Academic Qualification Framework Degree Framework

Three core levels are there of qualifications within the higher education system in our country. Basically these are comprise of: Bachelor Undergraduate level Master's or Post-graduate level Doctoral or Pre-doctoral level Diploma courses are now available at the undergraduate and postgraduate level. In the case of undergraduate level, it may differs between one to three years in length, postgraduate diplomas are generally awarded after one year's study.

Bachelor's degree in arts, commerce and sciences is three years of education (after 12 years of school education). In various places honours as well as special courses are also there. These are no longer in case of time duration but shows greater depth of study. Bachelor degree in professional area of study in agriculture, dentistry, engineering, pharmacy, technology and veterinary medicine generally take four years, while architecture and medicine. It takes five and five and a half years respectively. There are other bachelor degrees in education, journalism and librarian-ship that are second degrees. Bachelor's degree in law can either be taken as an integrated degree for five years or three-year course as a second degree. Master's degree is generally of two-year I duration. It could be coursework without thesis or research in isolation.

Admission to postgraduate programmes in engineering and technology is done on the basis of Graduate Aptitude Test in Engineering or Combined Medical Test respectively. A pre-doctoral programme-Master of Philosophy (M. Phil) is taken after completion of the Master's Degree. This can either be exclusively research based or can comprise course work as well PHD is awarded two year after the M. Phil or three years after the Master's degree. Students must need to quote a relevant thesis on the basis of original research.

Central Universities

1. Indira Gandhi National Open University also known as IGNOU instituted in the year 1985 to initiate and nurture the Open University and distance education system. The major objectives are widening of access to higher education. IGNOU programmes telecast on Doordarshan Network six days a week. Its jurisdiction is through out the oountry. It can set up Study Centres outside the country. This was allowed vide amendment of the IGNOU Act in the year 1997. Distance Education Council i.e.. DEC under IGNOU has the accountability for co-ordination and maintenance of standards in open and distance education system in the country.

2. University Of Hyderabad, instituted in 1974 for post-graduate teaching and research, 20 Km from the City of Hyderabad on the Old Hyderabad-Bombay road. It has a City campus-The Golden Threshold-the residence ofthe late Sarojini Naidu. The University has Eight Schools of Studies and a Centre for Distance Education offering post-graduate diploma in five disciplines.

*3. University or Delhi, i*nstituted in February 1922 as a unitary and residential university. It has 14 faculties, 82 teaching departments and 78 colleges spread over national Capital Territory of Delhi. A new State University-Indraprashtha Vishwavidhlaya bas come up in Delhi as an affiliating University.

4. Mahatma Gandhi Antarrashtriya Hindi Visbwavidyalaya, Wardha Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya Act (at Wardha) was passed by the Parliament in December, 1996. It came into existence with effect from 29th December 1997. It has

international cbaracter. Four schools proposed under this University. For the time being the University is operating from its temporary office at Delhi.

5. Babasaheb Bhimrao Ambedkar University, Lucknow instituted 8S a State University in 1994 at Lucknow, it was notified as a Central University on 10th January 1996. It aims to provide instructional and research facilities in new and frontier areas of learning. Has three schools and three centres (School of Ambedkar Studies, School for Information Science and Technology and School fo: Environmental studies and Centre for Rural Technology, Centre for Vocational Studies and Centre for Human Rights.). Pondicherry University instituted in 1985 8S a teaching-cum affiliating university. It has jurisdiction over the Union Territory of Pondicherry and Andaman and Nicobar Islands. It also has a Community College. Affiliated institutions of which 13 are located in Pondicherry, 3 in Karaikal, 2 in Mahe. 1 in Yanam and 3 in Andaman & Nicobar Islands.

6. Visva Bharati, Santiniketan It is an unitary teaching and residential University. Established by Guru Rabindranath Tagore. Incorporated as a Central University by t. He Visva Bharati Act, 1951. Itsjurisdiction is restricted to the area known as Santiniketan in the District of Birbhum, West Bengal. It imparts education from the Primary School level to Post-Graduate and Doctorate levels. It has 12 institutes-8 at Santiniketan, 3 at Sriniketan and 1 at Kolkata. Rural Segment of the University (Sriniketan) created CAREER (Centre for Advanced Rural Education, Extenuation and Research) and CSV (Centre for Science in Villages). For inculcating facilities in the housing technology Nirman Bhawan (Building Centre) was instituted under the sponsorship of HUDCO.

7. Millia lslamia, Jamia Nagar, New Delhi Functioned 8S a Deemed University since 1962. Acquired status of a Central University in December, 1988 by an Act. Of Parliament Imparts education from Nursery stage to post-Graduate & Doctorate levels. It has six Faculties and Eight Centres and Five Schools. AJ, Kidwai Mass Communication Research Centre (AJKMCRC) provided training at Post-graduate level in Mass Communication, producing educational material on different educational subjects for the UGC, INSAT Programme.

8. Aligarh Muslim University, Aligarh instituted in 1920 8S a fully residential Central University. It comprises four Hospitals, six Colleges (consisting Medical, Dental and Engineering Colleges), two Polytechnics and eight Schools. Offers six diploma courses exclusively for women. 18562 students (consisting school strength) were in rolls.

9. Banaras Hindu University, Varanasi established in the year 1916 as a teaching and residential University. It consists of three Institutions-Institute of Medical Sciences, Institute of Technology and Institute of Agricultural Sciences. It has faculties with 121 academic departments and 4 interdisciplinary schools. It maintains a constituent Mahila Mahavidyalaya and three School level institutions. 10000 Bedded Modern Ayurvedic Medicine Hospital. Jawahar La! Nehru University, New Delhi It came into existence in 1969. It is primarily concerned with Post-graduate Education and Research. It has 7 schools consisting of 24 Centres of Studies and a individual Centre for Bio- Technology.

10. Maulana Azad National Urdu University: The University Act was passed by the Parliament in 1997 and it came into existence on 9th January, 1998. Its Administrative Office has been set up at Hyderabad. It has Regional Officers at Delhi, Patna and Bangalore. Itsaim is to enrich and develop Urdu language and to impart vocational and technical education in Urdu medium through conventional and distance education system.

11. ASSAM University, Dorgakona, Assam instituted as a teaching-cum-affiliating University on 21.1. 1994. Though the act was passed in 1989. It has Jurisdiction over the districts of Cachar, Karimganj, Karhi, anglong and Hailakandi in the State of Assam.

12. Nagaland University, Kohima instituted as a teaching-cum-affiliating University on 6.9. 1994. Though the act was passed in 1989. Its Headquarters is at Lumami, Nagaland. It has its jurisdiction over the entire State of Nagaland. It has 39 colleges affiliated. It has campuses in Kohima, Lumami and Medsiphema (School of Agricultural Sciences and Rural Development-SASRD), 25 Departments and 4 Schools of Studies. Tezpur University, Nappam, Assam A non affiliating unitary Central University set up in 1994 under an Act of Parliament, Tezpur University Act, 1993. The objective is to provide employment oriented and inter-disciplinary courses, mostly at post-graduate level. It comprises of 11 Departments under 4 schools of studies and 6 centres of Studies.

13. North-Eastern Hill University, Shillong instituted in 1973 at Shillong by an Act of Parliament. North Eastern Hill University Act, 1973. It has a Campus at Aizwal and a centre in Tura. Its jurisdiction is over the States of Meghalaya, Arunachal Pradesh and Mizoram. Its Headquarters at Shillong. Post-graduate Departments and four Centres of Studies under its six schools of studies and an under-graduate college. It has 58 Under graduate Colleges and 8 professional course colleges and North-Eastern Regional Institute of Science and Technology (NERJST) affiliated. It also has a Regional Sophisticated Instrumentation Centre (RSIC).

Higher Education

Higher education is given by:

*1. Universities-*It comprise of agricultural universities and medical universities categorised into Central Universities which are being financed directly by the Ministry of Human Resources Development and State Universities, incorporated and financed by different states.

2. "Deemed to be universities" single-faculty, multi subjects institutions which enjoy the same academic status and privileges of a university

3. Institutions of National Importance, university-level institutions funded by the central government. These include the Indian Institutes of Technology. Most universities belong to the affiliating and teaching type in which departments impart instruction at the postgraduate level and undertake research. Agricultural universities stress research and extension work. At last, there are technological universities and ten open universities. There are also research institutions, administered by the Indian Council of Social Science Research and research laboratories, as well as more than 10, 000 colleges. Most of which are affiliated to universities. Universities are administered by the statutory bodies such as the Academic Council.

The Senate or Court and the Executive Council Syndicate. Funding for State universities generally comes from the State governments and the University Grants Commission. Higher education falls mainly under its jurisdiction. The Association of Indian Universities (AIU)

represents universities and has the responsibility for all matters within the higher education sector other than funding.

Professional institutions are integrated by different entities. The All-India Council for Technical Education (AICTE) instituted in the year 1987 and is accountable for the integration of technical and management Education institutions. Bodies such as State Councils of Higher Education were established currently.

4. Non-university level: On completion of Standard X, students may opt for

a. Secondary school studies pertaining to the Higher Secondary School Certificate.

b. Craftsman or apprenticeship courses provided in Industrial Training Institutes through the Craftman Training Scheme and Apprenticeship Scheme and leading to Trade Certificates or

c. Entering a Polytechnic where they provide one to three-year diploma courses in all the subjects except Medicine. There are around 1200 Polytechnics in India. Although planned to train technicians, with a rising number now provide courses leading to degrees and even post-graduate diplomas and certificates. Courses like the Higher National Diploma i.e.. HND needs Standard XII.

Higher Education System in India

Pertaining to the 'Higher Education System' India is one of the most renounced country in the world. Major players in the higher education system in the country are as follows: University Grants Commission (UGC), which takes care of the co-ordination, determination and maintenance of standards, release of grants. Professional Councils are accountable for recognition of courses, promotion of professional institutions and providing grants to undergraduate programmes and different awards.

The statutory professional councils are:

All India Council for Technical Education (AIeTE),

Distance Education Council (DEC),

Indian Council for Agriculture Research (lCAR),

Bar Council of India (BCI),

National Council for Teacher Education (NCTE)

Rehabilitation Council of India (ReI),

Medical Council of India (MCr),

Pharmacy Council of India (PCI),

Indian Nursing Council (INC),

Dentist Council of India (DCl),

Central Council of Homeopathy (CCH),

Central Council of Indian Medicine (CCIM)

Central Government is accountable for the core policies related to the higher education in the country. It give grants towards the use and establishment of central universities in the country. The Central Government is also accountable for the declaration of Educational Institutions as 'Deemed to be University' on the recommendation of the UGC.

Currently, There are around sixteen Central Universities in the country. In case of the Mizoram Accord, another Central University in the State of Mizoram is planned. There are around 37 Institutions which have been declared as Deemed to be Universities by the

Government of India as per Section of the UGC Act, 1956. State Governments are accountable for establishment of State Universities and colleges and provide plan grants for their development and non-plan grants for their maintenance. The co-ordination and co-operation between the Union and the States is brought about in the area of education through the Central Advisory Board of Education (CABE).

Special Constitutional responsibility of the Central Government: Education is on the 'Concurrent list' subject to Entry 66 in the Union List of the Constitution. This gives ultimate Legislative Power to the Central Government for the co-ordination and mentioning the standards in Institutions of higher education or research, scientific and technical institutions.

Indian Education System

Types of higher education institutions
1. University
2. Institute of Technology
3. College
4. Open University

School leaving adult higher education Credentials
1. Higher Secondary School Certificate
2. Secondary School Certificate
3. Diploma
4. Bachelor's Degree
5. Postgraduate Diploma
6. Master's Degree
7. Master of Philosophy
8. Post-Master Degree
9. Doctorate
10. Doctor of Laws
11. Doctor of Literature
12. Doctor of Science.

Structure of education system
1. Pre-higher education:
2. Duration of compulsory education:
3. Age of entry: 6
4. Age of exit: 14
5. Structure of school system:
6. Primary
7. Type of school providing this education:
8. Lower Primary School (Standards I To V)
9. Length of program in years: 5
10. Age level from: 6 to 11
11. Middle

Type of school providing this education
1. Middle School (Standards VI To VII)
2. Length of program in years: 3
3. Age level from: 11 to 14
4. Secondary.

Type of school providing this education
1. Secondary School (Standards IX To X)
2. Length of program in years: 2
3. Age level from: 14 to 16
4. Certificate/diploma awarded: Secondary
5. School Certificate
6. Senior Secondary.

Type of school providing this education
1. Higher Secondary School (Standards Xl To XlI)
2. Length of program in years: 2
3. Age level from: 16 to 18
4. Certificate/diploma awarded: Higher
5. Secondary School Certificate
6. Vocational Secondary

Type of school providing this education
1. Secondary schools
2. Length of program in years: 3
3. Age level from: 16 to 18
4. Certificate/diploma awarded: Higher
5. Secondary School Certificate

School education

Indian school education system is a two-tier system, the first ten years consisting general education followed by two years of senior secondary education. Primary education can be categorized into two stages, namely:
1. The first five years form the primary stage (Standards I-Vth) and
2. The coming next three years, the upper primary stage or middle school (Standards VI-VIIIth).
3. Secondary education generally lasts between two and four years. After two years, pupils who have completed ten years of education (Standard Xth) take the Secondary School Certificate. Students then enter higher secondary schools or Junior Colleges and complete a further two years of education (Standards XI and XIIth).

Courses put focus on university preparation. Public examinations are conducted at the end of Standard IX either by individual states or by Central Boards and lead to the award of the Higher Secondary School Certificate also known as All India Senior School Certificate or Indian School Certificate or Pre-University Course. Vocational education is however provided in two years at Higher and Technical Schools and lead to the Certificate of Vocational Education i.e.. CVE.

University level studies

1. First stage: Bachelor: Basically, First degree need three years fulltime study leading to Bachelor of Arts, Science and Commerce degrees. Entrance to & Honours course may require a higher pass mark in the higher secondary or pre-university examinations. An Honours degree does not basically involve longer study hut indicates greater specialization. In professional subjects: Courses last for four to five and a half years. The Bachelor of Laws (LLB) can either be taken as an integrated first degree course (five years) or as a two to three-year course taken as a second degree.

2. Second stage: Master's Degree: A Master's Degree in Arts, Science and Commerce basically requires two years of study after a first degree. Most. Are course work based without a thesis. The Indian Institutes of Technology provide three semester studies leading to ME, MSc (Engg) and MTech degrees. Master's courses in Engineering and Technology normally require two years 'study after a first professional degree. Candidates must qualify through the Graduate Aptitude Test in Engineering Colleges. I n Medicine and Surgery, the Master's degree takes two years after MBBS or BDS. The Master of Technology is awarded after a study period of three semesters. Students must complete a research project which usually takes one semester. The Master of Computer Applications (MCA) is awarded after three years' study beyond the Bachelor's Degree.

3. Third stage: Master of Philosophy, PHD: One and a half-year MPhil programmes are open to those who have completed their second stage postgraduate degree. It is a preparatory programme for doctoral level studies. Various universities admit MBBSIBE degree holders to PHD courses. The PHD programme involves two years study beyond the MPhil or a minimum of three years study beyond the Master's degree and the submission of a thesis, as well as an oral examination.

4. Fourth stage: DSc. DLit: The Doctor of Science (DSc) and the Doctor of Literature (Dlitt) degrees are awarded by Various universities two to three years after the PHD for ultimate contributions. Teacher education: Training of preprimary and primary/basic school teachers for lower primary classes (Standards I to V) are trained in Teacher Training Institutes (also known as Junior Basic Training Institutes or Primary Teacher Colleges) attached to State departments of education.

The course usually lasts for two years and leads to a Diploma or-a Teacher Training Certificate. Upper primary school teachers are trained in two years and the course leads to a Diploma. They must have passed the Higher Secondary School-Leaving Certificate. Training of secondary school teachers at lower secondary level (Standards IX and X) are graduates who have completed a one-year Bachelor of education at a college affiliated to a university. Teachers at the higher secondary level (Standards XI and XU) are postgraduates who have usually completed a Master's degree followed by a one-year Bachelor in Education. Four Regional Colleges of Education provide a combined four-year integrated programme leading to a Bachelor's degree. Training of higher education teachers at colleges of education must hold an M. Ed and a PHD.

Studies for these are undertaken at a number of universities. Non-traditional studies: Distance higher education since its inception in the year 1962 at the University of Delhi, distance education has grown considerably. There are around sixty Institutes: Directorates of distance education attached to conventional universities and ten Open Universities, consisting Indira Gandhi National Open University-with over 150 regional centers throughout India. Distance education programmes include about one hundred Degree or Diploma courses.

Many conventional universities also provide correspondence courses, which are Various times supplemented by contact classes. Lifelong higher education Universities and colleges provide adult and continuing education with assistance from the uac. Programmes include Population Education, Legal Literacy, Science Education and Technology Transfer. There are also evening colleges which provide courses at undergraduate level and, in Various areas, postgraduate courses are also provideed. Other forms of non-formal education Non-university level post-secondary education consists of one-year Certificate courses and two-to three-year Diploma courses in various technical and commercial fields. They are conducted by industrial training institutes and polytechnics administered through the state departments of technical education.

National Bodies Administration & co-ordination: Responsible authorities: Ministry of Human Resources Development, Science and Technology Head: Arjun Singh Shastri Bhavan New Delhi 110001 Association of Indian Universities AIU House, 16 Kotla Marg, New Delhi 110002 University Grants Corrunission Bahadur Shah Zafar Marg, New Delhi 110002 Role of governing body: Coordinates the work of the universities; establishes equivalences of degrees; acts as a bureau of information; conducts research on university development.

Inter University Centres

Under Section 12 (ccc) of the UGC Act, the Commission has established the following Inter-University Centres to give basic facilities, service and programmes to Universities with huge investment in infrastructure development and inputs have made it above the horizon of individual Universities to attain such facilities.

Nuclear Science Centre. New Delhi: Accelerator oriented research for Astronomy and Astrophysics, Pune: State-of-the-art instrumentation for research in astronomy IUC for DAE facilities, Indore: Use of facilities of Department of Atomic Energy. Information and Library Network i.e.. INFLIBNET, Ahmedabad: Networking of libraries with electronic media Consortium for Educational Communication (CEe), New Delhi: To promulgate Countrywide programme with the help of television 216.

National Assessment & Accreditation Council (NACC), Bangalore: To evaluate and accredit public & Private institutions of higher learning National Facilities UGC has also establish in the Centres as National facilities in well recognized Universities stated below: Western Regional Instrumentation Centre, Bombay: Design and development of indigenous equipment and training to staff in instrumentation. Regional Instrumentation Centre, Indian Institute of Science, Bangalore: Design and development of indigenous equipment and training to staff in instrumentation. Chennai: Research and dissemination of knowledge and

organization of training programme in crystal growth. M. S. T. Radar Centre SriVenkateswara Tirupati: Studies in atmospheric Dynamics to enable teachers to use MST Radar facility.

Eastern Centre for Radio Astrophysics, Calcutta University: Research in Astrophysics Japal-Rangapur observatory, Osmania University. Hyderabad: Science Research Observatory Centre for Science Education & Communication, New Delhi: Popularization of Science.

University Grants Commission (UGC)
Objective:

The government established University Grants Commission (UGC) by an Act of Parliament in 1956. It discharges the Constitutional mandate of coordination determination, and maintenance of standards of teaching, examination and research in the field of University and Higher Education. UGC serves 8S a crucial link between the Union and State Governments and the institutions of higher learning. It monitors developments in the field of collegiate and university education; disburses grants to the universities and colleges: Advises Central and State Governments on the measures necessary for the betterment of university education and mention regulations like those on the minimum standards of instruction.

Composition Commission comprises of the Chairperson, Vice-Chairperson and ten other members appointed by the Central Government. The Chairperson is selected from among persons who are not officers of the Central Government or any State Government. Of the ten members, two are from amongst the officers of the Central Government to represent it. Not less than four selected from among persons who are, at the time they are selected, shall be a teacher in the Universities. Others are selected from among eminent educationists, academics and experts in different fields.

Chairperson is appointed for a term of 5 years or until the age of 65 years, whichever is earlier. Vice Chairperson is appointed for a term of 3 years or until the age of 65 years, whichever is earlier. The other members are appointed for a term of 3 years. The Chairperson. Vice-Chairperson and members can be appointed for a maximum of two terms.

Funding UGC has no funds of its own. It receives both Plan and Non-Plan grants from the Central Government to fulfill the responsibilities assigned to it by law. It bifurcate and disburses full maintenance and development grants to all Central Universities, Colleges affiliated to Delhi and Banaras Hindu Universities and some of the institutions accorded the status of Deemed to be Universities. State Universlties, Colleges and other institutions of higher education, get support only from the Plan grant for development schemes.

Also, it gives monetary help or aid to the Universities and colleges under different schemes or programmes for enhancing relevance, quality and expertise and also improving the role of Universities pertaining to social change.

Regional Offices
Southern Regional Office: Andhra Pradesh, Kerala, Karnataka, Pondicherry, Tamil Nadu.
Northern Regional Office: Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana. Uttar Pradesh.
Central Regional Office: Madhya Pradesh, Rajasthan.
Eastern Regional Office: West Bengal, Bihar, Orissa, Sikkim.
North Eastern Regional Office: Assam, Meghalaya, Manipur, Arunachal Pradesh, Tripura, Nagaland.
Western Regional Office: Goa, Gujarat, Maharashtra.

New Initiatives, Vocationalization at The 1st Degree Level
With the permission of National Policy on Education 1986, a scheme is came into influence regarding the career orientation to education at the first degree level was started in the year 1994 − 95. In this scheme, a university I college could introduce one to three vocational courses in 35 identified subjects. Autonomous Colleges: 138 colleges have been working as individual colleges in eight states in the country. National Eligibility Test (NET) is being organised by the UGC since the year 1989 for eligibility for lectureship. About 50, 000 students give this test every year. Passing percentile is around 5%. Eight State Level Tests have been recognized at par with NET. The Governance system of Higher Education Institutions: The Universities are of different kinds:

With a single faculty, or multi-faculties; teaching or affiliating, or teaching cum affiliating, single campus or multiple campus. Most of the Universities are affiliating universities. Which prescribe to the affiliated colleges the course of study, hold examinations and award degrees, while undergraduate and to some extent post, the colleges affiliated to them impart graduate instruction.

Many of the university along with their affiliated colleges have grown speedily to the extent of becoming unmanageable. So, as per National Policy on Education 1986, a scheme of autonomous colleges was promoted. In the autonomous colleges, whereas the degree continues to be awarded by the University, the name of the college is also included. The colleges grow and propose new courses of study to the university for approval. They are also wholly accountable for conducting the examination. There are currently 126 autonomous colleges in the country.

Focus of Ninth Plan: Thrust areas are: Measures for quality enhancement and modernization of syllabi. Development of infrastructure, extra-budgetary resource mobilization and greater attention to issues in governance. Issues of access and relevance would receive attention. Conferment of greater autonomy to outstanding colleges and professional upgradation of teachers through Academic Staff Colleges would be given priority.

Emphasis is being placed on consolidation and rational use of the current infrastructure through institutional networking. Restructuring expansion. So as to only meet the demand of the unserved areas with keeping in mind women and the under privileged segment of society. The Open University system, which is attaining huge popularity and size is still craving for the diversified courses, offerings and gain wider acceptability by updating and enhancing its

quality. Attention is specifically on the educational needs of women and rural society, as well as professional training of in service employees.

Vocational Courses included Under Apprentices Act 1961 are stated below
Agriculture

1. Poultry Production

2. Fisheries or Fish Processing

3. Dairying

4. Sericulture

5. Apiculture

6. Floriculture

7. Plant Protection

8. Agricultural Chemicals

9. Inland Fisheries

10. Plantation Crops and Management

11. Seed Production Technology

12. Swine Production

13. Vegetable Seed Production

14. Medicinal and Aromatic Plant Industry

15. Sheep and Goat Husbandry

16. Repair and Maintenance of Power Driven

Farm Machinery

1. Veterinary Pharmacist-cum-Artificial Insemination Assistant

2. Agro Based Food Industry (based on animals)

3. Agro Based Food Industry (based on crops)

4. Agro Based Food Industry (based on food)

Important Key Facts of Higher Education System in India
Important Abbreviation to remember

- National Research Professorship (NRP)
- National Institute of Technical Teacher's Training & Research (NITTTR)
- Educational Consultants of India Limited (EdCIL)
- Pupil-Teacher Ratio (PTR)
- National Book Trust of India (NBT)
- Central Advisory Board of Education (CABE)
- All India Survey on Higher Education (AISHE)
- The Indira Gandhi National Tribal University (IGNTU)
- National Assessment and Accreditation Council (NAAC)
- National Institutional Ranking Framework (NIRF): The National Institutional Ranking Framework
- (NIRF) has been approved by the MHRD and launched by Honorable Minister of Human Resource
- Development on 29th September 2015.

Major Focused Indian Govt Initiatives

Prime Minister Mr Narendra Modi launched the Skill India initiative – 'Kaushal Bharat, Kaushal Bharat'. Under this initiative, the government has set itself a target of training 400 million citizens by 2022 that would enable them to find jobs. The initiatives launched include various programmes like: Pradhan Mantri Kaushal Vikas Yojana (PMKVY), National Policy for Skill Development and Entrepreneurship 2015, Skill Loan scheme, and the National Skill Development Mission.

PMKVY is the flagship program under the Skill India Initiative and it includes incentivizing skill training by providing financial rewards on completion of training to the participants. Over the next year 2.4 million Indians are believed to be benefitted from this scheme. National Policy for Skill Development and Entrepreneurship 2015 is India's first integrated program to develop skill and promote entrepreneurship simultaneously. The vision of this programme is to skill the Indian youth rapidly with high standards and at the same time promote entrepreneurship thus creating wealth and gainful employment for the citizens.

Skill Loan Scheme is designed to disburse loans of Rs 5,000 (US$ 75.3) to Rs 150,000 (US$ 2,260) to 3.4 million Indians planning to develop their skills in the next five years. The National Skill Development Mission is developed to expedite the implementation of skilling activities in India by providing the robust institutional framework at the centre and the state. The National Skill Development Corporation of India (NSDC) under a Public Private Partnership promoted by the Ministry of Finance, Government of India signed a Memorandum of Understanding with Center for Research & Industrial Staff Performance (CRISP), India to explore national and international opportunities for strengthening skills development in India.

Evolution of higher learning and research in Post-Independence India.

- India always been identified as knowledge hub since the beginning of human civilization. Indian higher education system has been witnessing metamorphic changes and challenges through the years, i.e., from ancient Gurukul system to the modern technology based learning system have changed the life of millions of people.
- This is evident from centers of learning which existed in the 7th century BC were the Buddhist monasteries and in the 3rd century AD was Nalanda. Few of these centers were very large having several faculties. Invasions and disorder in the country has extinguished ancient Indian education system.
- First college was set up in 1918 in Serampore in Bengal imparting western education in India. In 1857, three Central Universities of Calcutta, Bombay and Madras were set up, 27 colleges were affiliated. In 1947, 19 Universities were there in India. (CABE, 2005).
- The Higher education system in India has grown in remarkable way after post-independence period and become the largest Higher Education System in the world. The Indian higher education system as developed its own system and structure. Since

the Indian constitutions provides for joint responsibility of the union and state government for promotion of education.

- The linkage between learning, research and innovation within higher education is the key to the building of sustainable knowledge societies. Based on the provisions for academic, administrative and financial flexibility, there are different types of universities and institutions in the higher education system in the country

- India has different Higher education institutions namely, central and state universities, unitary and affiliating universities, institutions of national importance, deemed to be universities and open universities.

- The central government via the University Grants Commission (UGC) or the AICTE provides support to various state run university. Universities in India functionally are multi-faculty universities, single faculty universities (agricultural, technological and medical universities) apart from the universities there also institutions of national importance like IITs, IIMs deemed to be universities (BITS, IISc).

- Higher education system in the country is governed by multiple agencies with University Grant Commission (UGC) as the apex body.

- The rule and regulations by these agencies makes the higher education system more complex. The various stakeholders in the regulatory framework in the country are State governments, professional councils like University Grant Commission (UGC), All India Council for Technical Education (AICTE) etc.

- The growth of Higher education in India after post-independence is phenomenal. It is more than half a century ever since the government initiated a planned development of higher education in the country particularly with the establishment of University Grants Commission in 1953. During 1950 and 2012 the number of universities has increased from 20 to about 659, and colleges from 500 to 33023, and teachers from 15,000 to 9.46 lakhs.

- Consequently, enrollment of students has increased from a mere of 0.1 million in 1950 to 25.9 million. (Based on UGC Report 2012). Lets look back on the progress made so far ….

Radhakrishnan Commission (1948-49)

The first major commission to study the state of the universities in India after independence was the Radhakrishnan Commission (also known as the University Education Commission) in 1948-49.

The Commission was appointed with the specific aim 'to report on Indian University Education and suggest improvements and extensions that may be desirable to suit present and future requirements of the country'.

A major chapter in the Radhakrishnan Commission report was devoted to the problem of the medium (language) of instruction at the university level.

The most significant recommendation of the Commission was that a University Grants Commission modelled on the University Grants Committee in Great Britain be set up as a liaison between the central government and the universities.

This last recommendation became a reality in 1956 when the University Grants Commission (UGC) was established by an act of Parliament which stated that "The Constitution of India vests Parliament with the exclusive authority in regard to coordination and determination of standards in institutions of higher education and research and scientific and technical institutions."

Secondary education Commission (Mudaliar Commission)-

The Secondary Education Commission was appointed by the Government of India Resolution on 23rd

September 1952 under the Chairmanship of Dr. A. Lakshmanaswami Mudaliar, Vice-Chancellor, Madras

University to examine the prevailing system of secondary education in the country.

It was aimed to suggest measures for its reorganization and improvement with reference to the aims, organisation and content of secondary education, its relationship to primary and higher education and the interrelation of secondary schools of different types.

Kothari Commission 1964

The Commission was appointed under provision of a resolution of the Government of India, dated 14th

July, 1964and it began its task on October 2,1964 .

The Commission included eminent educationists in diverse fields from India and abroad. It consisted of total 17 members, where 14 members, 1 member – secretary, 1 Associate – Secretary and Dr. D.S. Kothari, chairman of the U.G.C. was appointed as the chairman of the commission.

Therefore, it is also known as the Kothari Commission.

The Commission submitted its report to the Government on June 29,1966. It was laid on the Table of the House on August 29, 1966.The report of the Commission, is a voluminous document of about 700 pages. It has been hailed as referred for all change and reform in Education.

Although it is 20 years old, yet it maintains its fragrance and freshness. Even the new National Policy on Education (1986) has been mainly based on its recommendations. It is termed as Bible for Teachers and should be read with fair.

Ramamurthy Review Committee-

The committee to review the National Policy on Education 1986, was formed on 7thNovember 1990 with Acharya Ramamurthy as Chairman and sixteen others as members.

This Committee's report bears the title ―Towards an Enlightened and Humane Society.

The Committee was appointed to review the National Policy on Education 1986 and make recommendations regarding the revision of the policy and action necessary for implementation of the revised policy within a time-frame.

Role of Department of Higher Education

- The Department of Higher Education, MHRD, is responsible for the overall development of the basic infrastructure of the Higher Education sector, both in terms of policy and planning. Under a planned development process, the Department looks after expansion of access and qualitative improvement in the Higher Education, through world-class Universities, Colleges and other Institutions.
- Enhancement of Gross Enrollment Ratio by expanding access through all modes. Promoting the participation of these sections of the society whose GER is lower than the national average.
- To improve quality and to promote academic reforms Setting up of new educational institutions and also capacity expansion and improvement of the existing institutions.
- Use of Technology in Higher Education.
- Development of Vocational Education and Skill Development.
- Development of Indian Languages.
- International Collaboration in the field of education.

UGC & Higher Education Regulatory Framework

Soon after Independence, the University Education Commission was set up in 1948 under the Chairmanship of Dr. S Radhakrishnan "to report on Indian university education and suggest improvements and extensions that might be desirable to suit the present and future needs and aspirations of the country".

It recommended that the University Grants Committee be reconstituted on the general model of the University Grants Commission of the United Kingdom with a full-time Chairman and other members to be appointed from amongst educationists of repute.

In 1952, the Union Government decided that all cases pertaining to the allocation of grants-in-aid from public funds to the Central Universities and other Universities and Institutions of higher learning might be referred to the University Grants Commission. Consequently, the University Grants Commission (UGC) was formally inaugurated by late Shri Maulana Abul Kalam Azad, the then Minister of Education, Natural Resources and Scientific Research on 28 December 1953.

The UGC, however, was formally established only in November 1956 as a statutory body of the Government of India through an Act of Parliament for the coordination, determination and maintenance of standards of university education in India.

In order to ensure effective region-wise coverage throughout the country, the UGC has decentralised its operations by setting up six regional centres at Pune, Hyderabad, Kolkata, Bhopal, Guwahati and Bangalore. The head office of the UGC is located at Bahadur Shah Zafar Marg in New Delhi, with two additional bureaus operating from 35, Feroz Shah Road and the South Campus of University of Delhi as well.

Regulatory Structure of Higher Education in India

Regulatory Framework Of Higher Education In India

- Department of Higher Education, Ministry of Human Resource Development
- Association of Indian Universities
- Central Advisory Board of Education
- State Councils for Higher Education

Policy making

Regulation

- University Grants Commission
- AICTE, MCI, PCI, DEC, BCI, NCTE
- ICAR, ICMR, ICSSR, CSIR
- State Regulators

Accreditation

- National Board of Accreditation
- National Assessment and Accreditation Council

- The regulatory framework of this sector in India is multi-layered. At the last chain of delivery – the classroom, three sets of regulations operate – University, College, and Council

- Universities awarding their own degrees are classified into five types based on their management – Central University, State University, Private University, Institutions-deemed-to-be-a-University and Institute of National Importance. Colleges award degrees in the name of the university to which they are affiliated.

- The University Grants Commission is a statutory organisation established by an Act of Parliament in 1956 for the coordination, determination and maintenance of standards of university education.

- Apart from providing grants to eligible universities and colleges, the Commission also advises the Central and State Governments on the measures which are necessary for the development of Higher Education. It functions from New Delhi as well as its six Regional offices located in Bangalore, Bhopal, Guwahati, Hyderabad, Kolkata and Pune.

- Different regulatory bodies such as the Medical Council of India (MCI), All India Council for Technical Education (AICTE) and the Bar Council India (BCI), among others, manage different professional courses. There are two accrediting institutions–namely National Board of Accreditation (NBA) established by AICTE and National Assessment and Accreditation Council (NAAC) established by UGC.

- The main governing body at the tertiary sector is the University Grants Commission (UGC). It has a dual function of providing grants as well as coordinating and maintaining the standards of higher education institutes.

- All public universities are governed by the UGC, as well as funded by it. The UGC Act of 1956 specifies the entire step-by-step administration of the University it governs, ranging from the number of working days to a number of lecture hours per subject, as well as the minimum qualification required for students to enroll and for teachers to teach a course.

- UGC Regulations, 2012 mandate that all higher education institutions be accredited by an accreditation agency.

- Powers and functions of UGC include allocation as well as disbursement of funds from the Central/State Government for development, maintenance as well as for research purposes, inspection of universities, conferring of degrees, etcetera.
- Central Government is responsible for major policy relating to higher education in the country. It provides grants to UGC and establishes central universities in the country. The Central Government is also responsible for declaration of Education Institutions as 'Deemed to be University' on the recommendation of the UGC.
- The special Constitutional responsibility of the Central Government: Education is on the 'Concurrent list' subject to Entry 66 in the Union List of the Constitution. This gives exclusive Legislative Power to the Central Govt. for co-ordination and determination of standards in Institutions of higher education or research and scientific and technical institutions.
- The coordination and cooperation between the Union and the States is brought about in the field of education through the Central Advisory Board of Education (CABE).

Supporting the UGC, accreditation for higher learning over Universities is overseen by the following fifteen autonomous regulatory and statutory institutions:

LIST OF THE REGULATORY AND STATUTORY BODIES IN INDIA FOR HIGHER EDUCATION

- ALL INDIA COUNCIL FOR TECHNICAL EDUCATION (AICTE)
- INDIAN COUNCIL OF AGRICULTURAL RESEARCH (ICAR)*
- CENTRAL COUNCIL OF HOMOEOPATHY (CCH)
- DISTANCE EDUCATION COUNCIL (DEC)
- MEDICAL COUNCIL OF INDIA (MCI)
- CENTRAL COUNCIL OF INDIAN MEDICINE(CCIM)
- REHABILITATION COUNCIL OF INDIA (RCI)
- NATIONAL COUNCIL FOR RURAL INSTITUTES
- PHARMACY COUNCIL OF INDIA (PCI)
- INDIAN NURSING COUNCIL (INC)
- COUNCIL OF ARCHITECTURE
- NATIONAL COUNCIL FOR TEACHER EDUCATION (NCTE)
- BAR COUNCIL OF INDIA (BCI)
- STATE COUNCILS OF HIGHER EDUCATION
- DENTAL COUNCIL OF INDIA (DCI)

To summaries, these above councils are responsible for the recognition of courses, promotion of professional institutions, regulating the course syllabus, providing grants and other awards to various fields of education. These bodies play an important role in the setting up of an institution imparting a degree or diploma course in higher education The National Policy on Education, as formulated in 1986 and modified in 1992, has been the guiding document of

the policies of the Central Government in the education sector for well over two decades. During this period, significant changes have taken place in India and the world at large. Read more details at – New Education Policy

Professional, Technical and Skill Based Education

Skill development is key feature in every individual's life if he/she want to be employed. Every country needs individuals with higher level of skills and educational qualification. We can't say that people with good educational qualification will surely get employment or skilled person will definitely get a job. An individual who want to get employed will have two possess both the things together i.e. good education and higher level of skills.

What employers are looking for are individuals who have the ability to communicate, solve problems and teamwork. The skill development ecosystem in India is complex, large and diverse, providing varied levels of skills across an extremely heterogeneous population. Skill development in India can be broadly segmented into Education and Vocational Training.
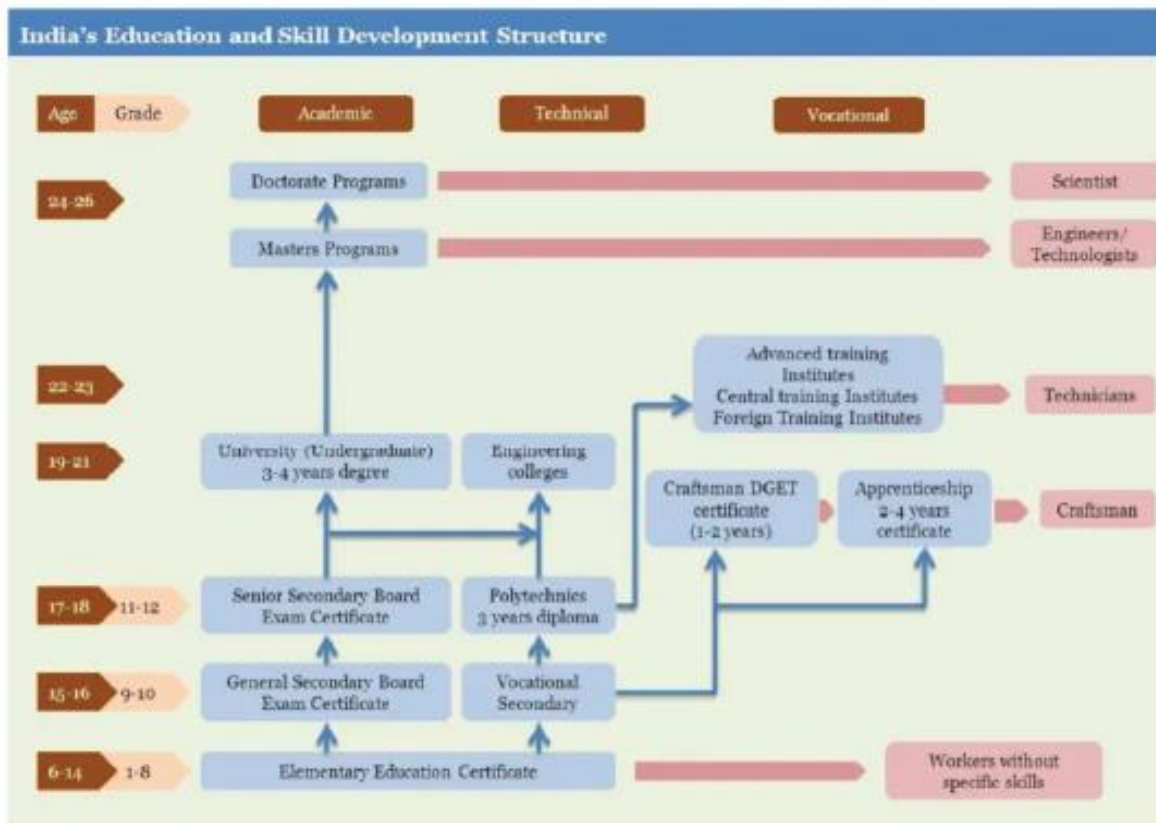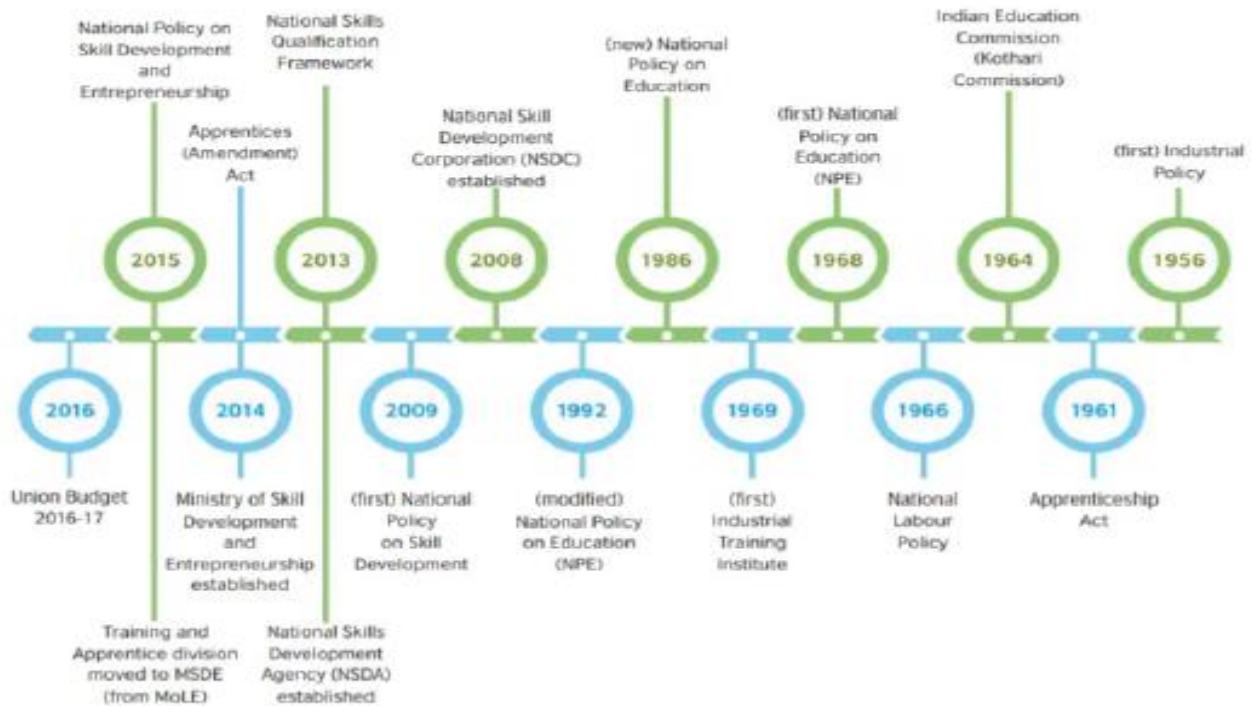

Skill development in India

Elementary, secondary and higher education is governed by the Ministry of Human Resource Development. University and Higher Education caters to all college education (Arts, Science, Commerce, etc.), while engineering education, polytechnics, etc. fall under Technical Education.

University Grants Commission (UGC) is the nodal body governing funds, grants and setting standards for teaching, examination and research in Universities, and the All India Council for Technical Education AICTE) is the regulatory body for Technical Education in India.

At the central level, the nodal institution for vocational training is the Director General of Employment & Training (DGET) under the Ministry of Labor and Employment. The DGET is responsible for formulating policies, establishing standards, granting affiliation, trade testing and certification, and matters connected to vocational training and providing employment services. The National Skill Development Council (NSDC) – now a part of the newly created Ministry of Skill Development and Entrepreneurship – was initially set up under the Ministry of Finance to provide viability gap funding and promote private skill initiatives.

HISTORY OF SKILL DEVELOPMENT: A SNAPSHOT

National Policy on Skill Development and Entrepreneurship — 2015

National Skills Qualification Framework — 2013

Apprentices (Amendment) Act

National Skill Development Corporation (NSDC) established — 2008

(new) National Policy on Education — 1986

(first) National Policy on Education (NPE) — 1968

Indian Education Commission (Kothari Commission) — 1964

(first) Industrial Policy — 1956

Union Budget 2016-17 — 2016

Ministry of Skill Development and Entrepreneurship established — 2014

(first) National Policy on Skill Development — 2009

(modified) National Policy on Education (NPE) — 1992

(first) Industrial Training Institute — 1969

National Labour Policy — 1966

Apprenticeship Act — 1961

Training and Apprentice division moved to MSDE (from MoLE)

National Skills Development Agency (NSDA) established

history of skill developement

The government has to put massive effort to form better educational structure especially for skill development sector comprising of industry-oriented training. A number of special initiatives are rolled by Government.

POLICY FRAMEWORK

The government has listed skill development as one of its priorities and aims to enhance participation of youth, seek greater inclusion of women, disabled and other disadvantaged sections into the workforce, and improve the capability of the present system, making it flexible to adapt to technological changes and demands emanating from the labor market.

Key Bodies	Enablers	Implementing Bodies	Beneficiaries
• Ministry of Skill Development & Entrepreneurship • MHRD • Ministry of Rural Development (MoRD) • Other Central Ministries	• State Skill Development Mission (SSDM) • NSDC • NSDA • SSCs • NCVT • SCVT • Labour Laws • Minimum Wages Act • Financial Institutions • Apprenticeships Act	• ITIs • Training Providers • Captive Training by Employers • Schools • Universities • Assessment Companies	• Marginalized societies • Unemployed youth • Low income Group • School & College Students

Source: FICCI-KPMG report "Skilling India"

The policy framework governing the skill development ecosystem in India includes the Apprentices Act, 1961, the National Skill Policy and the National Skills Qualification Framework (NSQF).

The Apprenticeship Act of 1961

Apprenticeship programmes in India are governed by The Apprentice Act of 1961 and the Apprenticeship Rules of 1992.

The Apprentice Training Scheme is implemented by the ministries of Labour and Employment and Human Resource Development.

The Ministry of Labour and Employment oversees 'trade apprentices' through six regional offices.

The Ministry of Human Resource Development oversees 'graduate, technician, and technician (vocational) apprentices' through four boards located in different cities.

One of the objectives of apprenticeship was also to ensure that employers get skilled workforce having adequate exposure to real work environment.

The Apprentice Protsahan Yojana was also launched to support MSMEs in the manufacturing sector in engaging apprentices. As per the amended Act, work hours and leave benefits of Apprentices will be at par with the regular workers from the organized sector.

National Skill Policy

The National Policy on Skill Development was first formulated in 2009 to create a skills ecosystem in India. It acts as a guide to formulate strategies by addressing the different challenges in skill development. The policy aims to provide an umbrella framework to all skill related activities carried out within the country, to align them to common standards and link skill activities with demand centres. The new skills policy also provides details on how skill development efforts across the country can be aligned within the existing institutional arrangements.

The National Skills Qualification Framework

The National Skills Qualifications Framework (NSQF), notified on 27th December 2013, is a competency based framework that organizes all qualifications according to a series of levels of knowledge, skills and aptitude.

Presently, more than 100 countries have, or are in the process of developing national qualification frameworks. Under NSQF, the learner can acquire the certification for competency needed at any level through formal, non-formal or informal learning.

The NSQF is anchored at the National Skill Development Agency (NSDA) and is being implemented through the National Skills Qualifications Committee (NSQC) which comprises of all key stakeholders.

The NSQF provides for a five-year implementation schedule and at the end of the fifth year (2018), it shall be mandatory for all training/educational programmes/courses to be NSQF compliant, and all training and educational institutions shall define eligibility criteria for admission to various courses in terms of NSQF levels.

Nodal bodies for Skill Development in India

Ministry of Skill Development and Entrepreneurship

The creation of the first-ever separate Ministry of Skill Development and Entrepreneurship was announced by Prime Minister Narendra Modi in June 2014.

It is conceived to encompass all other ministries to work in a unified way, set common standards, as well as coordinate and streamline the functioning of different organizations working for skill development.

MHRD

The Ministry of Human Resource and Development (MHRD) governs the polytechnic institutions offering diploma level courses under various disciplines such as engineering and technology, pharmacy, architecture, applied arts and crafts and hotel management. MHRD is also involved in the scheme of Apprenticeship Training.

Apart from this, MHRD has also introduced vocational education from class IX onwards, and provides financial assistance for engaging with industry/SSCs for assessment, certification and training.

Central Ministries

There are 21 Ministries under the central government who are also working for the purpose of skill development. There are two approaches that these Ministries have: one approach is setting up training centres of their own for specific sectors like (adopted by Ministry of Labour & Employment, Ministry of Agriculture, Ministry of Health & Family Welfare, etc.). The second approach is in the form of Public Private Partnership (as adopted by Ministry of Rural Development, Ministry of Women and Child Development, etc.).

NSDC

The National Skill Development Corporation India (NSDC) is a public private partnership organization (now under the Ministry of Skill Development and Entrepreneurship) that was incorporated in 2009 under the National Skill Policy. The main objectives of the NSDC are to:

- Upgrade skills to international standards through significant industry involvement and develop necessary frameworks for standards, curriculum and quality assurance Enhance, and support and coordinate private sector initiatives for skill development through appropriate
- Public-Private Partnership (PPP) models; strive for significant operational and financial involvement from the private sector Play the role of a "market-maker" by bringing financing, particularly in sectors where market mechanisms are ineffective or missing
- Prioritize initiatives that can have a multiplier or catalytic effect as opposed to one-off impact.

Sector Skill Councils

The National Skill Development Policy of 2009 mandated the NSDC to setup SSCs to bring together key stakeholders i.e. industry, work force and academia. As on date, 29 SSCs are operational and 4 more SSCs have been approved by NSDC. They are funded by NSDC for the initial few years and are expected to become financially self-sustaining as they grow

NCVT, SCVT and Quality Council of India

Established under Ministry of Labor and Employment with a view to ensure and maintain uniformity in the standards of training all over the country, the National Council for Vocational Training (NCVT) was set up in 1956.

This certifying body conducts All India Trade Tests for those who complete training in ITIs and awards National Trade Certificates to successful candidates.

The Council has representation from central and state government departments, employers' and workers' organizations, professional and learned bodies, All India Council for Technical Education, scheduled castes and scheduled tribes, All India Women's Organization, among others.

The State Council for Vocational Training (SCVT) at the state levels and the sub committees have been established to assist the National Council. The Quality Council of India (QCI) was set up jointly by Government of India and the Indian industry as an autonomous body to establish a national accreditation structure in the field of education, healthcare, environment

protection, governance, social sectors, infrastructure, vocational training and other areas that have significant bearing in improving the quality of life.

All institutions (Government and private ITIs) seeking formal affiliation from NCVT have to first get accreditation from the Quality Council of India

Industrial Training Institutes

The DGET which governs Industrial Training Institutions (ITIs) has recently been aligned with Ministry of Skill Development and Entrepreneurship. There are more than 10,000 ITIs with a capacity of approximately 1.5 million seats.

The DGET also governs RVTIs (Regional Vocational Training Institutions) and ATIs (Advance Training Institutions) focusing on specialized and high-end skill sets and trainers courses.

Three major skill development schemes of the DGET that are being implemented through government ITIs and private ITCs include the Craftsmen Training Scheme, the Apprenticeship Training Scheme, and the Modular Employability Scheme.

Alongside the daunting challenge of skilling millions of youth entering workforce each month, India also faces a huge challenge of evolving a skill development system that can equip the workforce adequately to meet the requirements of the industry.

The workforce needs to be trained across four levels, from the high end specialized skills for 'White Collar' jobs to the low-level skills of the 'Rust Collar' jobs. Moreover, these skills have to be adequately linked to the available job opportunities. Several factors have inhibited the skill development eco-system in India to scale up to the desired levels.

The skill development system in India is plagued with multiple issues related to awareness, perception, cost, quality and scale.

Value Education and Environmental Education

Value education

According to C. V. Good —" Value-education is the aggregate of all the process by means of which a person develops abilities, attitudes and other forms of behavior of the positive values in the society in which he lives."

According to Father of Indian Nation M.K.Gandhi: "If wealth is lost nothing is lost If health is lost something is lost If character is lost everything is lost"

- Institutions of higher learning and education in ancient India.
- Evolution of higher learning and research in Post Independence India.
- Oriental, Conventional and Non-conventional learning programmes in India.
- Professional, Technical and Skill Based education.
- Value education and environmental education. [This Article]
- Policies, Governance, and Administration.
- MCQ Based on last 10 Years solved question papers

Accordingly, the National Conference On Minimum Curriculum Standards for primary stage organized by NCERT (National Council For Educational Research and Training) in July

1970, emphasized the importance of inculcating in the students moral and spiritual values which form a part of our culture viz., honesty, kindness, charity, tolerance, courtesy, sympathy and compassion.

- The National Seminar on Primary and Work-oriented Education organized by NCERT in November,
- 1976, in the context of International Education Year recognized the relevance and importance of the Gandhian Values in reforming education.
- The National Policy on Education has laid considerable emphasis on Value Education by highlighting the need to make education a forceful tool for cultivation of social and moral values.
- The policy has stated that in our culturally plural society education should factor universal and eternal values oriented towards the unity and integration of our people. Dr. Kothari (1964-66) tried to emphasise the value viz., democracy, socialism, and equality of all religions. He attached great importance to achieve skills through science and technology and also balanced development of human values.
- National Education Policy (1986) studied Indian background and came to the conclusion that religious education is not possible in India as India is a country with many religions. N.E.P. (1986) therefore advocated the concept of value education, giving extensive meaning to the term moral education.

In pre-independence and after independence, several commissions and committees recommended character education, religious education and moral education. According to National Education policy of 1986, moral and religious education were broadly defined and coined into value education. Dr. Gawande (1994) had tried to investigate types of value and their areas. He noticed the following types of value and their areas:

Definition of Human Value

1. Truthfulness – To have constant practice to approach the reality or truthfulness.
2. Constructivity – To help for good undertaking.
3. Sacrifice – To help without selfish motive.
4. Sincerity -To work in stipulated time as assigned.
5. Self control – To have control on individual's mind for action.
6. Altruism – To behave with others with love and to consider the well-being and happiness first.
7. Scientific vision – To find out scientific reasons of a problem.

National value or constitutional value:

Each country has its own independent constitution in which specific values are included. They are called national values or constitutional values, e.g. following values are included in Indian Constitution.

Social value:

Each country preserves some values according to its culture and these values are preserved land protected. Dr. Chilan has fixed the following values of Indian society viz. Pity, Self-Control, Universal brotherhood, honesty, respect and faith.

Professional Value:
Many professionals are in existence and each profession has got its own independent values e.g. Following are the values of the teaching profession: Knowledge thrust, Sincerity in profession, Regularity and Faith.

Religious Value:
Each religion has got its independent status, principles and rules e.g. following values are included in Boudha religion. Wisdom, Character and Pity. Some values are common to all religions, whereas some values are attached to as particular religion only and they are the specialties of that particular religion.

Aesthetic Value:

Environmental Education
Environmental education enables learners to develop a structure of knowledge about the world and seek knowledge that they can use and develop throughout their lives. Environmental education empowers learners by enabling them to participate in a sustainable future. Thus the foundation for a lifelong learning is laid by environmental education.
Environmental study is based upon a comprehensive view of various environmental systems. It aims to make the citizens competent to do scientific work and to find out practical solutions to current environmental problems. The citizens acquire the ability to analyze the environmental parameters like the aquatic, terrestrial and atmospheric systems and their interactions with the biosphere and astrosphere.

Meaning of Environmental Education
The concept of Environmental education (EE) was first formalized by the International Union for the Conservation of Nature (IUCN), in 1970 at a meeting in Nevada, USA, as a process of recognizing values and classifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter-relatedness among man, his culture and his biophysical surroundings.

- Subsequently, Environmental Education was recognized and its development was recommended by the World Community as a measure for the understanding, protection and improvement of the environment and its quality (United Nations, 1972; UNESCO-UNEP, 1976).
- The world's _rst Intergovernmental Conference on Environmental Education was held in Tbilisi, Georgia.
- A major outcome of Tbilisi, gave detailed description on the objectives of environmental education viz: awareness, knowledge, attitudes, skills and participation.
- The 4th International Conference on Environmental Education was held at Center for Environment Education, Ahmadabad from November 24th to November 28th, 2007.
- The aim of this Conference was to understand what has emerged out of the discipline of Environment Education (EE) since Tbilisi declaration and the role of EE within Education for Sustainable Development (ESD).

The Evolution of Environmental Education-An Indian perspective

Honorable Supreme Court of India in 1991 made environment education compulsory at all levels of education. Centre for Environment Education (CEE), in partnership with the Departments of Education and academic institutions, carry out teacher training in EE.

- The State's responsibility with regard to environmental protection has been laid down under Article 48-A of our Constitution, which reads as follows: "The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country".
- The National Policy on Education 1986 (renewed in 1992) stated: There is a paramount need to create a consciousness of the environment. It must permeate all ages and all sections of society, beginning with the child.
- The National Curriculum Framework 2005 envisages that Environmental Education to be imparted in an infusion model in the Upper Primary and Secondary stages of school education with an aim to bring about sensitivity towards the International bodies and programs, such as United Nations Educational, Scientific and Cultural organization (UNESCO), United Nations Environment Program (UNEP), Ministry of Environment and Forestry (MoEF) and Centre for Environmental Education (CEE) have also been active in supporting environmental education
- Today EE in the formal educational system in India is handled at three levels. It is a composite subject called Environment at the primary school level; it is infused into environment in regular school subjects at the middle and secondary school level, and is a separate subject at the college level. For EE to be effectively taken up in the curricular, co-curricular and extracurricular mode, resources and facilities have to be built up and strengthened both within and outside the school and college system.
- The State Departments of Education in the respective states administer the institutions for preservice teacher training courses. The teaching of Environmental Studies (EVS) is placed under both science and Social Studies syllabi recommended by the NCERT.
- The National Council of Teacher Education has recommended EE as a chapter in its overall syllabus and guidelines for B. Ed. Colleges in the country.
- The NCERT, State Councils of Educational Research and Training (SCERT) and the District Institute of Educational Technology (DIET) are largely involved in in-service training in India. 'Green Teacher' a distance education course in Environment Education, for practicing teachers launched by Centre for Environment Education, Ahmedabad, India in collaboration with the Commonwealth of Learning (COL), Canada in 2005. It is a one year diploma program for teachers and educators.

Characteristics of Environmental Education

- Environmental Education is one of the most effective tools for increasing the general level of public environmental awareness, developing skills for solving environmental problems and maintaining and improving the quality of life.

- The aim of environmental education has been modified to emphasize ―environmental education for sustainable development (EESD) which has broader implications not only for environmental education but also for development, poverty, and population and gender (DESD, 2005-2014).
- It is expected that environmental education will promote environmentally sustainable societies throughout the world through EESD (DESD, 2005-2014).
- EE can develop students 'skills and knowledge to deal with current environmental Environmental learning can increase students 'critical ecological awareness of both local and global environments.
- Environmental education often develops environment related school-community partnerships and youth programs outside formal education

Need for Environmental Education

The need to protect the environment hence the rationales for environmental education arise as a result of the following: **Objectives of Environmental Education**

- Awareness: To acquire an awareness and sensitivity to the total environment and its allied problems;
- Knowledge: To gain a variety of experiences in and acquire a basic understanding of, the environment and its associated problems;
- Attitudes: To acquire a set of values and feelings of concern for the environment and motivation for actively participating in environmental improvement and protection;
- Skills: To acquire the skills for identifying and solving environmental problems;
- Participation: To encourage citizens to be actively involved at all levels in working toward resolution of environmental problems (UNESCO, 1978).
- Evaluation ability: To evaluate environs measures and education programmes in terms of social, economic, ecological and aesthetic factors.

Environmental Education for Sustainable Development (EESD)

- Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action (UNESCO, Tbilisi Declaration, 1977).
- Environmental education has been placed at the center of efforts to achieve sustainable development for the last several decades. International agreements suchas Agenda 21, for example, have called for a re-orientation of all education towards sustainability (UNCED, 1992, Chapter 36).
- India adopted a new paradigm of thinking and experience of development post-Stockholm Conference of 1972 called Sustainable Development (SD), following which, India became a part of187 countries agreeing on carrying out an important commitment towards SD by signing the Rio Declaration during 1992 UN Conference on Environment and Development.

- The Government of India's sensitivity and commitment to sustainable and inclusive growth is reflected in the major policies of various ministries and also specific initiatives and programs adopted through its Five Year Plans so as to achieve sustainability and MDG's (Millennium Development Goals).
- In order to achieve the goals of sustainable development, one of the first steps taken was in the direction of environment conservation and protection by promoting Environment education. This strategy was adopted post Stockholm conference by setting up centers of Excellence for Environment Education under Ministry of Environment in the early 1980s

Important Notes on Policies, Governance, and Administration
Constitution of India

The Constitution of India is the supreme law of India. It lays down the framework defining fundamental political principles, establishes the structure, procedures, powers and duties of government institutions and sets out fundamental rights, directive principles and the duties of citizens.

It is the longest written constitution of any sovereign country in the world. The nation is governed on the basis of this Constitution. B. R. Ambedkar is regarded as the chief architect of the Indian Constitution.

At the time of independence in August 15 1947, the State of Jammu and Kashmir decided not to join either India or Pakistan. However, soon Pakistan attempted to annex the State military. Meanwhile, the Maharaja signed the "Instrument of accession" with India along with certain concessions for the autonomy of the State. article 370 in Part XXI of the Indian Constitution grants a special status to Jammu and Kashmir

The Indian constitution is the world's longest constitution. At the time of commencement, the constitution had 395 articles in 22 parts and 8 schedules. It consists of almost 80,000 words. The Constitution, in its current form (September 2012), consists of a preamble, 25 parts containing 448 articles, 12 schedules, 5 appendices and 100 amendments, the latest of which came into force on 1 August 2015.

The Constituent Assembly took 2 years, 11 months and 18 days to frame the Constitution. Originally, the Constitution had 22 parts, 395 articles and 8 schedules. Presently, it consists of 450 articles (divided into 24 parts) and 12 schedules.

Various sources of our Constitution

1. Government of India Act of 1935 – Federal Scheme, Office of Governor, Judiciary, Public Service Commission, Emergency provisions and administrative details.
2. British Constitution – Parliamentary System, Rule of law, Lagislative Procedure, Single Citizenship, Cabinet System, Prerogative Writs, Parliamentary Privileges and Bicameralism.
3. US Constitution – Fundamental rights, independence of judiciary, judicial review, impeachment of president, removal of Supreme Court and high court judges and post of vice president.
4. Irish Constitution– Directive Principles of State Policy, nomination of members of Rajya Sabha and method of election of president

5. Canadian Constitution– Federation with a strong centre, vesting of residuary power in the centre, appointment of state Governor by the centre and advisory jurisdiction of Supreme Court.

6. Australian Constitution– Concurrent list, joint sitting of two houses of Parliament.

7. Constitution of Germany– Suspension of fundamental rights during emergency.

8. French Constitution– Republic and ideals of liberty, equality and fraternity in the Preamble.

9. South African Constitution- Procedure for amendment of the constitution and election of members of Rajya Sabha.

10. Japanese Constitution- Procedure established by Law.

11. Constitution of former USSR: Procedure of five-year plan, fundamental duties, ideals of justice in Preamble.

Constitution of India, 1949 Preamble

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN,

SOCIALIST, SECULAR, DEMOCRATIC, REPUBLIC and to secure to all its citizens:-

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

FRATERNITY assuring the dignity of the individual and the unity and integrity of the nation

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November 1949, do HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.

Key Points to remember

- The Indian Constitution is the longest in the world It has 448 articles, 12 schedules and 98 amendments. On the other hand, the American constitution is the shortest.
- The Constituent Assembly had 284 members, out of which 15 were women. The Drafting Committee submitted the draft in November 1949, after which they took three more years to complete it
- The Constitution of India was handwritten and calligraphed both in English and Hindi.
- The Indian Constitution has taken various features from other constitutions.
- The concepts of liberty, equality and fraternity were taken from the French Constitution.
- The idea of 5 year plans was taken from the USSR and the concept of socio-economic rights was taken from Ireland.
- Most importantly, the law on which the Supreme Court works was taken from Japan. There are many other concepts that have been borrowed from other countries.
- The Indian Constitution came into force on January 26, 1950.
- B.R. Ambedkar had a major role to play in the formulation of the Indian Constitution.

Classification of Fundamental rights

- Originally Constitution provided for seven Fundamental Rights viz.
- Right to equality (Article 14-18)
- Right to freedom (Article 19-22)
- Right against exploitation (Article 23-24)
- Right to freedom of religion (Articles 25-28)
- Cultural & educational rights (Articles 29-30)
- Right to Property (Article 31)[Later It was removed !!]
- Right to constitutional remedies (Article 32).

Right to Constitutional Remedies	• Article 32 :- The right to move the Supreme Court in case of their violation (called Soul and heart of the Constitution by BR Ambedkar) • Forms of Writ check • Habeas Corpus :- Equality before law and equal protection of law

Right to Equality	• Article 14 :- Equality before law and equal protection of law • Article 15 :- Prohibition of discrimination on grounds only of religion, race, caste, sex or place of birth. • Article 16 :- Equality of opportunity in matters of public employment • Article 17 :- End of untouchability • Article 18 :- Abolition of titles, Military and academic distinctions are, however, exempted

Right to Freedom	• Article 19 :- It guarantees the citizens of India the following six fundamentals freedoms:-
	   1. Freedom of Speech and Expression
	   2. Freedom of Assembly
	   3. Freedom of form Associations
	   4. Freedom of Movement
	   5. Freedom of Residence and Settlement
	   6. Freedom of Profession, Occupation, Trade and Business
	• Article 20 :- Protection in respect of conviction for offences
	• Article 21 :- Protection of life and personal liberty
	• Article 22 :- Protection against arrest and detention in certain cases

Right Against Exploitation	• Article 23 :- Traffic in human beings prohibited • Article 24 :- No child below the age of 14 can be employed
Right to freedom of Religion	• Article 25 :- Freedom of conscience and free profession, practice and propagation of religion • Article 26 :- Freedom to manage religious affairs • Article 27 :- Prohibits taxes on religious grounds • Article 28 :- Freedom as to attendance at religious ceremonies in certain educational institutions
Cultural and Educational Rights	• Article 29 :- Protection of interests of minorities • Article 30 :- Right of minorities to establish and administer educational institutions • Article 31 :- Omitted by the 44th Amendment Act

Fundamental Duties in the Indian Constitution

Fundamental duties in Indian constitution are based on Japanese model. Ten duties in the Indian Constitution were included in the Indian Constitution by 42nd amendment act, 1976 on the basis of Swarn Singh Committee. Eleventh duty was added by 86th Amendment act, 2002.

Fundamental rights and fundamental duties are co-relative. 11 Fundamental Duties of the citizens towards the State have been enumerated in Article 51-A in part-IV A of our Constitution. There is no provision in the Indian constitution for direct enforcement of any of these duties nor any sanction to prevent their violation. Supreme Court pointed out the foundation of the "composite culture' expressed in clause (f) of article 51-A in the Sanskrit language and literature.

List of fundamental duties for citizens

1. To abide by the Indian Constitution and respect its ideals and institutions, the National Flag and the National Anthem.
2. To cherish and follow the noble ideals of the freedom struggle.
3. To uphold and protect the sovereignty, unity and integrity of India.
4. To defend the country and render national service when required.
5. To promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities, to renounce practices derogatory to the dignity of women.
6. To value and preserve the rich heritage of our composite culture.
7. To protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures.
8. To develop the scientific temper, humanism and the spirit of inquiry and reform.
9. To safeguard public property and to abjure violence.
10. To strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement.
11. Who is a parent or guardian to provide opportunities for education to his child or ward, as the case may be, between the age of six and fourteen years.

President

Articles 52 to 153 of the Constitution deal with the Union executive. The Union executive consists of the

President, the Vice-President, the Prime Minister, the council of ministers and the attorney general of India. The President is the head of the Indian State. He is the first citizen of India. Impeachment of President: The President can be removed from office by a process of impeachment for 'violation of the Constitution'. The impeachment charges can be initiated by either House of Parliament. These charges should be signed by one-fourth members of the House (that framed the charges), and a 14 days' notice should be given to the President.

The executive powers and functions of the President are:

All executive actions of the Government of India are formally taken in his name.

According to article 75 he appoints the Prime Minister of India and according to Article 77 with consent of the Prime Minister he appoints the other ministers. They hold office during his pleasure.

He appoints the Attorney-General of India, the Comptroller and Auditor General of India, the Chief Election Commissioner and other Election Commissioners, the chairman and members of the Union Public Service Commission, the governors of states, the chairman and members of Finance Commission, and administrators of UTs and so on.

Legislative powers

The President is an integral part of the Parliament of India, and enjoys the following legislative powers. He can summon or prorogue the Parliament and dissolve the Lok Sabha. [Art. 85] He can also summon a joint sitting of both the Houses of Parliament, which is presided over by the

Speaker of the Lok Sabha. [Art. 108]

- He can address the Parliament at the commencement of the first session after each general election and the first session of each year. [Art. 87]
- He can send messages to the Houses of Parliament, whether with respect to a bill pending in the Parliament or otherwise.
- He can appoint any member of the Lok Sabha to preside over its proceedings when the offices of both the Speaker and the Deputy Speaker fall vacant. Similarly, he can also appoint any member of the Rajya Sabha to preside over its proceedings when the offices of both the Chairman and the Deputy Chairman fall vacant.
- He nominates 12 members of the Rajya Sabha from amongst persons having special knowledge or practical experience in literature, science, art and social service.[Art. 80(1)]
- The President is empowered to nominate not more than two Anglo-Indian members to the Lok Sabha, if that community is not adequately represented in that House.[Art. 331]

His prior recommendation or permission is needed to introduce certain types of bill in the Parliament. For example, a bill involving expenditure from the Consolidated Fund of India, or a bill for the alteration of boundaries of states or creation of a new state.

1. When a bill is sent to the President after it has been passed by the Parliament, he can give his assent, withhold his assent or return the bill for reconsideration of the parliament. However, if the bill is passed again by the Parliament, with or without amendments, the President has to give his assent to the bill.

2. When a bill passed by a state legislature is reserved by the governor for consideration of the President, the

President can give his assent, withhold it or direct the governor to return the bill (if it is not a money bill) for reconsideration of the state legislature. It should be noted here that it is not obligatory for the President to give his assent even if the bill is again passed by the state legislature and sent again to him for his consideration.

3. According to Article 123, he can promulgate ordinances when the Parliament is not in session. An ordinance issued under Art. 123 must receive approval of Parliament (both the houses) within six weeks of reassembly of the parliament.

Veto power of the President: A bill passed by the Parliament can become an act only if it receives the assent of the President. However, the President has the veto power over the bills passed by the Parliament, i.e. he can withhold his assent to the bills.

Absolute Veto: It refers to the power of the President to withhold his assent to a bill passed by the Parliament. The bill then ends and does not become an act. Usually, this veto is exercised in the following two cases:

With respect to private members' bills; and With respect to the government bills when the cabinet resigns (after the passage of the bills but before the assent by the President) and the new cabinet advises the President not to give his assent to such bills.

Suspensive Veto: The President exercises this veto when he returns a bill for reconsideration of the Parliament. However, if the bill is passed again by the Parliament with or without amendments and again presented to the President, it is obligatory for the President to give his assent to the bill. The President does not possess this veto in the case of money bills

Vice-President

The Vice-President occupies the second highest office in the country. He is accorded a rank next to the President in the official warrant of precedence. Election He is elected by the members of an electoral college consisting of the members of both Houses of Parliament. Thus, this Electoral College is different from the Electoral College for the election of the President in the following two respects:

1. It consists of both elected and nominated members of the Parliament.
2. It does not include the members of the state legislative assemblies.

The Vice-President's election, like that of the President's election, is held in accordance with the system of proportional representation by means of the single transferable vote and the voting is by secret ballot. To be eligible for election as Vice-President, a person should fulfill the following qualifications:

- He should be a citizen of India.
- He should have completed 35 years of age.
- He should be qualified for election as a member of the Rajya Sabha.
- He should not hold any office of profit under the Union government or any state government or any local authority or any other public authority.

Oath or Affirmation

- The oath of office to the Vice-President is administered by the President or some person appointed in that behalf by him.
- The Vice-President holds office for a term of five years from the date on which he enters upon his office.
- However, he can resign from his office at any time by addressing the resignation letter to the President.
- He can also be removed from the office before completion of his term. A formal impeachment is not required for his removal. He can be removed by a resolution of the Rajya Sabha passed by an absolute majority.
- On the vacancy of the post of the Vice-President, whether by death, resignation or otherwise, the Deputy Chairman of the Rajya Sabha takes charge until a Vice-President is elected and takes charge.

The executive powers and functions of the Vice- President are:

- The functions of Vice-President are twofold: He acts as the ex-officio Chairman of Rajya Sabha. In this capacity, his powers and functions are similar to those of the Speaker of Lok Sabha.
- He acts as President when a vacancy occurs in the office of the President due to his resignation, removal, death or otherwise. He can act as President only for a maximum period of six months, within which a new President has to be elected.
- Further, when the sitting President is unable to discharge his functions due to absence, illness or any other cause, the Vice-President discharges his functions until the President resumes his office.

- While acting as President or discharging the functions of President, the Vice-President does not perform the duties of the office of the chairman of Rajya Sabha. During this period, those duties are performed by the Deputy Chairman of Rajya Sabha.
- If the offices of both the President and the Vice-President fall vacant by reason of death, resignation, and removal etc. the Chief Justice of India or in his absence the senior most judge of the Supreme Court acts as President.
- For the first time, during the 15-day visit of Dr. Rajendra Prasad to the Soviet Union in June 1960, the then Vice-President Dr. Radhakrishnan acted as the President. For the first time, in 1969, when the President Dr. Zakir Hussain died and the Vice-President V.V. Giri resigned, the Chief Justice Md. Hidayatullah acted as President

Prime Minister

In the scheme of parliamentary system of government provided by the Constitution, the President is the nominal executive authority and Prime Minister is the real executive authority. The President is the head of the State while Prime Minister is the head of the government. Appointment of the Prime Minister Article 75 says that the Prime Minister shall be appointed by the President. The President appoints the leader of the majority party in the Lok Sabha as the Prime Minister. But, when no party has a clear majority in the Lok Sabha, then the President may exercise his personal discretion in the selection and appointment of the Prime Minister.

The term of the Prime Minister is not fixed and he holds office during the pleasure of the President. So long as the Prime Minister enjoys the majority support in the Lok Sabha, he cannot be dismissed by the President. However, if he loses the confidence of the Lok Sabha, he must resign or the President can dismiss him.

Powers and functions of Prime Minister

- The powers and functions of Prime Minister can be studied under the following heads:
- He recommends persons who can be appointed as ministers by the President.
- He can recommend dissolution of the Lok Sabha to the President at any time.
- He is the chairman of the Planning Commission, National Development Council, National Integration Council, Inter-State Council and National Water Resources Council.

Central Council of Ministers

As the Constitution of India provides for a parliamentary system of government modelled on the British pattern, the council of ministers headed by the prime minister is the real executive authority is our politico-administrative system.

The principles of parliamentary system of government are not detailed in the Constitution, but two Articles (74 and 75) deal with them in a broad, sketchy and general manner. Article 74 deals with the status of the council of ministers while Article 75 deals with the appointment, tenure, responsibility, qualification, oath and salaries and allowances of the ministers.

- He recommends persons who can be appointed as ministers by the President.
- He can recommend dissolution of the Lok Sabha to the President at any time.
- He is the chairman of the Planning Commission, National Development Council, National Integration Council, Inter-State Council and National Water Resources Council.
- Article 74 – There shall be a Council of Ministers with the Prime Minister at the head to aid and advise the President, who shall, in the exercise of his functions, act in accordance with such advice.
- Article 75 – The Prime Minister shall be appointed by the President and the other ministers shall be appointed by the President on the advice of the Prime Minister. The total number of ministers, including the Prime
- Minister, in the Council of Ministers shall not exceed 15% of the total strength of the Lok Sabha. [91st Constitutional Amendment Act, 2003] The council of ministers shall be collectively responsible to the Lok Sabha.
- A person who is not a member of either House can also become a minister but he cannot continue as minister for more than six months unless he secures a seat in either House of Parliament (by election/nomination). [Art. 75(5)]

The council of ministers consists of three categories: cabinet ministers, ministers of state, and deputy ministers.

- Cabinet Ministers: The cabinet ministers head the important ministries of the Central government like home, defence, finance and external affairs.
- Ministers of State: The ministers of state can either be given independent charge of ministries/departments or can be attached to cabinet ministers.
- Deputy Ministers: The deputy ministers are not given independent charge of ministries/departments and always assist the Cabinet or State Minister or both. They are not members of the cabinet and do not attend cabinet meetings. Minster may be taken from members of either House and minister who is member of one House has the right to speak and take part in the proceedings of the other House but cannot vote in the House of which he is not member. [Art. 88]. If the Prime Minister resigns or passes away, the entire ministry goes out automatically.

Top 16 Digital Initiative in Higher Education
#1 Study Webs of Active Learning for Young Aspiring Minds (SWAYAM)
- SWAYAM is an indigenous (Made in India) IT Massive Open Online Courses (MOOCs) Platform for providing best quality education that can be accessed by anyone, anytime and anywhere using the IT system.
- The Concept of Massive Open Online Courses (MOOCs) involves online delivery of interactive learning content to large number of people simultaneously.
- It allows sharing of best quality education with everyone, thereby bringing in equity as far as the quality of education is concerned.

- SWAYAM platform is developed by Ministry of Human Resource Development (MHRD) and All India Council for Technical Education (AICTE) with the help of Microsoft.
- It is ultimately capable of hosting 2000 courses and 80000 hours of learning: covering school, undergraduate, post-graduate, engineering, law and other professional courses.
- All the courses on this platform are interactive, prepared by the best teachers in the country and are available, free of cost to the students in India.
- More than 1,000 specially chosen faculty and teachers from across the Country have participated in preparing these courses.
- Not only this; In order to ensure best quality content are produced and delivered, Nine National Coordinators have been appointed: They are-
- Courses under SWAYAM would be available in the following levels: For each level, there is
    1. National Coordinator, who would be responsible for the quality of content: Out of school Children: for classes 9th to 12th (National Coordinator: National Open School Society)
    2. School children in classes 9th to 12th (National Coordinator: NCERT)
    3. Undergraduate (non-engineering) courses (National Coordinator: CEC)
    4. Post graduate (non-engineering) courses (National Coordinator: UGC)
    5. Engineering Courses (National Coordinator: IIT Madras)
    6. Management Courses (National Coordinator: IIM Bangalore)
    7. Out of college students (National Coordinator: IGNOU)
    8. Teaching the teachers (National Coordinator: NITTER Chennai)
    9. [Official Swayam website – https://swayam.gov.in/]

There are 4 quadrants in the MOOC pedagogy:

Video tutorials covering a whole course – normally having about 20 hours of instruction in series of lectures, each lecture not exceeding 30 minutes.

E-Content: reading material that could add to the learning imparted through the video tutorials.

Self-Assessment: Quizzes/assignments that intersperse the course

Discussion forum for posting queries: All the courses delivered through SWAYAM are available free of cost to the learners, however students wanting certifications shall be registered, shall be offered a certificate on successful completion of the course, with a little fee.

At the end of each course, there will be an assessment of the student through proctored examination and the marks/grades secured in this exam could be transferred to the academic record of the students.

You can see the latest notification by UGC around this. However, at present, the Credits up to 20% of the total courses can only be earned in a Semester by such students through online learning delivered on SWAYAM platform.

You can also download SWAYAM applications from popular app stores to help to pursue your course while you are on the move

University Grants Commission (UGC) has vide Gazette Notification dated 19th July, 2016, notified Regulation, 2016 regarding 'Credit Framework for Online Learning Courses through SWAYAM'.

Accordingly, a student studying at a recognized institute anywhere in the country and having cleared the Online Course through SWAYAM, shall be awarded Credits and the credits earned by such a student shall be transferred from the Host Institute to the Parent Institute where the student is studying

2 SWAYAM Prabha: the 32 Educational DTH Channels

- The SWAYAM PRABHA is a group of 32 DTH channels devoted to telecasting of high-quality educational programmes on 24X7 basis using the GSAT-15 satellite.
- Every day, there will be new content for at least 4 hours which would be repeated 5 more times in a day, allowing the students to choose the time of their convenience. The channels are uplinked from BISAG, Gandhinagar.
- The contents are provided by NPTEL, IITs, UGC, CEC, IGNOU, NCERT and NIOS. The INFLIBNET Centre maintains the web portal.
- The DTH Channels cover: –Curriculum based course contents covering diverse disciplines such as arts, science, commerce, performing arts, social sciences and humanities subjects, engineering, technology, law, medicine, agriculture etc. in higher education domain (all courses would be certification-ready in their detailed offering).
- School education (9-12 levels) modules; for teacher training as well as teaching and learning aids to children of India to help them understand the subjects better and also help them in better preparedness for competitive examinations for admissions to professional degree programmes.
- Curricula and courses that can meet the needs of life-long learners or Indian citizens in India and abroad.
- IIT-PAL – to assist the students in the Classes 11 and 12 aspiring to join IITs by encouraging scientific thinking and conceptual understanding critical to answer the 'tough' questions of JEE Advanced, so that good quality students enter the portals of IITs. The four channels under this would be on Mathematics, Physics, Chemistry and Biology.
- The project was conceived and completed within 3 months with the active participation of the Bhaskaracharya Satellite Application Centre and Geo informatics (BISAG) Gandhinagar and ECIL Hyderabad.

[Official website- http://www.swayamprabha.gov.in/]

Mobile app- https://play.google.com/store/apps/details?id=com.bisag.introslider&hl=en_IN

#3 National Digital Library (NDL)

- Ministry of Human Resource Development (MHRD) under its National Mission on Education through Information and Communication Technology (NMEICT) has initiated the National Digital Library of India (NDL India) pilot project to develop a framework of virtual repository of learning resources with a single window search facility.

- The Project titled "Development of National Digital Library of India, Towards Building a National Asset" has been sanctioned to IIT, Kharagpur under NMEICT by MHRD.
- NDL is the Single Window Platform that collects and collates metadata from premier learning institutions in India and abroad, as well as other relevant sources. It is a digital repository containing textbooks, articles, videos, audio books, lectures, simulations, fiction and all other kinds of learning media.
- NDL India is designed to hold content of any language and provides interface support for leading Indian languages. It is being arranged to provide support for all academic levels including researchers and lifelong learners, all disciplines, all popular form of access devices and differently-abled learners.
- National Digital Library in India aims to collect, preserve and disseminate entire intellectual output of our country and provide online access from school level to post graduate level, including technical education.
- The project aims to develop overall framework to collate large number of e-contents for school, college and higher education, e-content, virtual library, covering needs of learners with differing abilities
- Design & development of "OAI-PMH" Server for Metadata Harvesting, Indexed etc.
- Serve as a pan-India virtual teaching-learning-evaluation-knowledge platform and for key national asset and
- Collect resources from other Ministries such as Ministry of Culture, Health, Rural Development & Department of Science & Technology on this portal.
- Filtered and federated searching is employed to facilitate focused searching so that learners can find out the right resource with least effort and in minimum time.
- There are more than 72 lakh digital books available through the NDL. The contents cover almost all major domains of education and all major levels of learners from school level to the highest level of education including life-long learners.
- More than 15 lakh students have registered themselves in the NDL. The NDL is available through a mobile app too.

#4 National Academic Depository

- National Academic Depository (NAD) is an initiative of Ministry of Human Resources Development, Govt. of India (MHRD) to facilitate digital issuance, storage, access and verification of Academic Awards issued by Academic Institutions.
- NAD is a Unique, Innovative and Progressive initiative under "Digital India" theme towards achieving Digital enablement of the Education Records. NAD aspires to make the vision of Digital Academic Certificates for every Indian a reality.
- This touches the lives of Indian youth and empowers them with Digital, Online, Trusted, Variable Certificates which are accessible in a secure manner at all times.
- NAD promises to do away with difficulties / inefficiencies of collecting, maintaining, and presenting physical paper certificates.

#5 e-Shodh Sindhu

Based on the recommendation of an Expert Committee, the MHRD has formed e Shodh Sindhu merging three consortia initiatives, namely UGC-INFONET Digital Library Consortium, NLIST and INDEST-AICTE Consortium.

More than 15,000 international electronic journals and e-books are made available to all the higher educational institutions through the e-Shodh Sindhu initiative. This allows access to be best education resources in the world using digital mode.

The INFLIBNET, Gandhinagar, Gujarat is implementing the Scheme.

Official website –https://www.inⅡibnet.ac.in/ess/about.php

#6 Virtual Labs

- Physical distances and the lack of resources make us unable to perform experiments, especially when they involve sophisticated instruments. Also, good teachers are always a scarce resource. Web-based and video-based courses address the issue of teaching to some extent. Conducting joint experiments by two participating institutions and also sharing costly resources has always been a challenge.

- With the present day internet and computer technologies the above limitations can no more hamper students and researchers in enhancing their skills and knowledge. Also, in a country such as ours, costly instruments and equipment need to be shared with fellow researchers to the extent possible.

- Web enabled experiments can be designed for remote operation and viewing so as to enthuse the curiosity and innovation into students. This would help in learning basic and advanced concepts through remote experimentation.

- Today most equipment has computer interface for control and data storage. It is possible to design good experiments around some of these equipment, which would enhance the learning of a student. Internet based experimentation further permits use of resources – knowledge, software, and data available on the web, apart from encouraging skillful experiments being simultaneously performed at points separated in space (and possibly, time).

- Virtual Lab does not require any additional infrastructural setup for conducting experiments at user premises. One computer terminal with broadband Internet connectivity is all that is needed to perform the experiments remotely.

- Over 205 virtual labs in 9 Engineering & Science disciplines, comprising about 1515 experiments are operational and currently being accessed by more than 6 lakh students.

- Official website- http://www.vlab.co.in/

#7 e-Yantra

- An MHRD initiative under NMEICT Programme, named "e-Yantra" is implemented to incorporate Robotics into engineering education with the objective of engaging students through exciting hands-on application of mathematics, computer science, and engineering principles.

- Creation of robotic platforms has been very successfully demonstrated during Phase-I of the project. Presently, e-Yantra has been implemented in 100 colleges eYantra is creating skills by setting up lab infrastructure for project based learning and training teachers in these 100 engineering colleges.
- Going ahead, MHRD sees the core skills developed by IITB as generating, distributing and analyzing content to further create manpower with practical skills. All the projects and code are available on the e- Yantra web-site www.eyantra.org as open source content.

#8 Campus Connectivity

- The National Mission on Education through Information and Communication Technology (NMEICT) aims to leverage the potential of Information and Communication Technology (ICT) in teaching and learning process.
- The Mission also aims to provide 20 Broadband connections of 512 Kbps speed to over 25,000 colleges and 2000 polytechnics and optical _ber connectivity one Gbps to 419 universities/ university level institutions in the country which includes internet facility.
- On the lines of 'Digital India' initiative of the PMO, the MHRD has now decided that the campuses of Universities, (having 1 Gbps bandwidth) shall be made WiFi enabled campus. Already all the IITs, IIMs, and NITs have established WiFi campuses.
- The process of laying the optical ⬚bre and provision of the WiFi in Central Universities is currently underway.

#9 Talk to a Teacher

- Talk to a Teacher developed by IIT Bombay, is an initiative of the National Mission on Education through ICT, funded by MHRD to provide free access to a few selected graduate and postgraduate courses, taught at IIT Bombay by distinguished faculty members and scholars at large.
- It uses A-View collaboration tool developed by Amrita University for providing virtual classrooms to the faculty across the country.
- These courses can be viewed absolutely free of charge at lower bandwidths on a personal computer/laptop having a headphone and Internet connection.
- Registration is not required as it does not have any evaluation/certification process.
- The courses are recorded live in the classrooms of IIT Bombay and may not reflect entire content of the course.
- Apart from the core courses in engineering and computer science disciplines, the program also covers Humanities & Social Sciences discipline.
- More than 80,000 teachers have been trained, so far, under this project, involving synchronous delivery of courses from IIT Mumbai & IIT Kharagpur.

#10 Ask A Question

Ask A Question is a unique platform through which students from science and engineering colleges all over India can ask questions and faculty from IIT Bombay answers them. Students can ask questions either through an online forum or during an interactive live session. Interactive live sessions are held on every Thursday from 4:00 P.M to 5:00 P.M in the field of Electrical Engineering and every Friday from 4:00 P.M to 5:00 P.M in the field of Physics.

#11 e-Acharya

e-Acharya also called 'Integrated e-Content Portal' of NMEICT, is the official repository of NMEICT e-content and all content produced under NMEICT is being put at this Repository platform at INFILIBNET Centre Gandhinagar, so to apply basic tenets of preservation for digital content, implement standard Metadata schema of different types for the digital content and ensure their long-term availability.

All the Project Investigators awarded development of e-Content under NMEICT have been requested to ensure the deliverables are placed, at the earliest, in the Integrated Portal/e-Acharya of MHRD.

Further the NCERT shall provide e-content Links to e-Acharya and the NOIS shall providing the content on HDD to the e-Acharya repository and both shall ensure that all the content including e-Books are made available on e- Acharya.

The e-Acharya besides a repository of content shall also have the Metadata of all these contents and it shall form a vertical of 'National Digital Library' (NDL), being implemented by the IIT Kharagpur.

The e-Acharya shall be backed by a robust 24X7 Data Centre, which shall be integrated with NMEICT, Cloud network, set up at NIC / NKN Data Centre by the lIT-Delhi and called 'Baadal'. The MOOCs being produced under NMEICT shall also be uploaded on e-Acharya.

#12 E-Kalpa

Another MHRD/ NMEICT initiative named "e-Kalpa" creating Digital-Learning Environment for Design in India has successfully demonstrated the achievement of the following project objectives, on completion of its phase-I:
1. Digital online content for learning Design with e-Learning programs on Design
2. Digital Design Resource Database including the craft sector
3. Social networking for Higher Learning with collaborative Learning Space for Design
4. Design inputs for products of National Mission in Education through ICT

As on December 2015, the content of e-Kalpa website named "D'source" includes 160 Courses on Design Learning in different domains, more than 400 Resources in the form of fine examples of Design and crafts, 110 Case studies of Design Projects undertaken by professionals and design students, 50 Video lectures and presentations by subjects experts and 600 examples of a visual Gallery that has documented works of the rich tradition of art and design seen across different regions of India.

#13 The Free and Open Source Software for Education (FOSSEE)

- FOSSEE project sanctioned to IIT Bombay has been promoting use of open source software in educational institutions (http://fossee.in).
- It does through instructional material, such as spoken tutorials, documentation, such as textbook companions, awareness programmes, such as conferences, training workshops, and Internships. Textbook Companion (TBC) is a collection of code for solved examples of standard textbooks.
- About 2,000 college students and teachers have participated in this activity & close to 1,000 TBCs have been created in Scilab and Python alone.
- FOSSEE has made all the TBCs open source and has made them available for free download. Scilab and Python TBCs are also on the cloud, so that one needs only a browser to access/execute the codes of TBC.
- OSSEE is promoting the well-established open source software: OpenFOAM, an alternative to the proprietary software Fluent for computational fluid dynamics; DWSIM, an alternative to the proprietary software Aspen Plus, for chemical process simulation.
- FOSSEE has also undertaken several new open source software activities as well: raising Scilab toolboxes to that of Matlab; development of e-Sim, an electronic design automation software, an alternative to ORCAD; development of Sandhi, a software for data acquisition and control, an alternative to LabVIEW.
- The FOSSEE team works on open source hardware projects, such as Open PLC and Arduino as well.
- Through all of these projects, a large number of students across the country have been trained.

#14 e-Vidwan

- The 'Information and Library Network' (INFLIBNET) Centre took the initiative called "Vidwan: Expert Database and National Researcher's Network" with the financial support from NMEICT.
- The objectives of VIDWAN is to collect academic and research profiles of scientists, faculty and research scientists working in leading academic and R&D organizations in India and abroad;
- Quickly and conveniently provide information about experts to peers, prospective collaborators, funding agencies, policy makers and research scholars in the country;
- Establish communication directly with the experts who possess the expertise needed by research scholars;
- Identify peer reviewers for review of articles and research proposals; and
- Create information exchanges and networking opportunities among scientist.
- The database can be used for selection of panels of experts for various committees and taskforces
- Established by the Ministries / Govt. establishments for monitoring and evaluation purposes.

- Further, the availability of single point expert database will help the policy makers and funding agencies in decision-making and policy intervention.
- As on 31st December 2015, the database contains more than 17,500 profiles of experts from 2,000 leading academic institutions, universities, R&D organizations including IITs, CSIR, DRDO, etc

#15 Spoken Tutorial

- Spoken Tutorial is a multi-award winning educational content portal. Here one can learn various Free and Open Source Software all by oneself.
- Our self-paced, multi-lingual courses ensure that anybody with a computer and a desire for learning, can learn from any place, at any time and in a language of their choice
- The Spoken Tutorial project is the initiative of the 'Talk to a Teacher' activity of the National Mission on Education through Information and Communication Technology (ICT), launched by the Ministry of Human Resources and Development, Government of India.
- Spoken Tutorial Forums is a friendly online discussion forum. You can join existing discussions or start new topics, and get lots of replies from the Spoken Tutorial community. Registration to Forums is completely free and takes only one minute.
- Forums is very easy to use, even for computer newbies. It's very easy to format forum posts with fonts, colors, and many other options. You can attach _les to your posts directly from your computer.

#16 Central cloud Infrastructure

Central cloud Infrastructure: The MHRD under NMEICT has awarded a project to IIT Delhi, to set up a robust 24X7 backed Data Centre and the activities have been put up at NIC / NKN Data Centre, and the cloud is called 'Baadal'. The IIT Delhi cloud is hosting e-content and video content of e-Acharya.

1. **NIRF**

   Launched on 29th September 2015 by MHRD, this framework intents to outlines a methodology for ranking the institutions across our country. The Core Committee set up by MHRD arrived at the broad level understanding and hence give overall recommendations. Then only the methodology has been driven. The objective is to identify the broad level parameters for the ranking of Indian universities and institutions. The parameters that are broadly covered include- "Teaching, Learning and Resources," "Graduation Outcomes," "Research and Professional Practices," "Outreach and Inclusivity," and the "Perception".

2. **GIAN**

   Aimed to tap the talent of the strong academic network of the country-scientists, entrepreneurs, at international level. To encourage their overall engagement with Higher Education Institutes in India so that country's existing academic resources can be augmented and accelerate the pace of the quality reforms. Further to elevate India's

technological and scientific capacity to gain the global excellence. Through this, the best international academic experience can be brought into our education systems. It will enable the interaction of students and the faculty with that of the world level best academic and industry experts and also learn through their experiences motivate people to draw solutions to the Indian problems.

3. **UAY**

The major objectives of the UAY scheme are to promote innovation & development in IITs addressing the issues of the manufacturing industries; to spur the innovative mindset; to coordinate the action between the academia & industry and to strengthen the labs & the research facilities.

4. **IMPRINT**

IMPRINT-Impacting Research Innovation & Technology First of this kind Pan-IIT + IISc joint initiative supported by MHRD to address the major challenges in Science and engineering. These challenges are must to fix and India must champion in that to enable and empower the country for self-reliance and inclusive growth. This novel type of initiative containing two-fold mandate is intended at:

a. Developing the new engineering educational policy

b. Creating a fine road map to pursue the engineering challenges

This scheme provides the overarching vision in higher education that can guides research into the areas which are socially relevant predominantly.

5. **Technical Education Quality Improvement Programme of Government of India (TEQIP)**

Launched by MHRD in December 2002. It was aimed to support and upscale ongoing efforts in improving the quality of technical education in India and enhancing the existing capacities of the technical institutions to become more dynamic, quality conscious, demand-driven, forward-looking, effective and responsive. It can bring into the rapid economic and technological developments occurring at both national as well as international levels.

6. **PMMMNMTT**

PMMMNMTT- Pandit Madan Mohan Malviya National Mission on Teachers & Teaching Envisaged to address all issues related to teachers, teacher preparation, teaching, and their professional development comprehensively. The Mission caters current and urgent issues- supply of the qualified teachers, fetching talent into the teaching profession and raising the quality of teaching at schools and colleges level. Also building a strong professional cadre of a quality teacher with performance standards.

7. **RUSA**

Rashtriya Uchchtar Shiksha Abhiyan. It is the Centrally Sponsored Scheme planned by the Central Government has to implement -the strategic funding, reforms, and improvements in the Higher Education sector at the state level.