vaigai valley particularly in its upper reaches subsequent to the discovery of inscribed hero stones datable to early centuries of Common era at Thathappatti in Dindigul district and Pulimankombai in Theni district.

During the course of exploration by Archaeological Survey of India, about 293 sites all along the Vaigai river valley with various forms of antiquarian remains such as urn burials, menhirs, inscriptions, sculptures, and hero - stones, habitation mounds etc have been identified and documented. This includes both fresh discoveries and re - visitation of the earlier reported sites which revealed new findings hitherto unreported earlier.

Archaeological Excavations at Keeladi

The site Keeladi with the cultural deposit mound extending over a vast area of more than 110 acres, amidst the coconut groves, is located geographically between 9° 51.294'N northern latitude and 78° 11.696'E eastern longitude.

By road, it is 13 km East and South East of Madurai, a Temple city of Tamil Nadu. On the northern side of this potential mound runs the river Vaigai of 2 kms. On the East, exists the village Manalur having its kanmaai (lake) on its northern side and there by forming the north eastern

natural water source of the site. Similarly the village Agaram is located on the south eastern side of Keeladi archaeological mound. The western side of the site is engulfed by Kondagai village.

Key Findings – Keeladi Excavation (2017-2018)

Excavation work, during the fourth season had yielded 5820 antiquities with enough cultural traits in the form of structural activity (brick structures, terracotta ring wells, fallen roofing tiles with double holes and deeply finger pressed grooves to draw rain water).

Antiquities like few pieces of golden ornaments, broken portions, copper objects, iron implements, terracotta gamesmen (chessman), hop scotches, ear ornaments, spindle whorls, figurines and portions besides beads of terracotta, glass, semi-precious stones (agate, carnelian, crystal, etc.). Popular ceramic types like finer variety of Black and Red ware, Black ware, Black Polished ware, Red ware, Rouletted ware, few pieces of Arretines were also found. There are also enough numbers of graffiti sherds of both pre and post firing nature. A good number of Tamil Brahmi sherds also have been unearthed. All these finds clearly indicate the cultural richness of the ancient civilization of the Tamils of this region having its close proximity to the temple city Madurai.

Hence it becomes essential to continue to probe such cultural hidden treasures of Keeladi site in future and reveal the cultural wealth of the ancient Tamil society.

Keeladi 2600 Years Old Culture

The six carbon samples collected by the Department of Archaeology, Government Of Tamil Nadu, from the fourth season (2018) of excavations at Keeladi were sent to Beta Analytic Lab, Florida, USA for AMS dating and the reports have been received.

The dates of all six samples fall between the 6th century BCE and 3rd century BCE. The sample collected at the depth of 353 cm goes back to end of the 6th century BCE and another at the depth of 200 cm goes back to early 3rd century BCE. As there is a considerable deposit below the dated layer and also above the layers, the Keeladi cultural deposit could be safely dated between 6th century BCE and 1st century BCE.

Thus, the recent excavations and the scientific dates clearly suggest that the people were living in Tamil Nadu continuously for the past 2 lakhs years and the Keeladi excavation clearly ascertained that they attained the literacy or learnt the art of writing (Tamil-Brahmi) as early as 6th century BCE during Early Historic period.

Trace of Agrarian Society and Cattle Rearing

The species such as Cow/ Ox *(Bos indicus)*, Buffalo *(Bubalus bubalis)*, Sheep *(Ovis aries)*, Goat *(Capra hircus)*, Nilgai *(Boselaphus tragocamelus)*, Blackbuck *(Antilope cervicapra)*, Wild boar *(Suss crofa)* and Peacock *(Pavocr status)* were identified. Among the species, the cattle predominates the scene with 25%.

If we, put the ox, cow, buffalo and goat together it occupies almost 53%, there by indicating that they were predominantly cattle raising people.

The presence of antelope to the level of 6.66% and wild boar (1.33%) suggests that they were hardly domesticated. The availability of cut marks in some of the animals like antelope, goat and wild boar suggest that they consumed both goat, boar and antelope.

Structural Engineering

During the second season, a 13 m long wall with 3 courses of bricks was exposed.

Bricks of two sizes measuring 38x23x6 cm and 38x26x6 cm respectively were used in the construction.

Graffiti and Symbols

Among the available scripts of India, the Indus scripts is considered to be the earliest one and were 4500 years old. One kind of scripts that survived between the disappearance of Indus script and the emergence of Brahmi script is called as graffiti marks by the scholars. These graffiti marks are the one evolved or transformed from Indus script and served as a precursor for the emergence of Brahmi script. Therefore, these graffiti marks cannot be set aside as mere scratches. Like Indus script, these graffiti marks also could not be deciphered till date.

The symbols and graffiti are very much suggestive of the symbolic and codified expressions and communication of the megalithic and Iron Age people. In this context, the recovery of 1,001 graffiti sherds from Keeladi excavation recalls the preliminary writing expressions of the Iron Age people.

Tamili [Tamil-Brahmi]

As far as Tamil Nadu is concerned, the large number inscribed potsherds available next to graffiti is of the Tamili (Tamil-Brahmi) inscribed potsherds. The scholars called the Tamili (Tamil-Brahmi) script as Damili or ancient Tamil script. Majority of Early Historic sites excavated so far met with Tamili (Tamil-Brahmi) inscribed potsherds and a few of the sites yielded inscribed metal rings.

In Tamil Nadu, nearly 110 cave inscriptions were documented from 32 sites and these inscriptions were deciphered and well documented in the book by 'PADMASRI' Iravatham Mahadevan. At Keeladi, 56 Tamili (Tamil-Brahmi) inscribed potsherds were recovered from the excavation conducted by the Tamil Nadu State Department of Archaeology alone.

Handicrafts

In total, 17 pottery specimens were sent to the Earth Science Department of Pisa University, Italy through Vellore Institute of Technology for mineral analysis. The samples were analyzed and the results confirmed that water container and cooking vessels shaped out of locally available raw materials.

Interestingly, it is to be noted that two quadrants of adjacent trenches below the depth of 4 m revealed heaps of potteries of many cart loads. The occurrence of such large quantity clearly suggests that there could have been a pottery making industry at this site.

Life Style of Ancient People at Keeladi

The antiquities of Keeladi excavation really reflect the facts of the ancient life style of the society.

In fact, agriculture seems to be its prime occupation being supplemented by iron industry, carpentry, pottery making and weaving.

Precious Ornaments

The occurrence of seven gold ornaments, copper articles, beads of gems, more than 4000 beads of semiprecious stones, glass beads, shell bangles, ivory bangle pieces, comb and terracotta objects indicate the cultural richness and economic prosperity.

Gamesmen and Pastimes

Majority of the gamesmen recovered from excavations are of terracotta. In this context, Keeladi yielded 600 hop scotches. Even now the same game is prevalent in Madurai and other regions known as *Pandi or Nondivilayattu*. Dices were also recovered from the site. The occurrence of single and double holed terracotta discs represents that either they were used as wheel of the toy cart or twist disc game pieces. Apart from these, 80 chessmen of similar shape but in different sizes were collected from the excavation.

Commerce

The lengthy coastal stretch of the state really becomes the causative and favourable factors for the Trans-oceanic contacts of the Tamils with other parts of the world.

The commodities like pearl, gemstone, textile, steel, pepper and perfumes were exported to other countries from Tamil Nadu.

Similarly, gold, wines and horses were imported from the West.

Terracotta Images

Of the terracotta objects recovered from Keeladi excavation, 13 are of human images, 3 of animals, more than 650 represent gamesmen and 35 are of ear ornaments. Other than terracotta objects, the site also yielded jewellery pieces of gold and copper. Objects of iron were also recovered. But it is to be noted that this site didn't yield any objects meant for worship so far.

Findings

- ❖ Golden Ornaments,
- ❖ Broken Portions,
- ❖ Copper Objects,
- ❖ Iron Implements,
- ❖ Terracotta Gamesmen (Chessman),
- ❖ Hopscotches, Ear Ornaments Spindle Whorls,
- ❖ Images Portions Besides Beads Of Terracotta,

- ❖ Glass,
- ❖ Paste,
- ❖ Semiprecious Stones (Agate, Carnelian, Crystal, Etc.)
- ❖ Popular ceramic types like finer variety of Black and Red ware, Black ware, polished ware, Red ware, Rouletted ware, few pieces of Arretines.

There are also enough numbers of graffiti sherds of both pre and post firing nature. A good number of Brahmi shreds also unearthed. All these finds clearly indicates the cultural richness of the ancient civilization of the Tamils of this region having its close proximity to the temple city Madurai.

CONCLUSION

It becomes essential to probe such cultural hidden treasures of Keeladi site for some seasons and reveal the cultural wealth of the ancient society dating back to more than 2500 years before present.

PAPER - III
UNIT- I : Geography of India with special reference to Tamil Nadu

1. New Agricultural Laws

I - Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020

✓ **Introduced by:**

- Minister of Agriculture and Farmers Welfare, Narendra Singh Tomar

✓ **Background:**

- On 5 June 2020, The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Ordinance, 2020 was promulgated by the Union Cabinet.

✓ **Act:**

- It creates a national framework for contract farming through an agreement between a farmer and a buyer before the production or rearing of any farm produces.

✓ **Provisions:**

(a) Farming Agreement:

- The Act provides for a farming agreement between a farmer and a buyer prior to the production or rearing of any farm produce.

(b) Minimum Period of Farming Agreement:

- The minimum period of the farming agreement shall be for one crop season or one production cycle of livestock.

(c) Maximum Period of Farming Agreement:

- The maximum period of the farming agreement shall be five years.
- It also states that if the production cycle of any farming produce is longer and may go beyond five years, the maximum period of farming agreement may be mutually decided by the farmer and the buyer and explicitly mentioned in the farming agreement.

(d) Pricing of Farming Produce:

- The pricing of farming produce and the process of price determination should be mentioned in the agreement.
- For prices subjected to variation, a guaranteed price for the produce and a clear reference for any additional amount above the guaranteed price must be specified in the agreement.

(e) Settlement of Dispute:

- The Act provides for a three-level dispute settlement mechanism-- Conciliation Board, Sub-Divisional Magistrate and Appellate Authority.

✓ **Opposition**
- Farmers in contract farming arrangements will be the weaker players in terms of their ability to negotiate what they need
- The sponsors may not like to deal with a multitude of small and marginal farmers
- Being big private companies, exporters, wholesalers and processors, the sponsors will have an edge in disputes.

II - Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020
✓ **Introduced by:**
- Minister of Agriculture and Farmers Welfare, Narendra Singh Tomar

✓ **Background:**
- On 5 June 2020, the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Ordinance, 2020 was promulgated by the Union Cabinet.

✓ **Act:**

- It permits intra and inter-state trade of farmers' produce beyond the physical premises of Agricultural Produce Market Committee (APMC) markets and other markets notified under the state APMC Acts.

✓ **Provisions:**

(a) Trade of Farmers' Produce:

- The Act allows the farmers to trade in outside trade area such as farm gates, factory premises, cold storages, and so on. Previously, it could only be done in the APMC yards or Mandis.

(b) Alternative Trading Channels:

- It facilitates lucrative prices for the farmers via alternative trading channels to promote barrier-free intra-state and inter-state trade of agriculture produce.

(c) Electronic Trading:

- Additionally, it allows the electronic trading of scheduled farmers' produce (agricultural produce regulated under any state APMC Act) in the specified trade area.
- It will also facilitate direct and online buying and selling of the agricultural produce via electronic devices and the internet.

(d) Market Fee Abolished:

- As per the Act, the State Governments are prohibited from levying any market fee or cess on farmers, traders and electronic trading platforms for trading farmers' produce in an 'outside trade area'.

✓ **Opposition**

- **States will lose revenue as they won't be able to collect 'mandi fees' if farmers sell their produce outside registered APMC markets.**
- **What happens to 'commission agents' in states if entire farm trade moves out of mandis?**
- **It may eventually end the MSP-based procurement system.**
- **Electronic trading like in e-NAM uses physical 'mandi' structure.**
- **What will happen to e-NAM if 'mandis' are destroyed in absence of trading?**

III - Essential Commodities (Amendment) Act, 2020
✓ **Background:**

- On 5 June 2020, the Essential Commodities (Amendment) Ordinance, 2020 was promulgated by the Union Cabinet.

✓ **Act:**
- It is an act of Indian Parliament which was enacted in 1955 to ensure the delivery of certain commodities or products, the supply of which if obstructed owing to hoarding or black-marketing would affect the normal life of the people.
- This includes foodstuff, drugs, fuel (petroleum products) etc.

✓ **Powers of Central Government:**
- The Government of India regulates the production, supply, and distribution of a whole host of commodities it declares 'essential' in order to make them available to consumers at fair prices.
- The Government can also fix the MRP of any packaged product that it declares an 'essential commodity'.
- The Centre can add commodities in this list when the need arises and can take them off the list once the situation improves.
- If a certain commodity is in short supply and its price is spiking, the Government can notify stock-holding limits on it for a specified period.

✓ **Powers of State Government:**
- The respective State Governments can choose not to impose any restrictions as notified by the Centre.
- However, if the restrictions are imposed, traders have to immediately sell any stocks held beyond the mandated quantity into the market.
- This is done to improve supplies and brings down prices.

✓ **Amendment:**
- With the amendment in the Act, the Government of India will list certain commodities as essential to regulate their supply and prices only in cases of war, famine, extraordinary price rises, or natural calamities.
- The commodities that have been deregulated are food items, including cereals, pulses, potato, onion, edible oilseeds, and oils.

✓ **Stock Limit:**

- As per the amendment, the imposition of any stock limit on agricultural produce will be based on price rise and can only be imposed if there's-- a 100% increase in the retail price of horticultural produce and 50% increase in the retail price of non-perishable agricultural food items.

✓ **Calculation:**

- The increase will be calculated over the price prevailing immediately preceding twelve months, or the average retail price of the last five years, whichever is lower.

✓ **Opposition**

- Price limits for "extraordinary circumstances" are so high that they are likely to be never triggered.

- Big companies will have the freedom to stock commodities- it means they will dictate terms to farmers which may lead to less prices for the cultivators.

Intended Benefits Associated with These Bills

✓ The Bills aim to do away with government interference in agricultural trade by creating trading areas free of middlemen and government taxes outside the structure of **Agricultural Produce Market Committees (APMCs).**

- It will allow farmers an option to sell their produce directly to these new zones, without going through the middlemen and paying levies such as mandi fees.

✓ It sought to remove stock holding limits as well as curbs on inter-State and intra-State trade, and create a framework for **contract farming.**

✓ Also, these bills promote the creation of **Farmer Producer Organisations** (FPO) on a large scale and will help in creating a farmer-friendly environment for contract farming where small players can benefit.

✓ These bills may enable private players to invest in warehousing, grading and other marketing infrastructure.

✓ A combined effect of these bills will help in creating a **'One Nation, One Market' for agricultural produce.**

Swaminathan Committee recommendations

✓ The National Commission on Farmers (NCF) was constituted on Nov 18, 2004 under the chairmanship of Professor M.S. Swaminathan.

✓ The NCF submitted five reports through the period December 2004 - October 2006.

- ✓ **Recommendations**
    - Land Reforms,
    - Irrigation,
    - Credit And Insurance,
    - Food Security,
    - Employment,
    - Productivity of Agriculture and Farmer Competitiveness.
- ✓ The Odisha Cabinet has resolved to move the Union Government demanding implementation of the recommendations of the MS Swaminathan Committee regarding minimum support price (MSP) of all crops, for doubling the farmers' income.
- ✓ The decision comes in the wake of the on-going farmers' protest against the newly passed farm laws.
- ✓ The Odisha government has been working towards empowerment of farmers and is committed to doubling of farmer's income.

2. Tamilnadu New Industrial Policy 2021

Introduction

Tamil is one of the most advanced state in India. It's success is driven by a self sustained and self propelled industrial growth process.

Key facts

1. Second largest state economy in India.
2. Contributing to 8.4% of India's GDP.
3. Home to largest number of factories in India.

Progress and New Goals of Policy

1. Achieve annual growth rate of 15% in the manufacturing sector.
2. Attract investment worth of 135 billion US dollars between 2020 and 2025.
3. Create 2 million employment opportunities by 2025.
4. Increase the contribution of the Manufacturing sector to 30% of GSVA by 2030.
5. Achieve inclusive and balanced regional growth.

Pillars of Industrial Policy 2021

1. Infrastructure

i. The state has 57 SEZ (Special Economic Zones).

ii. SIPCOT is process of establishing Industrial parks in 15 districts.

iii. Tamil Nadu industrial corridors

Chennai – Bengaluru Industrial Corridor

Chennai – Kanyakumari Industrial Corridor

Tamil Nadu Defence Industrial Corridor

iv. Well connected Road infrastructure and power surplus state with installed capacity of 31,990 MW.

2. Focus on Sunrise Sectors

i. Automobile and Auto components
ii. Chemicals
iii. Electronics, Hardware, Heavy Engineering
iv. Leather and Textiles

3. Innovation and Ecosystem Development

i. SIPCOT to establish Industrial Innovation centres at Sriperumbudur and Hosur industrial parks.
ii. Research and Technology Adoption Fund.

4. Ease of Doing Business

i. Single window Facility under Tamil Nadu Business Facilitation Act and Rules in 2017-2018.
ii. Investor Facilitation Desk to provide guidance on procedural aspects of starting industries.
iii. "Yaadhum Oorae" dedicated portal for Non Resident Tamils.
iv. Biz Buddy – Tamil Nadu's industry help desk portal.

5. Incentives for Industries

i. Three categories of Districts
A Category Districts - Chennai , Tiruvallur, Kanchipuram, Chengalpet.
B Category Districts – Western Districts
C Category Districts – Southern Districts
ii. Investment Promotion subsidy
iii. Training, Land cost subsidy
iv. Interest Subvention
v. SGST reimbursement for Final products.
vi. Fixed capital subsidy
vii. Special incentives for logistics infrastructure

Policy Implementation

i. Implementing Agency – SIPCOT
ii. Inter Department committee shall serve as a recommendatory body to the cabinet for sanction of incentives.

Key achievements of Tamil Nadu

i. Tamil Nadu topped the Good Governance Index 2019.
ii. Ranked Second in State Investment Potential Index.
iii. Rank second in Growth, Innovation and Leadership Index.
iv. Chennai ranks second in terms of cities with high employabiling – India skills report 2019-2020.
v. Despite COVID – 19 state signed 55 MOU amounting to over Rs 40,719 Crores in investment.

Conclusion

The New Industrial policy supersedes the Tamil Nadu Industrial policy 2014 and will be valid till 31.03.2025. The policy aims to make Tamil Nadu the destination to invest, innovate and create products and services.

Fixed Capital Subsidy

'C' District (Backward Districts)

i. 12% for Large industries
ii. 15% for Mega industries
iii. 25% for Ultra Mega industries

This subsidy is given to promote inclusive growth across the state.

3. Tamilnadu MSME Policy 2021

- The CM also unveiled new MSME (Micro, Small & Medium Enterprises) Policy 2021 to provide a vital environment for MSMEs/startups. In this regard, the state government already set aside Rs.500 crore for upgradation and maintenance of Tamilnadu Small Industries Development Corporation Limited (TANSIDCO) estates.

Policy Target:

- To attract new investments worth Rs 2-lakh crore by 2025

Important Points:

- Several concessions including land at 50% discounted price, will be provided to the entrepreneurs starting ventures in the 22 industrially backward districts.

- The MSMEs capital subsidy will be increased to Rs 1.5 crore from the present Rs 50 lakh

- New MSMEs and start-ups will be exempted from approvals for establishment and operation for a period of three years based on self-certification. It is on the condition that

the unit should have mandatory approval within a period of one year from the expiry of the 3-year penod.

- The new policy has also enhanced ceiling for various subsidies provided to MSMEs
- plug & play facilities, plots and sheds will be developed and made available to them on short term lease.

TN signs 28 MoUs worth Rs 28,053 crore

- The state government of TN signed a total of 28 (MoUs) with a cumulative investment of Rs 28,053 crores across various sectors, including Electric Vehicles, Wind Energy, Auto Components, City Gas, Textiles etc. These MoUs will generate employment for 68,775 persons.

MoU:

- ✓ Five MoUs were signed under the Structured Package of Assistance. They are with:
  - Tata Electronics — Rs 4,684 crore (employment of 18,150);
  - Sun Edison — Rs 1,423 crore (1,907 persons);
  - Pegatron — Rs 1,100 crore (14,079 persons);
  - TI India — Rs 525 crore (1,813 persons)
  - BASF — Rs 345 crore (235 persons).

UNIT- II : Environment, Bio Diversity and Disaster Management

1.   Environment Impact Assessment Draft 2020

Recently, EIA Notification, 2006 has been amended in August 2020 to make processes more transparent and expedient. But in effect it has been severely criticized due to following reasons:

1. Removal of several activities from the purview of public consultation. A list of projects has been included under Category B2, expressly exempted from the requirement of an EIA. Such as, offshore and onshore oil, gas and shale exploration, hydroelectric projects up to 25 MW, irrigation projects between 2,000 and 10,000 hectares of command area, small and medium mineral beneficiation units, small foundries involving furnace units, some categories of re-rolling mills, small and medium cement plants, small clinker grinding units, acids other than phosphoric or ammonia, sulphuric acid, micro, small and medium enterprises (MSMEs) in dye and dye intermediates, bulk drugs, synthetic rubbers, medium-sized paint units, all inland waterway projects, expansion or widening of highways between 25 km and 100 km with defined parameters, aerial ropeways in ecologically sensitive areas, and specified building construction and area development

projects. There is apprehension that the exemption from EIA and public consultation for listed B2 category activity and expansion and modernization projects will seriously affect the environment, since these will be carried out without oversight.

2. A new provision for post-facto environmental clearance (where projects executed without prior clearance) was introduced. In a recent judgment early 2020, in the case of Alembic Pharmaceuticals Ltd vs Rohit Prajapati, the Supreme Court by also referring to Common Cause vs. Union of India judgment, struck down and condemned ex-post facto environmental clearance.

3. The notice period for public hearing has been cut from 30 days to 20 days. This will make it difficult to study the draft EIA report, more so when it is not widely available or provided in the regional language.

4. For project modernization and expansion, the norms in Notification2020 are liberal, with only those involving more than 25% increase requiring EIA, and over 50% attracting public consultation.

5. Under the proposed changes, project proponents need to submit only one annual report on compliance with conditions, compared to the existing two under 2006 notification.

6. The EIA Notification 2020 excludes reporting by the public for violations and non-compliance. Instead, the government will take cognizance of reports only from the violator-promoter, government authority, Appraisal Committee or Regulatory Authority.

2. Visakapattinam Gas Leak

✓ A major leak from a polymer plant LG Polymers near Visakhapatnam impacted villages in a five-km radius, leaving at least 9 people dead and thousands of citizens suffering from breathlessness and other problems in an early morning mishap that **raised fears of a serious industrial disaster.**

✓ The leak occurred early morning on May 7, 2020, at a private plastic making plant owned by LG Polymers Pvt Ltd, a part of South Korean conglomerate LG Corp.

✓ The chemical plant was closed due to the lockdown for a long time and attempts were made to restart the operation.

✓ During this course, some chemical activity got started in the tank and **a large amount of Styrene gas was leaked in surroundings.**

✓ The exact cause of this incident is still unknown and further investigations are going on.

✓ Fire engines, the police, and ambulances reached the area to control the situation.

- The trained chemical, biological, radiological, and nuclear (CBRN) defense team of NDRF rushed to the spot and evacuated 1,200 families to safe locations, and about 400 people were admitted to the hospital.
- The National Human Rights Commission of India issued a notice to the Andhra Pradesh government and the Centre following the leakage of poisonous gas.

Styrene and Its Impact

- **Styrene** is a flammable liquid that is used in the manufacturing of polystyrene plastics, fiberglass, rubber, and latex.
- It is also found in vehicle exhaust, cigarette smoke, and in natural foods like fruits and vegetables.
- A short-term exposure to the substance can result in respiratory problems, irritation in the eyes, irritation in the mucous membrane, and gastrointestinal issues.
- Long-term exposure could drastically affect the central nervous system and lead to other related problems like peripheral neuropathy.
- It could also lead to cancer and depression in some cases, though there isn't much evidence to indicate there may be an association between styrene exposure and an increased risk of leukemia.
- Styrene is included in the schedule of the **Manufacture, Storage and Import of Hazardous Chemical Rules, 1989.** The rules lay down strict norms on how it should be handled and stored.

Role of NGT

- The National Green Tribunal slapped an interim penalty of Rs 50 crore on LG Polymers India, and sought response from the Centre and others for the "damage to life, public health, and environment".
- The National Green Tribunal (NGT) took suo-motu cognizance of the matter
- It formed a committee under a retired judge of the Andhra Pradesh high court to inspect the site and determine the cause of the incident, the damage caused to life, environment and health, and steps to compensate victims.
- In its order, the NGT directed the application of a **strict liability principle** for damage to the people and the environment.

Laws to Protect Against Chemical Disasters in India

Laws Before and During Bhopal Gas Tragedy (1984):

- ✓ At the time of the **Bhopal gas tragedy**, the Indian Penal Code (IPC) was the only relevant law specifying criminal liability for such incidents.

Laws After Bhopal Gas Tragedy (1984):

- ✓ **Bhopal Gas Leak (Processing of Claims) Act, 1985:**
  - It gives powers to the central government to secure the claims arising out of or connected with the Bhopal gas tragedy.
  - Under the provisions of this Act, such claims are dealt with speedily and equitably.

- ✓ **The Environment Protection Act, 1986:**
  - It gives powers to the central government to undertake measures for improving the environment and set standards and inspect industrial units.

- ✓ **The Public Liability Insurance Act, 1991:**
  - It is an insurance meant to provide relief to persons affected by accidents that occur while handling hazardous substances.

- ✓ **The National Environment Appellate Authority Act, 1997:**
  - Under this Act, the National Environment Appellate Authority can hear appeals regarding the restriction of areas in which any industries, operations or processes or class of industries shall not be carried out or shall be carried out subject to certain safeguards under the Environment (Protection) Act, 1986.

- ✓ **National Green Tribunal, 2010:**
  - It provided for the establishment of the **National Green Tribunal** for effective and expeditious disposal of cases related to environmental protection and conservation of forests.

3. World Environment Conferences

Note: Refer EVS Notes

UNIT- III : Indian Economy - Current economic trends and impact of global economy on India

1. Atmanirbar Abhiyan

Aatmanirbhar Bharat Abhiyaan

- Aatmanirbhar Bharat Abhiyaan supports Indian economy in fight against COVID-19
- The clarion call given by the Hon'ble PM to use these trying times to become Atmanirbhar (self-reliant)

The Five pillars of Atmanirbhar Bharat focus on:

1. Economy
2. Infrastructure
3. System
4. Vibrant Demography
5. Demand

The Five phases of Atmanirbhar Bharat are:

- Phase I: Businesses including MSMEs
- Phase II: Poor, including migrants and farmers
- Phase III: Agriculture
- Phase IV: New Horizons of Growth
- Phase V: Government Reforms and Enablers

S.NO	ITEM	(Rs. Cr.)
1.	Part 1	5,94,550
2.	Part 2	3,10,000
3.	Part 3	1,50,000
4.	Parts 4 and 5	48,100
	Sub-Total	11,02,650
5.	Earlier Measures incl PMGKP	1,92,800
6.	RBI Measures (Actual)	8,01,603
	Sub Total	9,94,403
	GRAND TOTAL	20,97,053

Stimulus provided in Part-1	(Rs Crore)
Emergency W/C Facility for Businesses, incl MSMEs	3,00,000
Subordinate Debt for Stressed MSMEs	20,000
Fund of Funds for MSME	50,000
EPF Support for Business & Workers	2,800
Reduction in EPF rates	6,750
Special liquidity Scheme for NBFC/HFC/ MFIs	30,000
Partial credit guarantee Scheme 2.0 for Liabilities of IBFCs/MFIs	45,000
Liquidity Injection for DISCOMs	90,000
Reduction in TDS/TCS rates	50,000

Stimulus provided in Part-2	(Rs Crore)
Free Food grain Supply to Migrant Workers for 2 months	3,500
Interest Subvention for MUDRA Shishu Loans	1,500
Special Credit Facility to Street Vendors	70,000
Housing CLSS-MIG	5,000
Additional Emergency WorkingCapital through NABARD	30,000
Additional credit through KCC	2,00,000

Stimulus provided in Part-3	(Rs Crore)
Food Micro enterprises	10,000
Pradhan Mantri Matsya Sampada Yojana	20,000
TOP to TOTAL: Operation Greens	500
Agri Infrastructure Fund	1,00,000
Animal Husbandry Infrastructure Development Fund	15,000
Promotion of Herbal Cultivation	4,000
Beekeeping Initiative	500

Stimulus provided in Part-4 & 5	(Rs Crore)
Viability Gap Funding	8,100
Additional MGNREGS allocation	40,000

PH: 044-24339436, 42867555, 9840226187

MINISTRY OF
PETROLEUM AND NATURAL GAS

#AatmaNirbharBharat

MOVING TOWARDS A SELF-RELIANT INDIA
5 pillars of Aatmanirbhar Bharat

ECONOMY
Moving foward by Leaps, not steps

INFRASTRUCTURE
Ushering in a modern India

SYSTEM
Technology driven systems at par with ambitions of 21st century

DEMOGRAPHY
Youth centric vibrant demography

DEMAND
Increase in demand to be at par with strengthening of supply chain

Hon. Prime Minister
Shri Narendra Modi

#IndiaFightsCorona

/PetroleumMinIndia   /PetroleumMin

3RD TRANCHE OF ECONOMIC STIMULUS: KEY MEASURES

- Setting up of Rs 1 lakh cr agriculture fund for farm-gate infrastructure
- Rs 4,000cr for herbal cultivation in India
- Rs 10,000cr scheme for formalisation of micro food enterprises (MFE)
- Rs 20,000cr for fishermen through Pradhan Mantri Matsya Sampada Yojana
- Animal Husbandry Infrastructure Development fund worth Rs 15,000cr
- Rs 500 crore scheme for infrastructure development related to bee-keeping
- Amendments to Essential Commodities Act to enable better price realisation for farmers
- Agriculture marketing reforms to provide marketing choices to farmers
- Extension of 'Operation Greens' to all fruits and vegetables
- Legal framework to help farmers fix their own price for products
- Launch of National Animal Disease Control Programme for foot and mouth disease with outlay of Rs 13,343cr

SELF-RELIANT INDIA CAMPAIGN

The second set of measures under the ₹20 lakh crore Covid-19 economic stimulus package focuses on migrant workers, street vendors, small farmers, the urban poor

MIGRANTS

₹3,500 cr
Free food grain for migrants

80 million
migrants to get 5kg wheat/rice per person and 1kg pulse per family for the next 2 months

One nation, one ration scheme: PDS cards can be used in any ration shop in any part of country; 670 million beneficiaries in 23 states

AFFORDABLE HOUSING

- Converting government-funded housing to affordable housing complexes
- Incentivising industries to build housing complexes on own land
- Incentivising govt agencies to develop such housing complexes

FARMERS

₹30,000 cr
Additional emergency working capital funding through NABARD to benefit 30 mn small and marginal farmers

₹2 lakh cr
Concessional credit boost through Kisan Credit Cards to help 25 million farmers and fishermen

STREET VENDORS

₹5,000 cr
Special credit facility for street vendors for easy access to credit; 5 million street vendors expected to benefit

JOB CREATION

₹6,000 cr
of CAMPA funds to be used to create job opportunities in urban, semi-urban and rural areas

FOR FAMILIES

₹70,000 cr
boost to housing sector through Credit Linked Subsidy Scheme (CLSS); those with ₹6-18L income to benefit

MUDRA LOANS

₹1,500 cr
Relief for MUDRA-Shishu loans-holders. Govt to provide interest subvention of 2% for a period of 12 months

Booster dose

The third tranche of the measures announced under the **Atmanirbhar Bharat Abhiyan** focuses on agriculture and allied activities

- Funds worth **₹1 lakh crore** to be given to agricultural cooperative societies, farmer producer organisations and start-ups for boosting farm-gate infrastructure

- **₹10,000 crore** for formalisation of micro-food enterprises; cluster-based farming approach to be followed

- **₹20,000 crore** for fishermen under PM Matsya Sampada Yojana; expected to pave way for additional fish production of 70 lakh tonnes over 5 years

- **₹13,000 crore** drive to achieve 100% vaccination of cattle, buffalos, sheep, goats and pigs

A farmer carries strawberries after harvesting them in Srinagar on Friday. ▪ NISSAR AHMAD

- **₹15,000 crore** boost for animal husbandry infrastructure

- **₹4,000 crore** for promotion of herbal cultivation; 10 lakh hectares to be covered

- **₹500 crore** for beekeeping initatives

- Essential Commodities Act, 1955, to be amended to de-regulate **cereals, edible oils, oilseeds, pulses, onion and potato**

- Marketing reforms to be undertaken to provide adequate choice for **farmers to sell produce** at prices of their choice

Finance Minister Nirmala Sitharaman announced a set of structural reforms across sectors as a part of the efforts to boost a sagging economy

COAL
Commercial mining on a revenue sharing basis to be introduced. Companies in the private sector will be allowed to carry out exploration

MINERALS
Composite exploration-cum-mining-cum-production regime for minerals to be announced. 500 mining blocks will be auctioned

DEFENCE
A list of weapons/platforms for ban on import will be notified. FDI limit in manufacturing under automatic route to be raised to 74%

CIVIL AVIATION
Restrictions on utilisation of the airspace will be eased so that flying becomes efficient. Now, only 60% of the airspace is freely available

POWER
Power departments/utilities and distribution companies in U.T.s to be privatised. It will be in line with the tariff policy which is to be announced
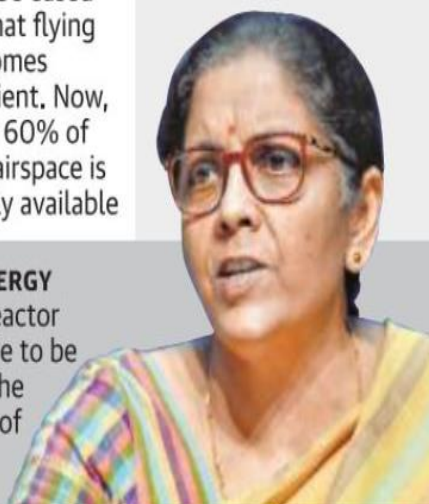
SPACE
Privatisation to be introduced. Planetary exploration, outer space travel to be opened to the private sector

ATOMIC ENERGY
Research reactor in PPP mode to be set up for the production of medical isotopes

2. Role of RBI in post COVID 19 Recovery

✓ After the Government's announcement of **Pradhan Mantri Gareeb Kalyan Yojana**, the **Reserve Bank of India's Monetary Policy Committee (MPC)** has come out with its own measures to help deal with economic fallout of **COVID-19 pandemic.**

✓ This was the first time that the MPC met outside its bi-monthly meeting calendar.

RBI's Measures

✓ **Cut in Repo Rate**

- The repo rate has been cut by 75 basis points (bps) from 5.15% to 4.40%.

- Repo Rate is the rate at which a country's central bank (RBI) lends money to commercial banks. Ideally, a low repo rate should translate into low-cost loans for general masses.

- The rates have been cut to **encourage banks to lend more** and to revive growth.

✓ **Cut in Reverse Repo Rate**

- The ratio has been cut by 90 bps to 4%.

- Reverse repo rate is the rate at which the central bank of a country (RBI) borrows money from commercial banks within the country.

- The higher reduction in the reverse repo rate was aimed at **prompting banks to lend more rather than keeping their excess liquidity with the RBI.**

✓ **Macroeconomic Indicators**

- The MPC refrained from giving growth and inflation projections, given the uncertainty in the situation.

- Growth outlook will depend on the **intensity, speed, and duration** of the pandemic. This clearly highlights downside risks to growth from a prolonged lockdown.

✓ **Moratorium on Repayments of Loans**

- RBI has also allowed banks to **defer payment of Equated Monthly Installments (EMIs)** on home, car, personal loans as well as **credit card dues for three months till May 31.**

- The RBI also allowed lending institutions, banks to **defer interest on working capital repayments by 3 months —** a move aimed at addressing the distress among firms as production is down.

    A working capital loan is a loan that is taken to finance a company's everyday operations.

- A **moratorium** is not a loan waiver and does not offer any discount on interest payout.

- But it provides stressed customers **extra time to repay** without their accounts being labelled **non-performing assets (NPA)** or their credit score being affected - a major worry for small and medium businesses.

- **Impact on Banks:**
    - For banks and lending institutions, this will affect their cash flows as they may not be getting repayments for three months.
    - But the RBI has reduced their cash reserve ratio (CRR) requirements, providing them additional liquidity.

✓ **Liquidity Infusion of Rs. 3.74 lakh crore - 3.4% of GDP**

- Through measures that pertain to **Targeted Long-Term Repo Operations (TLTRO)** of up to ₹1 trillion, a 100-bps cut in Cash Reserve Ratio (CRR) and

easier borrowing requirements under the Marginal Standing Facility (MSF) window.

- TLTRO will provide financing to credit institutions.
- **CRR** is the amount of money banks need to set aside with RBI as a buffer and do not earn any interest on it. CRR has been **cut to 3% from 4%.**
- Under the **Marginal Standing Facility (MSF)** window, banks can borrow funds from the RBI by pledging government securities within the limits of Statutory Liquidity Ratio (SLR).
- The RBI has increased accommodation under the marginal standing facility from 2%of SLR to 3%.

✓ There will be more to do as the crisis evolves; governments and regulators are reacting to events, as opposed to being proactive, simply because this is a kind of crisis that they have not dealt with before.

✓ The priority is to undertake strong and purposeful action in order to minimise the adverse macroeconomic impact of the pandemic.

Economic Impact of the Pandemic

✓ According to the **International Monetary Fund (IMF)** chief Kristalina Georgieva, the **world has entered a recession** that will be worse than the one in 2009, following the global financial crisis.

- Recession implies significant decline in general economic activity.

✓ **Moody's Investor Service (a rating agency) has reduced its GDP growth forecast for India to 2.5% in 2020** - a sharp drop from an earlier projection of 5.3%, due to the impact of the COVID-19 pandemic and the resultant lockdown.

- At the low growth rate of 2.5% in 2020, India may see a sharp fall in incomes, further weighing on domestic demand and the pace of recovery in 2021.
- The lockdown in India has brought business activity in most sectors of the economy to a halt and resulted in thousands of job losses.

✓ The ratings agency expects the country's economy to recover in **2021,** estimating a **growth rate of 5.8%,** but warned that uncertainty regarding the virus's spread and containment makes it difficult to fully assess the **economic toll** of the crisis.

✓ **India grew at 5% in 2019.**

- ✓ The **G20 countries** are likely to see an overall contraction of GDP by 0.5%. G20 GDP growth rate, which was 2.6% in 2019, is likely to recover to 3.2% in 2021.
- ✓ The U.S. economy would contract by 2% in 2020, while the Euro area would see a 2.2% contraction.
- ✓ China's economic growth rate is expected to slow to 3.3%, although it is expected to recover to 6% in 2021.

3.   Garib Kalyan Rozgar Yojana

- ✓ 'Garib Kalyan Rojgar Abhiyaan' is a massive rural public works scheme of Government of India to empower and provide livelihood opportunities to the returnee migrant workers and rural citizens.
- ✓ The Abhiyaan was launched on 20th June, 2020 from Village – Telihar, Block- Beldaur of Khagaria District of Bihar.

Objectives

- ✓ The objectives of this 125 days Abhiyaan, with a resource envelop of Rs. 50,000 Crore are:
  - Provide livelihood opportunities to returning migrants and similarly affected rural citizens
  - Saturate villages with public infrastructure - Anganwadis, Panchayat Bhawans, and Community Sanitary Complexes etc.
  - Set stage for enhancing longer term livelihood opportunities.

Coverage

- ✓ A total of 116 Districts with more than 25,000 returnee migrant workers across six States, namely Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand and Odisha have been chosen for the campaign which includes 27 Aspirational Districts.
- ✓ These districts are estimated to cover about 2/3 of such migrant workers.

Duration of the scheme

- ✓ Garib Kalyan Rojgar Abhiyaan (GKRA) operational for a period of 125 days, from 20th June, 2020.

Intended Beneficiaries

- ✓ Returnee migrant workers and similarly affected rural population of 6 States namely Bihar, Jharkhand, Odisha, Rajasthan, Madhya Pradesh and Uttar Pradesh.

Focus on 25 Works

- ✓ Abhiyaan involves intensified and focused implementation of 25 target driven works to provide employments and create infrastructure in the rural areas of 116 Abhiyaan Districts with a resource envelope of Rs 50,000 crore.

- ✓ Following is the list of 25 works & activities from participating Ministries /Departments.

  - Community Sanitary Complexes
  - Gram Panchayat Bhawans
  - Works under Finance Commission funds
  - National Highway works
  - Water conservation & Harvesting works
  - Wells
  - Plantation works (including CAMPA Funds)
  - Horticulture
  - Anganwadi Centers
  - Rural housing works (PMAY-G)
  - Rural connectivity works (PMGSY)& Border road works
  - Railway works
  - Shyama Prasad Mukherjee RURBAN Mission
  - PM KUSUM works
  - Laying of Optic Fiber under Bharat Net
  - Works under Jal Jeevan Mission
  - PM Urja Ganga Project
  - Training through KVK for Livelihoods
  - Works through District Mineral Fund
  - Solid and liquid waste management works
  - Farm ponds
  - Cattle sheds
  - Goat Sheds
  - Poultry sheds
  - Vermi-composting

The key to success is to focus our conscious mind on things we desire, not things we fear.