আধুনিক যুগের বাংলা সাহিত্যের ইতিহাস
(Adhunik Yuger Bangla Sahityer Itihas)

Objective of the Course: Learning Outcome:		
Full Marks: 100 **Total Credit=** 4	**End Semester Exam. -** 75 **Internal Exam. -** 25	**Course Code:** BENPG2305 **No. of Hours of Teaching:** 60 Hrs.

পাঠ নির্যাস : এই কোর্সটিও অন্যান্য বিভাগের ইচ্ছুক ছাত্র-ছাত্রীদের জন্য নির্বাচিত। বাংলা সাহিত্যের উনিশ ও বিশ শতকের সামাজিক, ঐতিহাসিক ও সাংস্কৃতিক প্রেক্ষাপটে বাংলা সাহিত্য সম্পর্কে একটি প্রাথমিক ধারণা পাওয়া যাবে এই পাঠে।

পূর্ণ

মান – ১০০

প্রশ্নমান - ৭৫ (৩ X ১৫ + ২ X ১০ + ২ X ৫)

মডিউল : ১ সামাজিক, ঐতিহাসিক ও সাংস্কৃতিক প্রেক্ষাপটে উনিশ শতকের বাংলা সাহিত্যের ইতিহাস পর্যালোচনা।

৩০ ঘন্টা

মডিউল : ২ সামাজিক, ঐতিহাসিক ও সাংস্কৃতিক প্রেক্ষাপটে বিশ শতকের বাংলা সাহিত্যের ইতিহাস পর্যালোচনা।

৩০ ঘন্টা

Fundamentals of Entrepreneurship
(*Non-Credit Course under CBCS*)

Objective of the Course:		
Learning Outcome:		
Full Marks: 50	**End Semester Exam. - 25**	**Course Code:** PG26W6
Total Credit= 2	**Internal Exam. -** 25	**No. of Hours of Teaching:** 30 Hrs.

1. **Entrepreneur and Entrepreneurship**: Basic Concept, Ownership Patterns of Entrepreneurs, Size of Entrepreneurship, Roles of Entrepreneur and Entrepreneurship, Growth of Entrepreneurship in India.   **L. H. 4**

2. **Entrepreneurial Finance and Financial Policies:** Modes of Finance and Financial Services: Venture Capital, Lease Financing and Hire Purchase, Factoring Services, Sources of Finance and Policies- Banking and Non-Banking Institutions, Financial Policies for Micro, Small and Medium Enterprises in India.   **L. H. 6**

3. **Entrepreneurial Problems and Sickness**: Problems of Entrepreneurship in functional areas, Problems faced by enterprises in globalization. Sickness in Enterprises- Basic Concept, Causes of Sickness in Micro, Small and Medium Enterprises.   **L. H. 5**

4. **Revival of Sick Enterprises**: Conceptual Issues, Government Policies in Rehabilitating Sick Enterprises specially Micro, Small and Medium Enterprises, Role of Board of Industrial and Financial Reconstruction (BIFR), Government regulations in Debt Recovery from Sick Enterprises.   **L. H. 6**

5. **E-Commerce and SMSEs**: Conceptual Issues, Significance and Role of E-Commerce in Micro, Small and Medium Enterprises, Prospective areas and Challenges.   **L. H. 5**

6. **Women Entrepreneurship**: Conceptual Issues, Functions of Women Entrepreneurs, Rationale for Developing Women Entrepreneurship, Problems and Prospects of Women Entrepreneurship in India.   **L. H. 4**

Suggested Readings:
1. Cherunillam, F., Business and Government, Himalaya Publishing House, N. Delhi.
2. Desai, V., Entrepreneurial Development Vol. I, Himalaya Publications, N. Delhi.
3. Hishrich, P., Entrepreneurship: Starting, Developing and Managing a New Enterprise,
4. Hisrich, Robert, D. et.al, Entrepreneurship, Tata McGrawHill

5. Kumar, A., Entrepreneurship: Creating and Leading an Entrepreneurial Organization, Pearson,India.
6. Lall, M., and Shikha S., Entrepreneurship, Excel Books, New Delhi
7. Natarajan., K and Gordon. E., Entrepreneurship Development, Himalya Publication,
8. Srivastava S.B. : A practical Guide to Industrial Entrepreneurial, Sultan Chand and Sons, New Delhi.
9. Tandon, B.C. Environment and Entrepreneur, Chugh Publication, Allahabad

Banking & Finance

Objective of the Course:		
Learning Outcome:		
Full Marks: 100	End Semester Exam. - 75	Course Code: COMPG2305
Total Credit= 4	Internal Exam. - 25	No. of Hours of Teaching: 60 Hrs.

COMMERCIAL LAWS

Unit I: The Indian Contract Act, 1872:
General Principle of Law of contract

    a) Contract – meaning, characteristics and kinds

    b) Essentials of valid contract – Offer and acceptance, consideration, contractual capacity, free consent, legality of objects.

    c) Void agreements

    d) Discharge of contract- mode of discharge including breach and its remedies.

    e) Contingent contracts

    f) Quasi –contracts

Unit II: The Indian Contract Act, 1872: Specific Contract

    a) Contract of Indemnity and Guarantee

    b) Contract of Bailment

    c) Contract of Agency

Unit III: The Sale of Goods Act, 1930

    a) Contract of sale, meaning and difference between sale and agreement to sell.

    b) Conditions and warranties

    c) Transfer of ownership in goods including sale by non-owners

    d) Performance of contract of sale

    e) Unpaid seller – meaning and rights of an unpaid seller against the goods and the buyer.

Unit IV: The Income Tax Act 1961

    a) Basic Concept: Income, agricultural income, person, assesse, assessment year, previous year, gross total income, maximum marginal rate of tax
    b) Permanent Account Number (PAN)
    c) Residential status, scope of total income on the basis of residential status.
    d) Exempted incomes
-     e) Aggregation of income and set- off and carry forward of losses
-     f) Deduction from gross total income

- g) Rebates and reliefs
- h) Income Tax Return Filing
-

Unit V: The Consumer Protection Act, 2019
    a) Introduction, Definitions: Consumer, Defect, Deficiency and unfair trade practices, manufacture, Consumer Councils

    b) Consumer Protection Redressal Agencies- Jurisdiction. Penalties for frivolous complaints

Unit VI: The Competition Act, 2002
    a) Objectives of the Act, Salient Features-Anti Competitive Agreements. Prevention of abuse of dominant position, Combination, Competition Advocacy, Competition Commission of India.

References

1. Labour laws by Taxman.

2. Compliance under Labour Laws by H.L Kumar

3. Labour and Industrial Laws- by Padhi. P.K

4. Industrial Relations, Trade Union and Labour Legislation by PRN Sinha

LAW AND TECHNOLOGY

Objective of the Course: Learning Outcome:		
Full Marks: 100	**End Semester Exam. -** 75	**Course Code:** LAWPG2305
Total Credit= 4	**Internal Exam. -** 25	**No. of Hours of Teaching:** 60 Hrs.

Module- 1: INTRODUCTION

An introduction to law and technology

Crimes- wrongs- offences

Rights of the victims

Punishment

Ethical issue with respect to biological sciences

Module- 2: HEALTH & ROLE AND REGULATION OF TECHNOLOGY

Organ donation

Illegal termination of pregnancy

Issues of negligence

Medical ethics

Hippocratic oath

Module- 3: AGRICULTURE & REGULATION OF TECHNOLOGY

Plant variety protection

Fertility of soil and regulation of fertilisers and other agricultural implements

Quarantine and pest management

Environmental issues

Micro- organism and Law

Module- 4: SOCIAL INTEGRATION & REGULATION OF TECHNOLOGY

Social networking- Positive and Negative Effects

Regulation of social networking

Module- 5: REGULATION OF TECHNOLOGY VIS A VIS SAFETY & PRIVACY

Concept of privacy and the issues of safety

Surveillance- CCTV; Blocking; Throttling etc.; Interception

Offences pertaining to safety and privacy

Statutory norms pertaining to the offences

Module- 6: LAW OF EVIDENCE & ROLE OF TECHNOLOGY

Concept of evidence and Law

Recognition of electronic evidence in Law

Relevance of electronic evidence

Module- 7: ELIMINATION OF CORRUPTION & ROLE OF TECHNOLOGY

Concept of e- governance

Corruption and role of e- governance

Scientific mechanisms to control corruption

LIST OF REFERENCES:
1. Chris Reed, Internet Law,
2. Karnika Seth, Law of Computer- internet
3. Paul Todd. Law of E-commerce. London: Cavendish, 2008.
4. Ramappa, T. Legal Issues in Electronic Commerce. Delhi: Macmillan, 2003.
5. Biotechnology and the Law by Hugh B. Wellons, Eileen Smith Ewing
6. Law and Biotechnology: Cases and Materials (Carolina Academic Press Law Casebook)
7. by Victoria Sutton
8. N. S. Sreenivasulu, Biotechnology and Patent Law: Patenting Living Beings, Manupatra, 2008

LOCAL / REGIONAL HISTORY WITH SPECIAL REFERENCE TO THE HISTORY OF DINAJPUR (1757-1971)

Objective of the Course: Learning Outcome:		
Full Marks: 100 **Total Credit**= 4	**End Semester Exam. -** 75 **Internal Exam. -** 25	**Course Code:** HISPG2305 **No. of Hours of Teaching:** 60 Hrs.

Unit 1: Sources: Understanding Local History: Methodological issues: relationship with Oral History

Unit 2: Historiography of Local / Regional History of Bengal.

Unit 3: Emergence of Modern Dinajpur.

a)   Pre-colonial Dinajpur and Sub-Himalayan Region-adjoining areas; Ethno Socio-Religious confluence

b)   Colonial penetration

c)   Colonial administration: Re-organisation of Dinajpur

Unit 4: History of Dinajpur since 1757: Cultural Response and Reaction

Unit 5: Trauma in Bengal Politics from the First Partition to the Second Partition

a)   Reaction to Partition politics on Dinajpur

Suggested Readings:

Axel Harneit-Sievers, (ed.), *A Place in the World: New Local Historiographies from Africa and South Asia.*

F.O.Bell: *Final Report on the Survey and Settlement Operation of the District of Dinajpur.*

F.W.Strong, *Dinajpur District Gazetteer*, 1912.

Francis Buchanan, *A Geographical, Statistical and Historical Description of the District or Zilla of Dinajpur in the Province or Subah of Bengal*.

J.C. Sengupta, *West Dinajpur District Gazetteer,* Government of West Bengal,1965.

Paul Thompson, *The Voice of the Past: Oral History*.

Subashis Gupta &Indrajit Chakrobartty, *Dinajpur: 1757-1947*.

W. W.Hunter: *A Statistical Account of Bengal,*vol.-VII.

DISCRETE MATHEMATICS, BOOLEAN ALGEBRA, GRAPH THEORY AND VECTOR ANALYSIS
[FOR THE STUDENTS OF THE OTHER DEPARTMENTS]

Objective of the Course:		
Learning Outcome:		
Full Marks: 100	**End Semester Exam. -** 75	**Course Code:** MATPG2305
Total Credit= 4	**Internal Exam. -** 25	**No. of Hours of Teaching:** 60 Hrs.

2.1.1   Discrete Mathematics [Marks 25]

1.1.1. Principle of inclusion and exclusion. Pigeon-hole principle. Finite combi- natorics. Generating functions. Partitions. Recurrence relations. Linear difference equations with constant coefficients.

1.1.2. Partial and linear orderings. Chains and antichains. Lattices. Distributive lattices. Complementation.

2.1.2   Boolean Algebra [Marks 25]

Huntington postulates for Boolean Algebra. Algebra of sets and Switching Algebra as examples of Boolean Algebra. Duality. Boolean functions. Normal forms. Karnaugh maps. Design of simple switching circuits.

2.1.3   Graph Theory [Marks 25]

1.3.1. **Graphs:** Undirected graphs. Directed graphs. Basic properties. Walk, Path, Cycle, Trail. Connected graphs. Components of a graph. Complete graph. Complement of a graph. Bipartite graphs. Necessary and sufficient condition for a Bipartite graph.

1.3.2. **Euler graphs:** Necessary and sufficient condition for a graph to be Euler graph. Konigsberg Bridge Problem.

1.3.3. **Planar graphs:** Face-size equation, Euler's formula for a planar graph. To show: the graphs K_5 and $K_{3,3}$ are non-planar.

1.3.4. **Tree:** Basic properties. Spanning tree. Minimal Spanning tree. Kruskal's algorithm. Prim's Algorithm. Rooted tree. Binary tree.

2.1.4   Vector Analysis [Marks 25]

1.4.1. Vector differentiation with respect to a scalar variable: Vector functions of one scalar variable. Derivative of a vector. Second derivative of a vector. Derivatives of sums and products. Velocity and Acceleration as derivatives.

1.4.2. Elements of Differential Geometry: Curves in space. Tangent to a curve at a point, Normal plane, Serret-Frenet formulae, Principal Normal and Binor- mal, Osculating plane, Rectifying plane, Darboux vector, Twisted cubic.

1.4.3. Differential Operators: Concept of scalar and vector fields. Directional derivative. Gradient, Divergence, Curl and Laplacian.

1.4.4. Vector Integration: Line integrals as integrals of vectors, circulation, irro- tational vector, work done by a vector. Conservative force, potential orientation. Statements (only) and verification of Green's theorem, Stoke's theorem and Divergence theorem.

2.1.5 Books for Reference in Discrete Mathematics, Boolean Algebra, Graph Theory and Vector Analysis

Discrete Mathematics, Graph Theory and Boolean Algebra

1.5.1. Introduction to Graph Theory: Douglas B. West (Prentice Hall of India)

1.5.2. Discrete Mathematics (with Graph Theory): E. G. Goodaire and M. M. Permenter (Prentice Hall of India)

1.5.3. Discrete Mathematics: J. K. Sharma (Macmillan)

1.5.4. Selected Topics on Discrete Mathematics: S. Kar (U. N. Dhur and Sons)

1.5.5. Higher Algebra- Abstract and Linear: S. K. Mapa (Sarat Book House)

Vector Analysis

1. Analytical Geometry and Vector Algebra: N. Datta and R. N. Jana (Shree- dhar Prakashani)

2. Analytical Geometry of two and three Dimensions and Vector Analysis: R. M. Khan (New Central Book Agency)

3. Vector Analysis: Chakravorty, J. G. and Ghosh, P. R. (U. N. Dhur and Sons)

4. Vector Analysis. Introduction to Tensor Analysis: Das, A. N. (U. N. Dhur and Sons)

5. Vector Analysis and An Introduction to Tensor Analysis: M. R. Spiegel (McGraw Hill)

6. Vector Analysis: R. K. Ghosh and K. C. Maity (New Central Book Agency)

CYBER LAWS & E BUSINESS

Objective of the Course: Learning Outcome:		
Full Marks: 100	**End Semester Exam. -** 75	**Course Code:** CISPG2305
Total Credit= 4	**Internal Exam. -** 25	**No. of Hours of Teaching:** 60 Hrs.

(Not for MSc CIS Students)

Unit-1

Information Technology-Its basics, Meaning of Law, Act, Offence, Ordinance, Cyber World, Cyber Crime- Its nature, types, policies, Legal aspects of computing, Cyber Terrorism, Hacking, DNS, Web Security, IT Products security and laws, Cyber Laws in developed countries, Indian Cyber Acts, Digital Signature, Encryption, Social Issues in Cyber Systems

Unit-2

Cyber Division in Police Stations, Domain Hijacking, Computer Fraud and Abuse Act, Information Technology Act, Information Security Protocols, Non-repudiation services, related protocols, Fairness in Information Exchanges Protocols, Trusted Third Party, its use as Adjudicator, message authenticator,

Unit-3

Information Security standards, Information Security Infrastructure. International Information Act & IT Act, Right to Information Act-2005 with Process, Features and Functions, IT Act 2000-Role, Features, Summary, Changes, Data Privacy Rules, Real life Example of IT Act uses, Emerging Cyber Act in India

Unit: 4
E Business- Meaning, Types, Characteristics, E Business Models, Related areas, Role, Contemporary areas, Models, Major Concerns in E Business, Digital Marketing: Meaning, Characteristics, Types, Need and Role, E Commerce Business Applications, E Commerce Types, M Commerce, Shopping Carts, Shopping Cart Software- Detailed study,

Unit: 5
E – strategy: Overview, Strategic Methods for developing E – commerce, Four C's : (onvergence, Collaborative Computing, Content Management & Call Center), Payment through card system, E – Cheque, E – Cash, E – Payment Threats & Protections, E – Marketing :. Home –shopping, E-Marketing, Tele-marketing

Text/References:

1. Kahin, B., & Nesson, C. (1996). *Borders in cyberspace: Information policy and the global information infrastructure*. MIT Press.

2. Kamisar, Y. (1980). *Police interrogation and confessions: Essays in law and policy* (p. 1). Ann Arbor, MI: University of Michigan Press.

3. Holtshouse, D. K. (2013). *Information technology for knowledge management*. U. M. Borghoff, & R. Pareschi (Eds.). Springer Science & Business Media.

4. Information Technology Law and Practice by Vakul Sharma – Universal Law Publishing Co. Pvt. Ltd.

5. The Indian Cyber Law by Suresh T Vishwanathan – Bharat Law house New Delhi.

6. Hand book of Cyber & E-commerce Laws by P.M. Bakshi & R.K.Suri – Bharat Law house New Delhi.

7. Guide to Cyber Laws by Rodney D. Ryder-Wadhwa and Company Nagpur.

8. The Information Technology Act,2000 – Bare Act –Professional Book Publishers – New Delhi.

INDIAN PHILOSOPHY

Objective of the Course:		
Learning Outcome:		
Full Marks: 100	**End Semester Exam. -** 75	**Course Code:** PHIPG2305
Total Credit= 4	**Internal Exam. -** 25	**No. of Hours of Teaching:** 60 Hrs.

Unit-I Indian Epistemology
i.   Carvaka
ii.   Buddha
iii.   Jaina
iv.   Nyaya
v.   Vaisesika
vi.   Samkhya
vii.   Yoga
viii.   Mimamsa
ix.   Vedanta

Unit-II Metaphysics
i.   Carvaka
ii.   Bauddha
iii.   Jaina
iv.   Nyaya
v.   Vaisesika
vi.   SAmkhya
vii.   Yoga
viii.   Mimansa
ix.   Vedanta

Unit-III Ethics
i.   Carvaka
ii.   Buddha
iii.   Jaina
iv.   Nyaya
v.   Vaisesika
vi.   SAmkhya
vii.   Yoga
viii.   Mimansa
ix.   Vedanta

MANAGEMENT INFORMATION SYSTEM WITH WEB TECHNOLOGY

Objective of the Course: To facilitate the students to understand of Fundamentals of MIS, Management and Decision support system, HTML. Learning Outcome:		
Full Marks: 100 **Total Credit**= 4	**End Semester Exam. -** 75 **Internal Exam. -** 25	**Course Code:** CSCPG2305 **No. of Hours of Teaching:** 60 Hrs.

Unit–I:

Management Information Systems - Need, Purpose and Objectives - Contemporary Approaches to MIS - Information as a strategic resource - Use of information for competitive advantage - MIS as an instrument for the organizational change

Unit–II:

Information, Management and Decision Making - Models of Decision Making -Classical, Administrative and Herbert Simon's Models - Attributes of information and its relevance to Decision Making - Types of information

Unit–III:

Information Technology - Definition, IT Capabilities and their organizational impact -Telecommunication and Networks - Types and Topologies of Networks - IT enabled services such as Call Centers, Geographical Information Systems etc.

Unit–IV:

Data Base Management Systems - Data Warehousing and Data Mining

Unit–V:

Systems Analysis and Design - Systems Development Life Cycle - Alternative System Building Approaches - Prototyping - Rapid Development Tools - CASE Tools – Object Oriented Systems (Only introduction to these tools & techniques)

Unit–VI:

Decision Support Systems - Group Decision Support Systems - Executive Information Systems - Executive Support Systems - Expert Systems and Knowledge Based Expert Systems - Artificial Intelligence

Unit–VII:

Management Issues in MIS - Information Security and Control - Quality Assurance -Ethical and Social Dimensions - Intellectual Property Rights as related to IT Services / IT Products - Managing Global Information Systems

UNIT–VIII

History of the Internet and World Wide Web, Search Engines, News-group, E-mail and its Protocols, Web Portal, Browsers and their versions, Its functions, URLs, web sites, Domain names, Portals. Static Web Development: HTML - Introduction to HTML, HTML Document structure tags, HTML comments, Text formatting, inserting special characters, anchor tag, adding images and Sound, lists types of lists, tables, frames and floating frames, Developing Forms, Image maps.

Reference:

1. Management Information Systems, Laudon and Laudon, 7th Edition, Pearson Education Asia

2. Management Information Systems, Jawadekar, Tata McGraw Hill

3. Management Information Systems, Davis and Olson,Tata McGraw Hill

4. Analysis and Design of Information Systems, Rajaraman, Prentice Hall

<p align="center" style="color:blue">DEDELOPMENT STUDIES</p>

Objective of the Course: Learning Outcome:		
Full Marks: 100 **Total Credit**= 4	**End Semester Exam. -** 75 **Internal Exam. -** 25	**Course Code:** ECOPG2305 **No. of Hours of Teaching:** 60 Hrs.

Module 1:   Introduction to development studies

Development studies: an integration of Development Economics with wider social science perspectives. Development–Concept and Paradigms, definition of underdevelopment economy. Characteristic of underdevelopment – Defining 'Development, Growth versus development, commonly used measures of development, Human development & Political Development. Indicators of development-Different Approaches - GDP, HDI, HPI, GDI, & PQLI. Economic development in historical perspectives. From MDG to SDG

Module 2:   Theories and paradigms of development

Classical& Neoclassical schools: Marxian Theory, Schumpeter Theory, Neoliberal theories and Governance, Dependency theory ,Human capability theories, Innovation, Leibensten's critical minimum effect, Dual Economy and dual society ,Rostow's stage theory of development, Balanced& unbalanced development theories, Model of industrialisation , Growth and Economic Convergences, Endogenous Growth, Changes in Recent development thinking: The role of Institutions. Sociological dimensions of Development: Max Weber, Karl Polanyi, E.Durkheim, and Talcott Parsons.

Module 3:   **Issues and challenges of development**

Inequality, Poverty, under nutrition and development, Population growth and development: Theory of demographic transition–Population as limits to growth. Human capital: Education & health in Economic Development. Development policy making and the role of market, state and civil society and allocation of resources. Development strategy &Role of international trade, BOP, external debt, financial crisis and stabilisation policies. Foreign direct investment, Aid & conflict. Monetary and fiscal policy for development. Resource, Environment and Sustainable development. Financing development

project: Domestic sources & foreign aid. Major obstacles to development process in developing countries. Social and sectoral issues in development process.

Module 4:   Factors in the development dynamics

Factors in the development Process: Land, Labour, and agriculture, capital and technical progress , Employment, migration, urbanization & development, Role of the market, the state and alternative, Institutions in development. Role of Microfinance Institutions, Credits & debt for development. Capital formation, investment choice and technical progress.. Violence, Conflict and social movement. Social exclusion, discrimination and marginalization. Freedom entitlement and human rights, Development and disparity. Ethnicity, tribal development and globalization

Module 5:   Environment, Ecology and Food security

Definition and Global Situation of 'Organic Agriculture'--Ecological and Environmental Issues--Self-regulating Ability and System Stability—Biodiversity--Global Warming and Climate Changes--Soil Nutrient Balance--Soil Microbial Biomass---Soil Structure, Compaction and Erosion--Crop Protection--Food Quality, Safety and Environmental Impacts--Food and Agrochemicals--Nutritional Quality--Organic Agriculture and Food Production: Ecological, Environmental, Food Safety and Nutritional Quality Issues. Food Security: Definition: An Evolving Concept. The Dimensions of Food Security. Duration of Food Insecurity. The Actors of Food Security. Origins of Food Sovereignty. Principles of Food Sovereignty.

Module 6.   Decentralisation and participatory development

Democratic decentralization, local governance and local organizations, decentralized planning and development, people participation, empowerment of local bodies, Participatory Development: Role of various Institutions in Participatory Development Experiences in Decentralised planning: Kerala, West Bengal. Local Economic Development– Issues and Challenges. Panchayati Raj Institutions and Urban LGIs - Significance of Grama Sabha-Scope and Opportunities – Issues and Challenges. Democracy, Governance

and development**.** Development institutions: The state, democracy and development. NGOs, civil society and social movements.

Readings

1. Adelman, I. (1961), Theories of Economic Growth and Development, Stanford University Press, Stanford. and Carlo Leifert (2010) "Sociology, Organic Farming, Climate Change and Soil Science" edited by Sustainable Agriculture Reviews: Volume 3; Series Editor Eric Lichtfouse, Springer, New York

2. Banerjee A.V &Duflo E (2011), Poor Economics: rethinking poverty and the way to end it. Penguin Random House India. New Delhi

3. Bardhan, P. The Contributions of Endogenous Growth Theory to the Analysis of Development Problems: An Assessment. Handbook of Development Economics Volume 3B.

4. Behrman, S. and T.N. Srinivasan (1995), Handbook of Development Economics, Vol. 3, Elsevier, Amsterdam.

5. Byres Terence J.(ed.), The State, Development Planning and Liberalization in India, 1998, Delhi, Oxford.

6. Chenery, H.B. and T.N. Srinivasan (Eds.) (1989), Handbook of Development Economics, Vols. 1 &Elsevier, Amsterdam.

7. Chenery, H.B. et. Al. (Eds.) (1974), Redistribution with Growth, Oxford University Press, Oxford.

8. Dasgupta, P. (1993), An Enquiry into Well-being and Destitution, Clarendon Press, Oxford.

9. Denoon, D. "Cycles in India's Economic Liberalization," Comparative Politics, 31 (1), October 1998

10. Dreze, J. and A. Sen, Hunger and Public Action, 1989

11. Drèze, Jean and AmartyaSen (2002), India: Development and Participation, second edition. Oxford: Oxford University Press.

12. Gasper, D. (2004). The ethics of development: From Economism to human development. Edinburgh: Edinburgh University Press

13. Ghatak, S. (1986), An Introduction to Development Economics, Allen and Unwin, London.

14. Gills, M., D.H. Perkins, M. Romer and D.R. Snodgrass (1992), Economics of Development, (3rd Edition), W.W. Norton, New York.

15. Gimmell, N. (1987), Surveys in Development Economics, Blackwell, Oxford.

16. Gouri, G. "The New Economic Policy and Privatization in India" Journal of Asian Economics 8.3 1997, pp. 455-479.

17. Hayami Y &Godo Y (2005) : Development Economics : From the poverty to the Wealth of Nations, third edition , Oxford University Press. New Delhi

18. Hogendorn, J. (1996), Economic Development, Addison, Wesley, New York.

19. Joshi, V. and I.M.D.Little, India's Economic Reforms 1991-2001, 1996

20. Kahkonon, S. and M. Olson (2000), A New Institutional Approach to Economic Development, Vistaar.

21. Kindleberger, C.P. (1977), Economic Development, (3rd Edition), McGraw Hill, New York.

22. Meier, G.M. (1995), Leading Issues in Economic Development, (6th Edition), Oxford University Press, New Delhi.

23. Mukherjee A &Chakraborty S (2016) Development Economics : A Critical Perspectives PHI Learning Private Ltd. New Delhi

24. Mukherjee Sampat (2015) Contemporary Development Economics, new Central Book Agency (P) Ltd, Kolkata. India

25. Myint, H. (1971), Economic Theory and Underdeveloped Countries, Oxford University Press, New York.

26. Myrdal, Gunnar. (1974), "What is Development?" Journal of Economic Issues 8(4):729-736.

27. Ray Debraj(1998) Development Economics, Oxford University Press. New Delhi. 1ˢᵗ Indian Edition.

28. Reza Ghorbani, AlirezaKoocheki, Kirsten Brandt, Stephen Wilcockson,

29. Sen, Amartya (1999) Development as Freedom. New York: Anchor Books.

30. Sen, Amartya, 2000, 'A Decade of Human Development', Journal of Human Development, 1(1)Sakiko Fukuda-Parr, A. K. Shiva Kumar, 2004'Readings in human development: concepts, measures and policies for a development paradigm', OUPSéverineDeneulin, Lila Shahani, 2009,

31. Tambi, E.; Aromolaran, A.; Odularu, G; and Oyeleye, B., 2014. Food sovereignty and food security: Where does Africa stand? Forum for Agricultural Research in Africa (FARA), Accra, Ghana.)

32. Thirwal A.P (2006) " Growth and development with special reference to developing countries Eighth Edition, Palgrave Macmillan , New York

33. Todaro P.M & Smith S.C (2003) " Economic Development Eight Edition, Pearson Education, New Delhi.

EDUPG2305: Fundamentals of Research Methodology

Objective of the Course: Learning Outcome:		
Full Marks: 100	**End Semester Exam. -** 75	**Course Code:** EDUPG2305
Total Credit= 4	**Internal Exam. -** 25	**No. of Hours of Teaching:** 60 Hrs.

Unit I: Research: Meaning, Nature, Characteristics; Educational Research: Fundamental, Applied & Action, Longitudinal and Cross Sectional, & Interdisciplinary; Identification of research worthy Problems; Research Design; Research Objectives & Questions; Review of related studies.

Unit – II: Hypothesis: Meaning, type, Formulation & Testing; Characteristics of Good Hypothesis; Variables: Concepts, types & Method of Control

Unit –III: Population and Sample, Sampling methods: Probability & Non Probability; Tools and techniques of data collection: needs criteria of good research tools, Construction and uses of – observation, interview, questionnaire, rating, and attitude scale.

Unit – IV: Strategies of Research: Historical, Descriptive and Experimental. Importance & critical Evaluation of the strategies; Writing Research Report: As per style & format; evaluating a research report, its criteria.

Unit – V: Educational Data- Quantitative & Qualitative; Descriptive & Inferential; Tabulations of Educational data; Graphical Presentation- Histogram, Polygon and Ogive; NPC and Non-normality: Skewness & Kurtosis; Percentile & Percentiles Rank; Measures of Central Tendencies and variability's: Uses

Unit – VI: Measures of Correlation: Product moment, Rank differences, bi-serial and point – biserial, partial and multiple correlations (concepts & Uses only); Regression and Prediction: concepts.

Unit – VII: Parametric Statistics- Significance of Statistics, one tailed & two tailed tests, t-test, ANOVA; Non-Parametric Statistics: Chi-Square, Median test.

Suggested Readings:
1. Mangal, S.K & Mangal, S. - Research Methodology in Behavioural Sciences, PHI, Delhi

2. Kerlinger, F.N. – Foundations of behavioural research.

3. Best and Kahn. – Research in education.

4. Koul, L. – Methodology of educational research.

5. Guilford, J.P. – Fundamental statistics in psychology and education.

6. Guilford, J.P. – Psychometric methods.

7. Anastasi, A. – Psychological Testing.

8. Freeman, - Psychological testing.

9. Fergusion, G.A. – Statistical analysis in psychology and education.

10. Nunnally, J.C. – Educational measurement and evaluation.

11. Siegal, S. – Nonparametric statistics for the behavioural sciences.

12. Van Dalen, D.B. – Understanding Educational Research : an introduction.

13. W.L. Neuman – Social Research Method – Qualitative and quantitative approaches, Pearsan Education.

14. Ram Ahuja – Research Methods, Rauat Publication Jaipur and New Delhi.

15. J.W. Best & J.V. Kahn – Research in Education, Prentice Hall of India, New Delhi.

16. L. Koul – Methodology of Educational Research, Vikas Publishing House, New Delhi.

17. . Radha Mohan – Research Methodology in Education, Neelkamal Publication, New Delhi.

18. C.R. Kothari – Research Methodology - method and techniques, WishwaPrakashan, New Delhi.

19. K.S. Sidhu – Methodology Research in Education, Sterling Publishers, New Delhi.

GENERIC ENGLISH- 2

Objective of the Course: Learning Outcome:		
Full Marks: 100	**End Semester Exam. -** 75	**Course Code:** ENGPG2305
Total Credit= 4	**Internal Exam. -** 25	**No. of Hours of Teaching:** 60 Hrs.

1. Matthew Arnold   "The Study of Poetry"

2. T.S. Eliot   "Tradition and Individual Talent"

3. John Stuart Mill   "Subjection of Women"

LANDFORMS, ATMOSPHERE AND RESOURCES

Objective of the Course:		
Learning Outcome:		
Full Marks: 100	End Semester Exam. - 75	Course Code: GEOPG2305
Total Credit= 4	Internal Exam. - 25	No. of Hours of Teaching: 60 Hrs.

UNIT I

Fundamental Concepts in Geomorphology - Geological structures and landforms; principles of uniformitarianism; Cycle of Erosion - concepts of Davis and Penck; Continental Drift Theory – concept of Wegener; Plate Tectonics – concept and related views.

UNIT II

Earth's Movement – endogenetic forces, folds, faults, rift valleys, exogenetic forces; Dynamics of fluvial processes and resulting landforms; Dynamics of glacial processes and resulting landforms; Dynamics of Aeolian processes and resulting landforms; Ground water Dynamics and Karst Landforms.

UNIT III

Nature and scope of climatology and its relationship with meteorology. The atmosphere: Structure and composition, insolation, heat-balance of the earth. Distribution of temperature: Temporal, vertical and horizontal, Green House effect. Distribution of atmospheric pressure and winds.

UNIT IV

Climatic Phenomena: Air masses and fronts, origin, growth, classification. Frontogenesis, types and weather associated with fronts. Climatic Classifications: Koppen'sThornthwaites - A critical appraisal of each classification.

UNIT V

Nature, scope and significance of Geography of Resources.Definition and concept of natural resources.Classification of resources. Characteristics of natural resources: Resource conservation and management with reference to land and forest resource.

UNIT VI

Theories of Resource Use - Theories of agricultural location; Theories of industrial location: Weber and Losch; Energy resources-Conventional energy resources - coal, petroleum, non – conventional - solar and geothermal energy.

COMPUTATIONAL METHODS, PROGRAMMING & FUNDAMENTAL ELECTRONICS

Objective of the Course: Learning Outcome:		
Full Marks: 100 **Total Credit=** 4	**End Semester Exam.** - 75 **Internal Exam.** - 25	**Course Code:** PHYPG2305 **No. of Hours of Teaching:** 60 Hrs.

Computational Methods and Programming –II

Newton's formulas; Lagrange's interpolation; inverse interpolation. Numerical differentiation and integration: Numerical differentiation; numerical integration - Simpson's, Weddle's and trapezoidal rules; Gauss' quadrature formula; accuracy of quadrature formulas.

Laboratory Course

Applications of Numerical methods in FORTRAN

List of Books:
1. *E. Balagurusamy : Numerical Methods*

2. *V. Rajaraman: Computer Oriented Numerical Methods*

Fundamental Electronics:

Basic small signal amplifiers: Classification of amplifiers, BJTIFET amplifier circuits, model and generalised amplifier circuits, Bootstrapped and Darlington amplifier circuit. Audio power amplifiers.

Audio power amplifier requirements, Class A, Class B and Class C power amplifiers, Push pull and tuned power amplifiers. Cascade amplifiers, Diffference amplifiers, Multistage R-C coupled amplifiers. Noise in electronic circuits

Block diagram of a typical OP-AMP circuit: Open-loop configuration. Practical OP AMP: Input offset voltage and current, input bias current, total output offset voltage, CMRR and frequency response Inverting and non-inverting amplifiers. OP AMP with negative feedback - voltage series feedback. Effect of feedback on closed loop gain, input resistance, output resistance, bandwidth, offset voltage and current, voltage follower.

Laboratory Course

1. To design a circuit diagram and study the voltage gain, input impedance, and power gain of an emitter follower.

2. To construct using OPAMP, (i) Differentiator (ii) Integrator (iii) adder-subtractor circuits. To study their performance for different time varying inputs.

3. To determine CMRR, input offset voltage, output offset voltage, input bias current and slew rate of an OP- AMP.

4. To study OP-AMP as voltage comparator. Plot a curve in input and output voltages and show how the output switches from positive to negative value.

5. To design and construct a Wein-Bridge oscillator using OPAMP and to study its output waveform and frequency for various RC values.

6. To study OP-AMP as a function generator, i.e. as (a). square wave generator

(b). triangular wave generator.

List of Books:
1. Millman &Halkias: Integrated Electronics, ”(3rd Edition) Tata McGraw-Hill Publishing Co.Ltd.

2. Boylestead and Nashelsky : Electronic Devices and Circuits Theory, 9/e, PHI, 2006.

3. Malvino: Electronic Principle, Tata McGraw-Hill Publishing Co. Ltd.

4. Chattopadhyaya, Rakhist, Saha and Porkait : Foundation of Electronics (3rd Edition), New Age International Publisher (2014)

5. S M Sze and Kwok K. Ng : Physics of Semiconductor Devices, (3rdEdition), Wiley- Interscience.

LOCAL GOVERNMENT AND POLITICS IN INDIA

Objective of the Course: Learning Outcome:		
Full Marks: 100	**End Semester Exam. -** 75	**Course Code:** POLPG2305
Total Credit= 4	**Internal Exam. -** 25	**No. of Hours of Teaching:** 60 Hrs.

Unit- I

Local Government – the concept- Origin and Evolution of local Government in India

Unit-II

Local Government and the Political Process in India since independence
Panchayati Raj and Municipal Governance in India

Unit-III

73rd and 74th Amendment Acts.
Rural Governments: Composition, power and functions; Urban Local Governments: composition, power and functions.
Women and Political Participation, women and electoral politics in India - Focus on Panchayati Raj Institutions

Unit-IV

Local Government and Bureaucracy in India

Unit-V

Leadership at the local level-Women in Local Governments in India
Autonomy of Local Government in India: Local Self Government- Local Democracy

HISTORY OF SANSKRIT LITERATURE

Objective of the Course: Learning Outcome:		
Full Marks: 100 **Total Credit**= 4	**End Semester Exam. -** 75 **Internal Exam. -** 25	**Course Code:** SANPG2305 **No. of Hours of Teaching:** 60 Hrs.

Unit-I Basic concept of Vedic Literature

40 Marks

Unit-II Court Epics in Sanskrit Literature

40 Marks

Unit-III Tales & Fables of Sanskrit Literature

20 Marks

Indian Social System

Objective of the Course: Learning Outcome:		
Full Marks: 100	**End Semester Exam. -** 75	**Course Code:** SOCPG2305
Total Credit= 4	**Internal Exam. -** 25	**No. of Hours of Teaching:** 60 Hrs.

Unit I: Approaches to the Study of Indian Society:

Structural-functional approach, Dialectical approach, Subaltern approach

Unit II: Key Issues in Indian Society:

Village as a social unit, Caste-class relationship, Family and its changing dimension, Tribes and its location

Unit III: Modernity in Indian Society:

Westernization, Secularization, Modernization and Globalization

Unit IV: Contemporary Debate on Indian Society:

Citizenship and Nationality, Development vs Underdevelopment, Marginalization, Secularism.

Readings:

Nagla, B.K. (2008). Indian Sociological Thought. Jaipur: Rawat Publication

Bhattacharya, Sabyasachi. (2007). Development of Modern Indian Thought and the Social Sciences.OUP

Madan, T. N. (1994). Pathways: Approaches to the Study of Society in India. Delhi: OUP

Singh, Yogendra. (2004). Ideology and Theory in Indian Sociology. Jaipur: Rawat

Sharma,K.L.(2008).Indian Social Structure and Change. Jaipur: Rawat Publication

Ahuja, Ram. (1993). Indian Social System. Jaipur: Rawat Publication

Srinivas, M.N. (1969). Social Change in Modern India. Berkeley: University of California Press

Singh, Yogendra. (1983). Modernization of Indian Tradition. Jaipur: Rawat Publication

Doshi, S.L. (2009). Post-modern Perspectives on Indian Society. Jaipur: Rawat Publicaton

Oommen, T. K. (ed) (1997). Citizenship and National Identity. Delhi: Sage

Harris, Graham 1989 Sociology of Development, London: Longman

INTELLECTUAL PROPERTY LAW

NON- CREDIT COURSE

Objective of the Course:		
Learning Outcome:		
Full Marks: 50	**End Semester Exam. - 2**5	**Course Code:** PG26X6
Total Credit= 2	**Internal Exam. -** 25	**No. of Hours of Teaching:** 30 Hrs.

Module: 1. LAW OF COPYRIGHT   6 Lectures

Objectives of copyright protection; eligibility; Meaning of copyright; Works protected under copyright; Registration of copyright; ownership, licensing and assignment; copyright societies; Limitations and Exceptions; Infringement;

Module: 2. LAW OF TRADEMARK   6 Lectures

Marks and types of marks, Registration of trademarks and service marks; Concept of distinctiveness and consumer deception – grounds for refusal of registration; well-known marks and dilution – passing off and infringement; Registration of domain names;

Module: 3. LAW OF PATENTS   6 Lectures

Objectives of Patent Law; Meaning, Subject matter and eligibility; Procedure for Filing; Procedure for grant of patents – Anticipation; Ownership and assignment; Limitations and Exceptions to Patent Rights – Government use, Compulsory Licensing; Infringement

Module: 4. LAW OF DESIGNS   6 Lectures

Objectives and criteria of design protection – grounds of refusal ownership and assignment of right – infringement;

Module: 5. MODERN TRENDS IN PROTECTION OF IP RIGHTS   6 Lectures

Protection of Semiconductor Chips; Geographical Indications; Plant Varieties – Farmers' Rights, Biodiversity, Traditional Knowledge and Traditional Cultural Expressions

DESCRIPTIVE STATISTICS

Objective of the Course: Learning Outcome:		
Full Marks: 100 **Total Credit**= 4	**End Semester Exam. -** 75 **Internal Exam. -** 25	**Course Code:** STAPG2305 **No. of Hours of Teaching:** 60 Hrs.

Introduction: Nature of Statistics, Uses of Statistics, Statistics in relation to other disciplines, Abuses of Statistics. (2L)

Types of Data: Concepts of population and sample, quantitative and qualitative data, cross-sectional and time-series data, discrete and continuous data, different types of scales. (3L)

Collection and Scrutiny of Data: Primary data – designing a questionnaire and a schedule, checking its consistency. Secondary data – itsmajor sources. Complete enumeration. Controlled experiments, Observational studies and Sample Surveys. Scrutiny of data for internal consistency and detection of errors in recording. Ideas of cross-validation. (3L)

Presentation of data: Construction of Tables with one or more factors of classification, diagrammatic representations, frequency distributions, cumulative frequency distributions and their graphical representations, stem and leaf displays. (4L)

Univariate data – different measures of location, dispersion, relative dispersion, skewness and kurtosis, Moments, Liapounov's inequality, Quantiles and measures based on them, comparison with moment measures. Box Plot. Outlier Detection. (10L)

Bivariate data – scatter diagram, correlation coefficient and its properties, Correlation ratio, Correlation Index, Intra-class correlation, Concept of Regression, Principles of least squares, Fitting of polynomial and exponential curves. Rank correlation – Spearman's and Kendall's measures. (13L)

Analysis of Categorical Data: Consistency of data, independence and association of attributes, measures of association – Pearson's and Yule's measures, Goodman-Kruskal's $\square$. (5L)

List of Practical (20H)

Graphical representation of data.
Problems based on measures of central tendency. Problems based on measures of dispersion.
Problems based on combined mean, variance and coefficient of variation. Problems based on moments, skewness and kurtosis.
Fitting of quadratic and exponential functions. Karl Pearson's correlation coefficient.
Correlation coefficient for a bivariate frequency distribution.

Lines of regression, angle between lines and estimated values of variables. Spearman's rank correlation.
Box Plot.

References:

Miller, Irwin and Miller, Marylees (2006): John E. Freund's Mathematical Statistics with Applications, (7th Edn.), Pearson Education, Asia.
Mood, A.M., Graybill, F.A. and Boes, D.C. (2007): Introduction to the Theory of Statistics, 3rd Edn. (Reprint), Tata McGraw-Hill Pub. Co. Ltd.
Goon A.M.,Gupta M. K., Dasgupta B.(1998): Fundamentals of Statistics (Vol- 1),World Press.
Yule G.U & Kendall M.G. (1950): An Introduction to the Theory of Statistics, C.Griffin.
Snedecor & Cochran (1967): Statistical Methods (6th ed), Iowa State Univ. Press.
Wallis F.E. & Roberts H.V. (1957): Statistics- a new approach, Methuen. Tukey J.W. (1977): Exploratory Data Analysis, Addison-Wesley Publishing Co.