

Syllabus

Master of Arts in Development Studies

Academic Year- 2020-2021



**Department of Development Studies
University College of Arts and social Sciences
Mahatma Gandhi University, Nalgonda
Nalgonda- 508254, Telangana, India**

DEPARTMENT OF DEVELOPMENT STUDIES, MAHATMA GANDHI UNIVERSITY, NALGONDA –TELANGANA STATE
DETAILS OF COURSES FOR POST-GRADUATION IN DEVELOPMENT STUDIES

I SEMESTER				II SEMESTER				III SEMESTER				IV SEMESTER						
Course		Teaching Hours	Credits	S. No	Course		Teaching Hours	Credits	S No	Course		Teaching Hours	Credits	S.No	Course		Teaching Hours	Credits
1	Economics for Development Studies	5	5	1	Public Policy and Development	5	5	1	Planning and Development	5	5	1	Infrastructure and Development	5	5			
2	Basic Quantitative Methods for Development Studies	5	5	2	Advanced Quantitative Methods for Development Studies	5	5	2	Education and Development	5	5	2	Health and Development	5	5			
3	Fundamentals of Historical Development	5	5	3	Theories of Development	5	5	3	Social Movements & Development	5	5	3	Project Work	5	5			
4	Fundamentals of Society and Social Change	4	4	4	Development Experience of Indian Economy	4	4	4	Elective – I a) . Rural Development & Issues. b) Development & Environment	4	4	4	Elective – I a) Urban Development & Issues. b) Development and Crime	4	4			
5	Fundamentals of Economic Geography	4	4	5	Social Science Research Methods	4	4	5	Elective – II a) Democracy and Development. b) Development & Displacement	4	4	5	Elective – II a) Disaster Management. b) Perspective in Science, Technology and Development	4	4			
6	Seminar	2	2	6	Seminar	2	2	6	Seminar	2	2	6	Seminar	2	2			
7	Communicative Skills & Soft Skills	2	2	7	Human Values & Professional Ethics	2	2	7	Open elective Telangana Economy	4	4	7	Open elective Indian Economy	4	4			
Total		27	27		Total	27	27			29	29			29	29			

Semester-I: Paper- 101: Economics for Development Studies

Unit- 1: Basic Concepts of Economics

Definition, Nature, Scope, Methods of Economics, Fields of Economics; Laws of Demand, Supply and its determinants, Market Equilibrium: Firms and Household; Market Equilibrium, Elasticity of Demand its types and determinants; Consumer Behaviour and Consumer Choice: The consumption decisions – Choices made by Households; Budget constraints, Basis of Choice: Utility; Diminishing MU and EMU, allocating income to maximise utility, income and substitution effects, Consumer and Producer Surplus.

Unit- 2: Firm Behaviour and Markets

Introduction to Production, Behaviour of profit maximizing firms, Production Functions, Concepts of TP, MP, AP, Production Functions with Two variables factor of production, Isoquant and Iso-cost lines, Cost minimizing equilibrium Condition; Cost and Revenue Functions: Accounting and Economic costs, Costs in the short run, Fixed costs, variable costs, Marginal costs, Long run AC and MC, TR,MR,AR; Markets (Perfect and Imperfect) - Features of Perfect Competition, Monopoly, Oligopoly and Monopolistic Competition.

Input Markets: Labour, Land and Capital Markets (Basic concepts), Demand for inputs, Diminishing Returns, Marginal Revenue Product, Input demand curve; Labour Market and demand for labour; shifts in input demand curves; Land markets and rent, Capital Market, Capital Income-Interest and profit.

Unit III Basics of Public Finance

Public Goods –meaning of pure and partial public goods, private goods and merit goods and its characteristics, rationale of provision of public goods, free rider problem and externality, the role of government – taxes vs. regulation; Public finance vs. Private finance, fiscal functions and role of government in allocation, distribution and stabilisation.

Unit IV Introduction to Macroeconomics

The Origins of Macroeconomics, Difference between Micro- and Macro-economics, Role of government in the Macro economy, the components of the macro economy, the methodology of macroeconomics. The Circular Flow of Income; Introduction to National Income Accounting: Meaning of Measurement Methods of NI, Concepts of NI- GDP, GNP in Market Prices and Factor Prices, Nominal and real GDP and GNP, Disposable Income, Personal Income, Private Income, Limitations of the GDP concept, GDP and the black economy.

Money definition, functions, types and its Characteristics; The demand for money and its determinants, Supply of money and its determinants; credit creation; Inflation Meaning and its types, Causes of inflation, Effects of Inflation. Banking, functions and types of banking, RBI, NABARD.

Unit V Basics of International Economics

Definition of International Trade and its importance; Theories of trade—Absolute Advantage and Comparative Advantage, Modern theories of international trade, terms of trade, exchange rates; Trade Barriers--tariffs, subsidies and quotas; Reasons for free trade or protection; Balance of Payments-The current and capital account, Trade surpluses and deficits; WTO and International Financial Institutions.

Basic Readings:

Mankiw, N. G. (2014). Principles of economics.Cengage Learning.

Fair, R. C., & Case, K. E. (2007).Principles of economics.Prentice Hall.

Marshall, A. (2009). Principles of economics: unabridged eighth edition. Cosimo, Inc..

Semester-I: Paper- 102: Basic Quantitative Methods for Development Studies

Unit- 1: Statistics- I

Definition of Statistics, Uses and limitation of Statistics in Development Studies, Methods of collecting data – Census and Sampling – its advantages and disadvantages; Importance of Statistics in Development Studies.

Unit- 2: Statistics- II

Measures of Central tendency – mean, median and mode, Measures of Dispersion – range, quartile deviation, mean deviation, standard deviation, variance, coefficient of variation, Gini coefficient.

Unit- 3: Statistics- III

Concept of correlation, Karl Pearson's Coefficient of correlation, Spearman's rank coefficient of correlation, Simple regression, Estimation of regression coefficients by ordinary least square methods, standard error of regression line.

Unit- 4: Mathematics- I

Uses and Limitations of Mathematics in Development Studies, Concept of function and type of functions, Concepts of derivative, Rules of differentiation; Interpretation of revenue, Cost demand, supply functions, Elasticities and their types.

Unit- 5: Mathematics- II

Multivariable functions, Concept and types of production functions, rules of partial differentiation and interpretation of partial derivatives, Problems of maxima and minima in single and multivariable functions.

Basic Readings:

Monga, G.S. (1972), Mathematics and Statistics for Economists, Vikaspublishing house, New Delhi.

Chiang, A.C. (1988), Fundamental Methods of Mathematical Economics, Mac Graw Hill, New York.

Allen, R.G.D. (1974), Mathematical Analysis for Economists, Mac Millian Press and ELBS, London.

Dowling, E.T. (1992), Mathematical Economics 2nd Edition, Mac Graw Hill, New York.

Gupta, S.P. (2007), Statistical methods, Sultan Chand and Sons, New Delhi.

Nagar, A.L. and Das, R.K. (1983): Basic Statistics 2nd Edition, OUP, Delhi.

Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book Co., London.

Yamune, Taro (1975) Mathematics for Economists, Prentice Hall of India, New Delhi.

Unit- 1: History of Development Studies

Background and beginnings of 'Development Economics': post- world war world economic order and end of formal colonialism; distinction between growth and development economics/studies; Economic Development in the Literature of Mercantilism, Physiocracy as a Theory of Development, The Wealth of Nations, Nineteenth-Century Classical Economics, The Marginal Revolution, Marshall and Schumpeter, Trade Cycle Theory and Growth, Re-emergence of a Theory of Aggregates and Transitional.

Unit- 2: Deviation from Mainstream on Underdevelopment and Development

Introduction to Developmentalism, Key thinkers in Challenging the Mainstream Arguments of Development- Paul Narcoz Rosenstein- Rodan , Ragnar Nurkse, Albert Otto Hirschman, Arthur Lewis, Walt Whitman Rostow; Assessment of developmentalist thought.

Unit- 3: Population and Development

Population and Early Advocates of Population Increase; Anticipation of Malthus and Essay on Population: The First Version, Second Thoughts; Diminishing Returns and Population, Increasing Returns and the Size of the Market and Population, The Conception of an Optimum Population, Limitations of this Conception of Optimum Population, Impact of Population on Economic Development.

Unit- 4: Accumulation and Effective Demand

Definition of Accumulation, Meaning of Effective Demand; Pre- Smithian Theories; Accumulation in the Smithian System, John Rae and Capital Theory, Law of Markets, Malthus and Under consumption; John Stuart Mill on The Influence of Consumption on Production; The Neo-Classical Tradition and Stagnation Theory.

Unit- 5: Organisation and Policy

Introduction to Organisation and Policy, Policies of Mercantilism, Anti-Mercantilist Protest, System of Natural Liberty, Entrepreneur and his Functions, Joint Stock Principle, Public Enterprise in a System of Economic Freedom, Wakefield and Colonies, Infant Industries Argument, External Economies, The Instability of Aggregate Demand.

Basic Readings:

Robbins, L. (1968). Theory of Economic Development in the History of Economic Thought. Springer.

Khan, S. R. (2014). A history of development economics thought: challenges and counter-challenges. Routledge.

Semester-I: Paper- 104: Fundamentals of Society and Social Change

Unit- 1: Introduction to Society

Introduction to Making Society, Diversity and Unity in Society, Varna and Jati in Society, Family and Kinship; Rural Society , Agrarian and peasant Social Structure, Basic characteristics of agrarian society; Changing nature of agrarian society.

Unit- 2: Structure Perspectives of Indian Society

Institutions, cultural pattern, linguistic diversity, linkages and binding regions, Groups and communities, the village as nucleus of Indian society; Social hierarchy (caste, class, gender and tribe).

Indological perspective of G.S. Ghurye and Louis Dumont; Structural- Functional Perspective of M.N. Srinivas and S.C. Dube understanding Caste, Indian village and Social Structure; Marxian Perspective of A.R Deasi and D.P Mukherji in understanding Indian state, role of nation, Indian development, modernity and tradition; Subaltern Perspective; Non- Brahmanical Perspective.

Unit- 3: Introduction to Social Change

Definitions of Social Change, Historical Background of Social Change, Characteristics of Social Change; Mechanisms of Social Change; Patterns of Social Change- (Cyclical, One directional and Combined patterns); Recent Trends in Indian Social Change.

Unit- 4: Theories and Determinants of Social Change

The Evolutionary Theory, Cyclical Theories, Structural Functionalist Theory, Conflict Theory; Factors in Social Change- Three Basic Sources of Social Change, Exogenous and Endogenous Origin of Change, Acceptance of and Resistance to Social Change, Factors that Affect Direction and Rate of Change.

Basic Readings:

Dube, S. C. (1990). Indian society. New Delhi: National Book Trust.

Dhanagare, D. N. (1993). Themes and perspectives in Indian sociology. Rawat Publications.

Srinivas, M. N. (2002). The Social Significance of Religion in India. Collected Essays, MN Srinivas, New Delhi: OUP.

RANAJIT, G. (1998). A Subaltern Studies Reader 1986-1995. Delhi, Oxford University Press.

Khilnani, S. (2004). The idea of India. Penguin Books India.

Semester-I: Paper- 105: Fundamentals of Economic Geography

Unit-1: Introduction to Economic Geography and Drivers of Economic and Geographic Change

Introduction- Meaning, Nature, origin, evolution, Scope and importance of economic geography. Relationship between economics and geography, key agents of economic geography- labour, firm and state. Innovation- meaning, difference between invention and innovation, trends in innovation; Entrepreneurship- definition, place, networks and the social identity of the entrepreneur; Accessibility- meaning, accessibility and mobility, measuring accessibility; Accessibility and networks, Accessibility and inequality, Interplay between virtual and grounded accessibility.

Unit-2: Approaches and Theories of Economic Geography

Introduction to Classical, Marxian and Alternative approaches to economic geography. Theories of economic geography-Determinants of industrial location, Theories of industrial location- Weber's, Sargant Florence and Williamsons theories.

Unit- 3: Economic Geographies of Contemporary India and World

Geographies of economic globalisation (investment, production, trade, consumption) in agriculture, manufacturing and services, Trans-national and multi-national corporations: global commodity chains, production networks and value networks, Global cities, world city network and mega-city regions, Global finance, Geographies of ICTs and knowledge economies, Geographies of emerging economies, Geographies of labour and migration.

Unit- 4: Economic Geography and Policy Challenges

Introduction to policy challenges, uneven development, economic and geographical inequalities among the regions, Indian states and worldwide, Policy paradigms of economic geography: neo-liberalism, Keynesianism, socialism, 'Third Way' and alternative economic approaches

Basic Readings:

- Aoyama, Y., Murphy, J. T., & Hanson, S. (2010). *Key concepts in economic geography*. Sage.
- Bryson, J., Henry, N., Keeble, D., & Martin, R. (Eds.). (1999). *The economic geography reader: producing and consuming global capitalism*. Chichester: Wiley.
- Clark, G. L., Feldman, M. P., Gertler, M. S., & Wójcik, D. (Eds.). (2018). *The New Oxford Handbook of Economic Geography*. Oxford University Press.
- Jones, A. (2012). *Human geography: The basics*. Routledge.

Semester-II: Paper- 1: 201: Public Policy and Development

Unit-1: Public Choice

Meaning of Public choice, Private and public mechanism of allocating resources, Preference revelation and aggregation of preferences; voting systems; An economic theory of Democracy – Politico-eco-bureaucracy, Rent seeking and Direct unproductive profit seeking activities.

Unit-2: Rationale for Public Policy

Allocation of resources for public goods – Voluntary exchange models; Impossibility of decentralized provision of public goods; Demand revealing schemes for public goods; Stabilisation policies- Keynesian Case for Stabilisation policy; Provision of infrastructural facilities; Role of public policy in removing distributional inequalities and regional imbalances.

Unit-2: Public Policy and Design

Definition of Public Policy, Economic Policies & Strategies for Development in a Globalized World and its application to India, Social Policies: Social Protection & poverty alleviation Policies in India.

Unit-4: Public Policy Evaluation Methods

Definition of Policy Analysis, Randomised social experiments, Naive non-experimental estimator, Natural experiment, instrumental variables, Regression Discontinuity Design, Regression analysis, Matching methods, Before-after, Difference-in-differences, Synthetic control methods

Unit-5: Public Policy and Human Development

Definition of Social Protection, Social Protection Policies in India and Worldwide, Public policy to promote innovation-based growth, Key Factors Affecting Public Policies,

Basic Readings:

Menutt, P (1996), The Economics of Public Choice, Edward Elgar, U.K.

Stiglitz, J. E., & Brown, E. P. (1988). Economics of the public sector (Vol. 50). New York: WW Norton.

Stiglitz, J. E., & Rosengard, J. K. (2015). Economics of the public sector: Fourth international student edition. WW Norton & Company.

Holtz-Eakin, D., & Rosen, H. S. (Eds.).(2003). Public policy and the economics of entrepreneurship.MIT Press.

Goodin, R. E., Moran, M., & Rein, M. (2006).The Oxford handbook of public policy (Vol. 6).Oxford Handbooks of Political.

Semester-II: Paper- 2: 202: Advanced Quantitative methods for Development Studies

Module 1: Statistics – I: Basic concept of sampling – random and non-random sampling, simple random, stratified random and P.P.S sampling, Concept of an estimator and its sampling distribution, Desirable properties of a good estimator, formulation of statistical hypotheses – null and alternative, Testing for mean of a population from large sample and Testing for difference between means of two population from large sample.

Module 2: Statistics – II: Concept of probability, Classical and empirical definitions of probability, laws of addition and multiplication, discrete random variable – its concept, mean and variance, Normal distribution – its concept and properties.

Module 3: Statistics – III: Time series and analysis, components of time-series data, determination of secular trend by moving average and ordinary least square methods, Uses of seasonal indices, Estimation of linear and compound growth rate using OLS method.

Module 4: Mathematics – I: Determinants and their Basic Properties, Solution of Simultaneous equations through Cramer's rule Matrices – Concept and types, Simple operation on matrices, matrix inversion, rank of matrix, concept of vector and its properties, Introduction to input-output analysis.

Module 5: Mathematics – II: Constrained optimization, Lagrangian function, simple economic applications, maximization of utility and maximization of profits, Introduction to linear programming, formulation of linear programming problem – its structure and variables, Nature of feasible, basic, optimal solution, Solution of linear programming through graphic method, Concept of duality.

BASIC READING LIST:

1. Monga, G.S. (1972), Mathematics and Statistics for Economists, Vikas publishing house, New Delhi.
2. Chiang, A.C. (1988), Fundamental Methods of Mathematical Economics, Mac Graw Hill, New York.
3. Allen, R.G.D. (1974), Mathematical Analysis for Economists, Mac Millian Press and ELBS, London.
4. Dowling, E.T. (1992), Mathematical Economics 2nd Edition, Mac Graw Hill, New York.
5. Gupta, S.P. (2007), Statistical methods, Sultan Chand and Sons, New Delhi.
6. Nagar, A.L. and Das, R.K. (1983): Basic Statistics 2nd Edition, OUP, Delhi.
7. Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book Co., London.
8. Yamune, Taro (1975) Mathematics for Economists, Prentice Hall of India, New Delhi.

Semester-II: Paper- 3: 203: Theories of Development

Module 1: Classical Development Models: Adam Smith, Ricardo, Malthus and Karl Marx, Cambridge Growth Models, Harrod-Domar, Joan Robinson, Kaldor.

Module 2: Neo-Classical Development Models: Solow, Meade, Uzawa, Endogenous, Growth models – Romer and Lucas.

Module 3: Development Models: Arthur Lewis, Fei-Rani's, Structuralist models, Rostow's stages, Nurkse and Hirschman.

Module 4: Development Strategies: Neumann's growth model and modifications. Active and passive variables, Choice of goods and Techniques, Mathur's Wage Goods, Light and Heavy Strategies.

Module-5: Sustainable Development: definition, goals, determinants, measurements and Challenges. Making changes citizens and civil society. Putting sustainable development to work in Governments.

Basic Reading List:

1. Walter Eltis : Classical Theories of Economic Growth
2. A K Sen : Growth Economics
3. Halin Mathews : Theories of Economic Growth. (Surveys in Economic Theory, Vol. 2, AEA)
4. Todara and Smith : Economic Development
5. Todara : Economic Development
6. Gautam Mathur : Planning for Steady Growth
7. Chakravarthy : Development Planning: The Indian experience.
8. P.N.Mathur, Bhalla and Agarwala & Singh : Investment Criteria
9. Tracey Strange and Anne Bayley: Sustainable Development; Linking Economy, Society and Environment, OECD.

Semester-II: Paper- 4: 204: Development Experience of Indian Economy

Unit 1- Experiences of Indian Planning

Indian Economy during pre-independence Period, Experiences of Indian Planning, Liberalization and economic reforms- Pre and Post Economic Reforms; Gandhian Model, Nehru Mahalanobis Model, LPG Model.

Unit 2- Agriculture, Industry & Service Sector

Agriculture sector, Commercialization of Indian agriculture, Land Reforms, Issues in utilization of land resource: major constraints in Indian agriculture pattern, Effects of urbanization on agricultural land use, Green Revolution, Agricultural Policy. Crisis and Performance of Indian agriculture. Industrial sector, Growth and Performance, Industrial Policy (Pre Reform and Post Reform Period), Small Scale Industries and their Issues and Policy (MSME), Informal Sector. Service Sector; Trends, Growth and Performance, Structural Change Debate with reference to Service Sector

Unit 3- Social Sector

Poverty, Inequality and Unemployment, Human Development Estimates, Evaluation of Government's Poverty and Unemployment Alleviation Programs, India's Human Development Report in global perspective, Health and Education Policy.

Unit 4-Trade and Finance in Indian Economy

Composition, direction and Organization of trade, Balance of Payments- Tariff policy and Exchange rate, India and WTO. Monetary policy in India, Fiscal policy in India, Inflation Trends, Estimates, Consequences and Remedies. Black money and parallel economy in India, Consequences and Remedies.

Reading List

1. Ahluwalia, I.J. and I.M.D. Little (Eds.) (1999), Indian's Economic Reforms and Development (Essays in Honour of Manmohan Singh), Oxford University Press, New Delhi.
2. BanikNilanjan (2015), The Indian economy-A Macro-Economic Perspective, Sage India.
3. Bhagwati J (1993), India in Transition :Freeing the economy, Oxford, Clarendon Press.
4. Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (2001), Development Experience in the Indian Economy: Inter-State Perspectives, Bookwell, Delhi.
5. Dutt R and KPM Sundaram (2014), Indian Economy.
6. Economic Survey (Current Year).
7. Sachs, J. D., Varshney, A, & Bajpai, N. (1999). Introduction India in the Era of Economic Reforms, Oxford University Press, New Delhi.
8. Uma Kapila (2015), Indian Economy: Performance and Policy, Academic Foundation.
9. Krishna Bharadwaj (1982), Regional Differentiation in India-A Note, Vol - XVII No. 14-15-16.

Semester-II: Paper- 5: 205: Social Science Research Methods

Module-1: Introduction: Meaning, Aim, Objectives, and Scope of Research in development studies. Types of Research- Exploratory, applied, fundamental, Conceptual, Empirical, Descriptive and Analytical, Importance of Review of Literature in Research.

Module-2: Research Problems: Defining research problem, Identification of Research problems, Theoretical frame, Statement of the problem, Review of research. Formation of Objectives and Hypothesis, Defining the concepts in research design.

Module-3: Sampling and Data Collection: Need of sampling, stratified sampling, Multi-stage sampling, Systematic sampling, cluster sampling, size of sampling, uses of sampling, sampling and non-sampling errors- Observation methods, Participant and non-participant methods- Case study, Questionnaire and interview schedule, Projective indirect methods, Focus group study (FGD), Rapid appraisal survey (RAS).

Module-4: Interpretation and Report Writing: Meaning of Interpretation, Techniques of interpretation, precaution in interpretation. Significance of interpretation, Steps in Report writing, Types of Reports, Precautions in research report writing.

Module-5: Ethics in Research:

Why care about ethics? Ethical principles and guidelines for social science research, Risk and Benefit Evaluation, Research integrity, Plagiarism, Informed Consent, Confidentiality.

Basic Reading List:

1. C. R. Kothari, Research Methodology, New Age International Publisher.
2. A.N. Sadhu and Amarjit Singh, Research Methodology in Social Research, Himalaya Publishing House.
3. Wilkinson and Bhandarkar, Methodology and Techniques of Social Sciences, Himalaya Publishing House.
4. O.R. Krishna Swamy and Ranganatham, Methodology of Research in Social Sciences, Himalaya Publishing House.
5. Ram Ahuja, Research Methods, Rawat Publications.
6. C.S.O. Guide to Official Statistics.
7. Flick, Uwe (2012) Introducing Research Methodology, New Delhi: Sage, pp.1-16

Semester-III: Paper - 301: Planning and Development

Unit - 1: Introduction to Economic Planning: Meaning of Economic Planning, Need for Economic Planning in Developing Countries, Process of Plan Formation, Objectives and Requisites of Planning, Limitations of Planning, Types of Planning.

Unit - 2: Planning and Market Mechanism: Distinction between Planned and Market Economies, Revival of Market, Role and Nature of Prices in Planned Economies, Privatization Wave in the World, Core Areas of State Intervention.

Unit - 3: Planning Models and Techniques: Clark-Chenery Model, Mahalanobies Model, and Raj-Sen Model, Linear Programming, Shadow Prices: Definitions, Historical Background, Need for Shadow Prices, Uses of Shadow Prices, Construction Methodology of Shadow Prices and its Limitations.

Unit - 4: Measurement and Indices of Development: Introduction to Measurement of Economics Growth & Development, Development Indices Physical Quality of Life Index (PQLI), Human Development Index (HDI), Gender Empowerment Measure (GEM), Human Poverty Index (HPI), Gender Development Index (GDI), Gender Inequality Index (GII), Global Innovation Index (GII), Multi-dimensional Poverty Index (MPI), Global Hunger Index (GHI): Background History, Features, Construction Methodology, Recent Trends, Comparison of Ranks among the Countries, Merits, Demerits, and Improvements.

Unit - 5: Recent Changes in Indian Planning: Introduction to Five Year Plans in India, Objectives of 12 Five Year Plans and its Achievement & Failures, Reasons for Shifting in the Five Year Planning System and Planning Commission in India, Genesis of NITI AAYOG, Objectives, Structure and Functioning, Performance and Importance of NITI AAYOG since its Inception.

References

- Agarwal, A.N. and Kundan Lal, Economic Planning, 1981.
- Lewis, W.A. Development Planning, 1970
- Oscar Lange, Essays on Economic Planning, 1967
- Todaro, M.P., Development Planning: Models and Methods, 1971

Unit - 1:Introduction: Definition of education, development, relation between education and development, scope of education and development, contribution of education to economic growth, poverty and income distribution, Education as consumption good and Investment good, Concept, Components and historical development of human capital.

Unit - 2: Costs and Benefits of Education:

Costs of Education-Expenditure on Education, Private costs and Social costs, Direct and Indirect costs/opportunity costs, Alternative ways of measuring costs-amortization and depreciation, increment costs, cost function and analysis. Benefits of Education- Direct and Indirect, Private and Social benefits of education, Problems in measurement of costs and benefits, cost-benefit analysis of education investment, uses of cost-benefit analysis of education

Unit - 3: Demand for Education: Private, Social demand for education, factors determine public and private demand for education, concept of manpower requirements and methods of forecasting, Rate of return on education.

Unit - 4: Financing of Education: Meaning, sources of financing, types of financing-Student loans, Fee reimbursement, Scholarships, need for financing, public subsidy of education, effects of subsidy on equity and efficiency of financing education in India, scope of cost recovery in education.

Unit - 5: Education for Sustainable Development: Sustainable Development: Meaning, Nature, Scope, Sustainable Development Goals, Approaches and strategies, Integration in Curriculum, Right to Education, Role of Education, Teacher in promoting sustainable development.

References

- Gorge Psacharopoulos and Maureen Woodhall, Education for Development-An Analysis of Investment Choices, Oxford University Press,1985.11
- Simon McGrath, Education and Development, Routledge Publisher, 2018.
- Cohn, Elchanan, Economic of Education, Ballinger Publisher, USA, 1979.
- Gorge Psacharopoulos, Economics of Education-Research and Studies, Elsevier Publisher, 1987.

Semester-III: Paper - 303: Social Movements & Development

Unit - 1: Introduction to Social Movements: Definition, Characteristics of Social Movements, Typology of Social Movements, Factors Contributed for Social Movements, Theories of Social Movement - Deprivation Theory, Resource Mobilization Theory, Political Process Theory, Structural Strain Theory, and New Social Movement Theories.

Unit - 2: Social Movements in India: Tribal movements, Backward Class Movements, Dalit Movements, Women's Movements, Human Rights Movements, Anti-liquor Movement, Students' Movements.

Unit - 3: Social Movements in Telangana: Struggle against - Vetti, Jogini, Devadasi System, Child labour, Girl child, Flourosis, Migration, Farmer's and Weaver's Distress.

Unit - 4: Development Induced Movements in India: Environment Protection Movements, Anti Nuclear Energy Movements, Displacement and Aboriginal Movements, Peasant Movements, Regional Movements, Industrial Working Class Movements,

Unit - 5: Movements Induced Development: Watershed Movement, RTI Movement, Anti Corruption Movements, Anti-fluoride Movement, Middle Class Movement.

References:

- Staggenborg, Suzanne and Howard Ramos. (2016). "Defining Social Movements" Chapter 1 in Social Movements, 3rd Ed. Toronto: Oxford University Press.
- McAdam, Doug. (1982). "Political Process Model" Pp. 36-59 in Political Process and the Development of Black Insurgency 1930-1970. Chicago: University of Chicago Press.
- Wilkes, Rima. (2004). "First nation politics: Deprivation, resources, and participation in collective action." Sociological Inquiry, 74(4), 570-589.
- Kumar, A. 2001. Social Transformation in Modern India. Sarup: New Delhi.
- Rao, M.S.A. 1979. Social Movements and Social Transformation: A Study of Two Backward Classes Movements in India. Macmillan: Madras.
- Shah, Ganshyam (ed.) 2002. Social Movements and the State. Sage Publications: New Delhi Wilson.

Semester-III: Paper – 304: Elective – I (a) Rural Development and Issues

Unit - 1: Basics of Rural Development: Definition, Characteristics, Indicators of Rural Development and their Measurement, Planning the Rural Development, Tools for Rural Economic Analysis, Rural Dynamics.

Unit - 2: Theories of Rural Development: Dualistic Theories – Social, Technical and Financial Dualism, The dependency theory of Underdevelopment, Myradals theory of spread and back wash effect, trickledown theory, theory of A symmetric information, Spatial Theories, Von Thunanan's concentric ring theory, Christallers Central place Theory, Perroux's Growth Pole theory, Spatial diffusion theory, Mishra's concept of growth model.

Unit - 3: Issues of Rural Development in India: Poverty, Connectivity (Infrastructure), Electricity and water supplies, Education/Literacy, Employment, Migration, Land Reforms, discrimination, rural indebtedness.

Unit - 4: State Intervention for Rural Development: Programme objectives and implementation process- Deen Dayal Upadhyay Grameen Kaushal Yojna, Roshni: Skill Development Scheme for Tribals, Swachchh Bharat Mission, Sansad Adarsh Gram Yojna, Heritage Development and Augmentation Yojna (HRIDAY), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), National Rural Livelihood Mission, Pradhan Mantri Gram Sadak Yojna, Training to Rural Youth for Self Employment (TRYSEM), Public Distribution System (PDS) Antyodaya Anna Yojna (AAY), Village Grain Bank Scheme, National Rural Health Mission, Aam Aadmi Bima Yojna, Kutir Jyoti Programme, Sarva Siksha Abhiyan, Housing Schemes etc.

Unit - 5: Technology for Rural Development: Concept, Nature, Scope, Functions and Barriers of Rural Communication, Rural Press - Print and Electronic Media and Rural Development – Coverage of Rural Issues and Development Projects in India, Radio and Rural Development – Community Radio and Rural Radio Broadcasting in India, Television and Rural Development – Community Television and Rural Television Broadcasting in India, Film and Rural Development – Newsreels and Documentaries on Rural Development in India, New Media and Rural Development – Information and Communication Technologies and their role in Rural Development.

References:

- K. Singh, 2009, Rural Development: Principles, Policies and Management, Sage Publications
- M. R. Ghonemy, 1986, The Dynamics of Rural Poverty, Food and Agriculture Organization (FAO).
- Dreze Jean & Sen Amartya, 2013, An Uncertain Glory: India and its Contradiction, Penguin Group Ltd.
- K. Sahu, 2003, Rural Development in India, Anmol Publications.
- National Council of Applied Economic Research, 2007: India Rural Infrastructure Report, SAGE Publication.
- S. N. Tripathy, 2000, Rural Development, Discovery Publishing U. M. Jha, 1995, Rural Development in India: Problems and Prospects, Anmol Publications.

Semester-III: Paper – 304: Elective – I (b) Development and Environment

I. Sustainable Development: Definition, features, goals, principles, Indicators of sustainable development, Approaches to study sustainable Development- Positive, Human Development, multi dimensional and Eco system Approach, Indigenous approaches-Livelihood and Poverty Reduction Strategy.

II. Dimensions to Sustainable Development - society, environment, culture and economy; current challenges - natural, political, socio-economic imbalance; sustainable development initiatives and policies of various countries: global, regional, national, local; needs of present and future generation - political, economic, environmental.

III. Ecosystem & Sustainability: Fundamentals of ecology - types of ecosystems & interrelationships, factors influencing sustainability of ecosystems, ecosystem restoration - developmental needs. Introduction to sustainability & its factors, requirements for sustainability: food security and agriculture, renewable resources - water and energy, non-renewable resources, factors and trade-offs, sustainability conflicts, a conceptual framework for linking sustainability and sustainable development.

IV. Measurement of Environmental Degradation: Environmental Costs and Benefits: Under and Non-user Benefits. Direct and Indirect Valuation Methods: Contingent Valuation Method and Willingness to pay. Hedonic Property Values, Travel Cost, Averted Expenditure and Dose Response Methods. UN System of Integrated Economic and Environmental Accounts. Green National Income and Genuine Savings. Environmental Impact Assessment and Report. Environmental Audit.

V. Environment Problems of India: State of India's Environment – Air, Water and Soil Pollution, Natural Resource Depletion, Deforestation, Industrial and Agricultural Pollution, Urbanization, Vehicular Pollution, Impact of Green Revolution Techniques. Functions of Ministry of Environment and Forest, Pollution Control Boards. Environmental Laws in India.

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- Bell, Simon, and Stephen Morse. Sustainability indicators: measuring the immeasurable?. Routledge, 2012.
- Sala, Serenella, Biagio Ciuffo, and Peter Nijkamp. "A systemic framework for sustainability assessment." *Ecological Economics* 119 (2015): 314-325.
- Sørensen, Bent. *Energy, Resources and Welfare: Exploration of Social Frameworks for Sustainable Development*. Academic Press, 2016.
- Streimikis, Justas, and Tomas Baležentis. "Agricultural sustainability assessment framework integrating sustainable development goals and interlinked priorities of environmental, climate and agriculture policies." *Sustainable Development* 28, no. 6 (2020): 1702-1712.
- Robins, Nick. (1990) *Managing the Environment: The Greening of European Business*, Business International, London.

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- Hanley, N.J.F.Shogren and B.White (1997) Environmental Economics in Theory and Practice. Macmillan

Semester-III: Paper - 305: Elective – II (a) Democracy and Development

Unit - 1: Introduction to Democracy: Meaning, Characteristics, Typology, Scope, Merits, and Demerits, Theories of Democracy, Relationship between Democracy and Development.

Unit - 2: Distribution of Powers in Democracy: Centre-State Relations- Issues and Challenges pertaining to the Federal Structure; Local Self-Government 73rd and 74th Constitutional Amendments for sharing of powers - Panchayat Raj and Municipal Institutions; Resolution of Inter-State disputes with reference to Water Disputes Challenges of Implementation.

Unit - 3: Debates on Development and Development Processes: State and Provision of Services; State and Market; Involvement of Civil Society-Community Based Organizations (CBOs) and NGOs; Self-help Groups, (SHGs), Charities and Stakeholders, Public-Private Partnerships (PPP); Corporate Social Responsibility (CSR), New Public Management – Good Governance and its Models, Recommendations of Administrative Reforms Committee, Democracies and the Press, New Media Technologies and Democracy, Media and Public Opinion.

Unit - 4: Political Parties and Political Participation: The concept of Political Participation, Forms of Political Participation, Political Participation, Democracy and Political Parties, Theoretical Debate and Practical Variations, Political Participation and Political Parties in India, Political Participation through an increasingly competitive party system, Increased Voter Turnout, Social nature of the party-led political participation, Non-Party Institutions and Political participation, Political Participation and Indian Democracy.

Unit - 5: Role of Political Parties in Development Process: Election Manifestos of Political Parties and their Implementation, Role of Opposition Parties in Development, Political Corruption and Anti-Defection Laws, Ethical Values of Political Parties.

References:

Governance by Lakshimikantha

Hasan, Zoya (Edited) (2002).Parties and Party Politics in India. New Delhi, India. Oxford University Press.

Ross, Gilbert Ralph (1954). Democracy, Party, and Politics, Ethics, Vol. 64(1): 100-125.

Semester-III: Paper - 305: Elective – II (b) Development and Displacement

Unit - 1: Development: Definition, Characteristics, resources required for development, their availability, use pattern and alternatives forms of resources,

Unit - 2: Land Acquisition: Vision and philosophy of land Acquisition, Evolution of land use pattern in India from 1950-51 to 2020-21, Pre-existing land acquisition Acts-1894 and other Laws, procedure for acquisition and shortcomings of them, Changes in the land acquisition law in 2013 and its impact on infrastructure projects, Industrialization and Urbanization, Changes in the payment of compensation.

Unit - 3: Displacement: An Introduction to the phenomenon, and Definitions of Displacement, Linear projects (Roads, Railways etc) and non-linear projects (Townships/Industrial development, Dams, Forest), Socio-economic and health impacts of displacement of vulnerable and indigenous groups,

Unit - 4: Resettlement: Land acquisition models- Compulsory acquisition, Land sharing an adjustment model, land pooling, negotiated land acquisition. Development induced relocation- Voluntary and involuntary resettlement, Resettlement and Rehabilitation policies. Policies of multi-lateral/bilateral funding institutions- World Bank and Asian Development Bank Policies, National and state Policies of on Resettlement. Sector specific policies on large projects- Multi-purpose Dam projects, Mining projects, High Way projects, SEZ, etc.

Unit - 5: Rehabilitation: Policies, assessing livelihood losses livelihood impact assessment and skill mapping surveys, income restoration strategies, training strategies for skill upgradation and meeting demands for shifting economic profiles in the development area.

- Hoda , Anwarul (2018): Land use and Land Acquisition laws in India, Working Paper No. 361, Indian Council for Research on International Economic Relations.
- Govt of India: The Right to fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
- Bhagat-Ganguly, V.; C., S(2016): Land Acquisition, Rehabilitation and Resettlement in India, SAGE Journal,

Semester-IV: Paper - 401: Infrastructure and Development

Unit - 1: Role of Infrastructure in Development: Definition of infrastructure, Elements of Infrastructure (Physical, Social, Utilities and services), Types of infrastructure, significance and importance of infrastructure in economic development, Infrastructure as a public good, Financing of Infrastructure.

Unit - 2: Social infrastructure: Education, Health, Drinking water, Housing and sanitation, hierarchical provision of facilities, norms and standards, Distribution of facilities-access, equity, affordability, pricing policies.

Unit - 3: Economics of Infrastructure: Energy, Electricity and Special Economic/Investment Zones Power Generation, Distribution and Pricing; Privatisation of Electricity; Coverage; Alternative (Renewable and Unconventional) Sources of Energy, including Nuclear, Solar and Wind Energy; Energy Conservation; Problems and Potential of SEZs, Export Processing Zones (EPZs) and Special Investment Region (SIR). Banking and Financial Services Spread and Performance of Banking Services; Technology Interface of Financial Services; Financial Inclusion Initiatives.

Unit -4: Infrastructure and Economic Development: Role of central, state and local governments in infrastructure development- Rural & urban infrastructure development, Public- private partnership, Reforms in the infrastructure development in various sectors.

Unit - 5: Sustainability of Infrastructure development: Sustainability issues in infrastructure development, Land, forest and other environmental concerns, Green growth, judicious use of natural resources, Incorporation of SDGs in infrastructure policies.

References:-

1. Piyush Joshi, (2003). Law relating to Infrastructure Projects (Second edition) LexiNexus Butterworths India New Delhi.
2. Delmon, Jeffrey. (2011) Public Private Partnership projects in Infrastructure: An essential guide for policy makers, Cambridge University Press.
3. Mehta, Pradeep S, (2009). Developing infrastructure through an ideal regulatory framework, CUTS Institute for regulation and Competition.
4. Fay, Marianne and Toman, Michael (2010). Infrastructure and Sustainable development, World Bank.
5. Shilling, John D (2007). The Nexus between Infrastructure and Environment, Evaluation brief World Bank
6. Hawkesworth, Ian (2015), Towards Framework for the governance of Infrastructure, OECD
7. Crew, M. A. and P. R. Kleindorfer (1979), Public Utility Economics, Macmillan, London.
8. Das, K. (2010), 'Lopsided Infrastructure', in Alternative Survey Group (Ed.), Alternative Economic Survey, India: Two Decades of Neoliberalism, Daanish Books, Delhi,
9. Goel, M.M. (2011), Economics of Human Resource Management in India, VK Global Publications, New Delhi.
10. Government of India (2017), The India Infrastructure Report, Vols. I, II and III, NCAER and Government of India, New Delhi. (Chairman: Rakesh Mohan).

Semester-IV: Paper - 402: Health and Development

Unit - 1: Health and Development: Meaning of Health and Health care, Development, Relation between health care and development, - Health care planning and development, health care indicators, Transition and Challenges, Prevention and Management of Diseases, Health and Health care Policies.

Unit - 2: Health care Systems: Introduction to various Health System Models- Health services philosophies, Levels of health care-Primary, Secondary & Tertiary- Health care providers (Government, Private, Voluntary/NGO, Indigenous), Alternative systems of medicine (AYUSH), Inter-sectoral approach for health care delivery, Decentralized health care delivery system- Sustainable, Grassroots & Comprehensive Health Models.

Unit - 3: Health care Management: Strategic management in Public Health- Organization Behavior and Design, Human Resource Development Quality & Assurance, Management Information and Evaluation System, Health resources & Management, Total Quality Management, Role of centre and State governments in health care delivery.

Unit - 4: Healthcare Legislation in India: Implementation and evaluating Legal aspects of healthcare & Medical, Termination of Pregnancy Act, The maternity benefit act, The immoral traffic, (prevention) act, The transplantation of human organs act, PNMT Act, Biomedical waste Rules, COPRA Act, Indian factories act, ESI act.

Unit - 5: Issues and Challenges in Health Care: Reproductive and Maternal Health Care-major nutrition supplementation programmes in India, Child Health Care programmes, Adolescent Health Care programmes and Life Cycle Approach, Care of Elderly.

References:-

1. Health Care Administration: Planning, Implementing, and Managing Organized Delivery Systems, Third Edition, by Lawrence Wolper, Jones and Bartlett Publishers International, UK.
2. Essentials of Public Health Management by L. Fleming Fallon Jr., Eric Zgodzinski, Jones & Bartlett Publishers, 2011
3. Health Management by Preeti Oberoi, Sarup & Sons publication.
4. Health Care Policy: Issues and Trends, Jennie Jacobs Kronenfeld, Publisher: Praeger, 2002
5. Health Care and Public Policy by David A. Reisman, published by Edward Elgar publishing, UK, 2007.
6. Health Planning in India by G. Ramachandrud. 7. Health economics, H P S Rana by Alfa Publications (2009)

Semester-IV: Paper - 403: Project Report

Semester-IV: Paper – 404: Elective – I (a) Urban Development and Issues

Unit - 1: Urban Development-Concept and Dynamics: Understanding the concept and urban growth in India, definition and characteristics of urban areas, classification of towns, the relevance of urban ecology, Theories of Urban Development, The demographic and land use pattern in urban areas, - Trends in urbanization process.

Unit - 2: Urban Planning and Governance: Urban Planning: An Overview, Techniques for Urban Planning, Urban Land Use Planning, Planning for City – Regions, Governance: An Overview, Statutory and Institutional Framework, Urban E-Governance

Unit - 3: Urbanization & Urbanism: Meaning, characteristics of urbanism, slums – definition, approaches, theories and classification and culture of slums, Urban Problems-Housing, Drug Addiction, Juvenile Delinquency, Prostitution and Pollution.

Unit - 4: Participatory Urban Development: Participatory Development-An Overview, Citizen Participation in Urban Development, Participatory Tools and Methods, Public Private Partnership for Urban Development.

Unit - 5: Urban Development Programmes in India: The Smart Cities Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT) Project, Pradhan Mantri Awas Yojana (Urban), Heritage City Development and Augmentation Yojana (HRIDAY), Urban transportation, Swachh Bharat Mission (SBM).

References:-

1. Clinard, Marshall B (1970), Slums and Community Development, The Free press, New York.
2. Didee, Jayamala (1993), Urbanisation - Trends, perspectives and challenges, Rawat Pub. Jeipur.
3. Mitra, Arup (1994) Urbanisation, slums, informal sector employment and poverty, B.R. Pub.
4. Rajesh, Slums as Urban villages, Rawat Pub. Jeipur, 1994.
5. Ramachandran (1989) Urbanisation and Urban System in India, Oxford University Press, New Delhi
6. Thudipara, Jacob Z.(1993), Urban Community Development, Rawat Pub., New Delhi. Gill
7. Vibhooti, Shukla (1988), Urban Development and Regional policies in India, Himalaya pub., Bombay.

Semester-IV: Paper – 404: Elective – I (b) Development and Crime

Unit - 1: Crime and Criminology: Definitions: Crime, Criminology and Criminal Justice, Differences between concepts: Sin, Crime, Vice & Wrong; Meaning: Deviance and Delinquency, Historical Development of criminology - Nature and Scope- Criminology, Criminology's relations with other disciplines.

Unit - 2: Police System: Historical overview of Police system in India and its function- Police Act 1861, Organization set up of Indian Police in Modern Society, Objective of Police System, Maintenance of Law and Order, Investigation of Crimes, Protection of Life, Protection of Property Rights, Prevention of Crime, Interface with the community, executive, prosecution and judiciary.

Unit - 3: Green Crimes: Nature, Primary green crimes and Secondary green crimes, causes and effects of the green crime, Green Offenders, Green Victims.

Unit - 4: Environmental law & Regulation: Protecting the Air, Protecting the Water, Monitoring and Controlling Hazardous Waste, Protection of environment under Article 226 and 321 of the Constitution of India and relief provided there under.

Unit - 5: Cyber Crime: Cyber Crimes, Types of Cybercrime, Hacking, Attack vectors, Cyberspace and Criminal Behavior, Clarification of Terms, Traditional Problems Associated with Computer Crime.

References:-

1. Beirne ,Piers &South ,Nigel (2007) Issues in Green Criminology: Confronting Harms Against Environments, Humanity and Other Animals, Willan.
2. Hall ,M.,Maher, J.,Nurse ,A., PotterG., WyattT. & SouthN.,(2017),Greening Criminology in the 21st Century :Contemporary debates and future directions in the study of environmental harm, Routledge.
3. Lynch,J., Michael. & Stretesky , B.,Paul. (2014),Exploring Green Criminology: Toward a Green Criminological Revolution, Routledge.
4. Nurse ,Angus (2015). An Introduction to Green Criminology and Environmental Justice, SAGE Publications Ltd.
5. Nurse, A., (2015).Policing Wildlife: Perspectives on the Enforcement of Wildlife Legislation(Palgrave Studies in Green Criminology)Palgrave Macmillan.
6. Anti-Hacker Tool Kit (Indian Edition) by Mike Shema, Publication Mc Graw Hill.

Semester-IV: Paper – 405: Elective – II (a) Disaster Management

Unit - 1: Introduction to Disaster Management: Definitions & Meanings of Disaster, Hazard, Vulnerability, Risk, Capacity, Classification of Disasters, Disaster Management Cycle. Different Types of Disaster : A) Natural Disaster: such as Flood, Cyclone, Earthquakes, Landslides etc B) Man-made Disaster: such as Fire, Industrial Pollution, Nuclear Disaster, Biological Disasters, Accidents (Air, Sea, Rail & Road), Structural failures(Building and Bridge), War & Terrorism etc. Causes and effects.

Unit - 2: Risk and Vulnerability Analysis: Risk - Its concept and meaning, Types of risks-Earth Quake, Flood, Cyclone, Tsunami, Drought, Risk Reduction management, Vulnerability -Its concept and analysis, Strategic Development for Vulnerability Reduction.

Unit - 3: Rehabilitation, Reconstruction and Recovery: Reconstruction and Rehabilitation as a Means of Development, Damage Assessment, Post Disaster effects and Remedial Measures, Creation of Long-term Job Opportunities and Livelihood Options, Sanitation and Hygiene, Education and Awareness, Dealing with Victims' Psychology, Long-term Counter Disaster Planning, Role of Educational Institute.

Unit - 4: Acts of Disaster Management in India: Background, National Disaster Management Act, 2005, National Policy on Disaster Management, 2009, The National Disaster Management Plan, 2016, Disaster Management Cycle in India. Epidemic Diseases Act 1897, , National Disaster Management Plans for Animals, NPDM 2009.

Unit - 5: Miscellaneous: Disaster Insurance, Community-Based Disaster Management, Role of the Media in Disaster Management, Role of Social Media in Disaster Management, Retrofitting of Buildings-The Key is to Let it Swing, Climate Change and Disasters, Poverty and Disasters, Miscellaneous NDMA Guidelines, National Disaster Plan for Animals.

References:-

1. Disaster Management Guidelines, GOI-UND Disaster Risk Program (2009-2012)
2. Damon, P. Copola, (2006) Introduction to International Disaster Management, Butterworth Heineman.
3. Gupta A.K., Niar S.S and Chatterjee S. (2013) Disaster management and Risk Reduction, Role of Environmental Knowledge, Narosa Publishing House, Delhi.
4. Murthy D.B.N. (2012) Disaster Management, Deep and Deep Publication PVT. Ltd. New Delhi.
5. Modh S. (2010) Managing Natural Disasters, Mac Millan publishers India LTD.

Semester-IV: Paper – 405: Elective – II (b)

Perspective in Science, Technology and Development

Unit - 1: Science and Technology: Developments and their applications and effects in everyday life, Achievements of Indians in science & technology; indigenization of technology and developing new technology, Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

Unit - 2: Information Technology: Important Terms in IT, Cyber Warfare, Blockchain Technology, Automation Artificial Intelligence.

Unit - 3: Development of science and technology in India: Ancient, Medieval and Modern time, India has advances in science and technology in following areas: Atomic energy, Space, Telecom, E- governance, Electronics, Oceanography, Biotechnology, IT, Primary and tertiary industries.

Unit - 4: Achievements of Indians in Science & Technology: Chandrasekhara Venkata Raman, Acharya Jagadish Chandra Bose, Satyendra Nath Bose, Meghnad Saha, Homi Jehangir Bhabha, Subrahmanyam Chandrasekhar, A.P.J. Abdul Kalam, Vikram Sarabhai, Mokshagundam Visvesvaraya, Har Gobind Khorana, Tessy Thomas, C.N.R. Rao.

Unit - 5: Issues Relating to Intellectual Property Rights: Need for Intellectual Property Rights, Types of IPR, IPR Regime in India, International Agreements Related to IPRs, Geographical Indicators, Recent Issues - Evergreening, Compulsory Licensing, Prominent Cases, etc.

References:-

1. Bauchspies, W.K, et al, ed. 2006. Science, Technology and Society: A Sociological Approach, Oxford: Blackwell Publishing.
2. Fuller, S. 2006. Philosophy of Science and Technology Studies, New York: Rutledge, Page: 12
3. Sismondo, S. 2010. Introduction to Science and Technology Studies. Oxford: Wiley-Blackwell Publishing, Page: 12-22
4. Bijkar, W.E. et al. ed. 1995. Of Bicycles, Backlites and Bulbs: Towards a Theory of Sociotechnical change, Massachusetts: MIT.
5. Melzer, P. 2006. Alien Constructions: Science Fiction and Feminist Thought, Austin: University of Texas Press. Page: 149-178.
6. Lavigne, C. 2013. Cyberpunk Women, Feminism and Science Fiction, London: McFarland and Comp, any Inc. Page: 114-130.
7. Cavallaro, D. 2000. Cyberpunk and Cyberculture, London: Athlone Press, Page: 72-126