

INFORMATION BROCHURE

RESEARCH PROGRAMME

DOCTOR OF PHILOSOPHY (Ph.D.)

Established by Government of Jharkhand Act on 16 May, 2016 and
Approved vide UGC Act 2(f) 1956

AISECT University

Main Campus - Vill- Joniya (Tarwa-Kharwa), Post- Maheshra, Dist. – Hazaribag, Jharkhand

City Office - Matwari Chowk , Infront of Gandhi Maidan, Hazaribag, Jharkhand

Email: info@aisectuniversityjharkhand.ac.in

Phone (India): +91-8252299990, +91-840-488-4433



सत्यमेव जयते

झारखण्ड गजट

असाधारण अंक

झारखण्ड सरकार द्वारा प्रकाशित

संख्या 313 राँची, सोमवार,

26 वैशाख, 1938 (श०)

16 मई, 2016 (ई०)

विधि (विधान) विभाग ।

अधिसूचना

13 मई, 2016

संख्या-एल0जी0-11/ 2016-82/ लेज0-झारखण्ड विधान मंडल का निम्नलिखित अधिनियम, जिस पर राज्यपाल दिनांक 06 मई, 2016 को अनुमति दे चुके हैं, इसके द्वारा सर्वसाधारण की सूचना के लिये प्रकाशित किया जाता है

आईसेक्ट विश्वविद्यालय अधिनियम, 2016

(झारखंड अधिनियम संख्या-12, 2016)

प्रस्तावना

झारखण्ड राज्य में आईसेक्ट विश्वविद्यालय की स्थापना एवं समावेश के लिए और उससे सम्बद्ध एक निजी विश्वविद्यालय के आनुषंगिक मामलों की स्थिति प्रदान करने हेतु एक अधिनियम;

जबकि यह समयोचित है कि समिति के सहायक निबंधक, भोपाल (न्यास एवं समिति) के तहत सृजित एवं पंजीकृत एआईएसईसीटी (आईसेक्ट) स्कोप कैम्पस, एन.एच-12, भैरौपुर (निकट मिसरोद) होशंगाबाद रोड, भोपाल



सत्यमेव जयते

विश्वविद्यालय अनुदान आयोग
University Grants Commission
मानव संसाधन विकास मंत्रालय, भारत सरकार
(Ministry of Human Resource Development, Govt. of India)
बहादुरशाह जफर मार्ग नई दिल्ली- 110 002
Bahadurshah Zafar Marg, New Delhi-110002
Phone : 011-23604329, 011-23604431



ज्ञान-विद्या विमुक्तये

www.ugc.ac.in

SPEED-POST

Sep, 2018

F.No- 5-2/2018(CPP-I/PU)

04 OCT 2018

The Registrar,
AISECT University,
Matwari Chowk, Infront of Gandhi Maidan,
Hazaribagh, - 825301
Jharkhand

Sub: -Status of the AISECT University, Matwari Chowk, Hazaribagh, Jharkhand.

Sir,

With reference to your letter No. Au-R/Status/Uni_Details/UGC/2018 dated 24.09.2018 on the above subject, I am directed to inform you that AISECT University, Matwari Chowk, Infront of Gandhi Maidan, Hazaribagh, Jharkhand has been established by an Act of State Legislature of Jharkhand as a Private University and is empowered to award degrees as specified under Section 22 of the UGC Act to the students studying in its main campus in regular mode with the approval of Statutory Bodies/Councils, wherever its required, after creating required academic and physical infrastructure facilities including library, laboratories and appointment of teaching and supporting staffs as per the norms and standards laid down by UGC and other relevant Statutory Council (s).

AISECT University, Matwari Chowk, Infront of Gandhi Maidan, Hazaribagh, Jharkhand is not authorized to open study centre/ off campus centre beyond the territorial jurisdiction of the state as per the judgment of Hon'ble Supreme Court of India in case of Prof. Yashpal vs. State of Chhattisgarh. The University cannot open its centre(s) even within the state as per the provision of UGC (Establishment of and Maintenance of Standards in Private Universities) Regulations, 2003 without the approval of UGC.

The UGC has not granted any approval to the University to open off campus/study centre.

Yours faithfully,


(Kundla Mahajan)
Under Secretary (CPP-I/PU)

About the University

All Indian Society for Electronics and Computer Technology (AISECT), established 31 years back with a novel concept of spreading computer literacy and technology training in rural mass in their mother tongue, is now the leading national network of ICT enabled services with over twenty thousand centers encompassing 28 states and 3 union territories of India. In these years AISECT has enlarged its area of operation from vocational training and computer literacy to skill development activities, financial inclusion, content development, e-learning & e-governance projects, higher education institutions and placement activities. Six universities have been set up so far by AISECT – Rabindranath Tagore University (Bhopal, MP), Dr. C.V. Raman University (Bilaspur, CG), AISECT University (Hazaribagh, Jharkhand), Dr. C.V. Raman University (Vaishali, Bihar), Scope Global Skill University (SGSU) (Bhairampur, Madhya Pradesh) and Dr. C.V. Raman University (Khandwa, MP)

The outstanding contribution of AISECT has been lauded by many national and international organizations. It has won prestigious awards year after year for its excellent work. These awards include Indian IT Innovation Award 2005, NASSCOM IT Innovation Award 2006, i4d Award 2007, Golden Icon in e-Governance Award, NASSCOM Emerge 50 Leader Award, TiE Lumis Partners Entrepreneurship Excellence Award, Schwab Social Entrepreneur Award 2010 and Financial Inclusion Award 2011, e-gov India Award 2011, Skoch Corporate Leadership Award 2013, Financial Inclusion and Payment Systems Award 2013, 27th amongst the fastest growing mid-size businesses in India 2013, Voted amongst the top 100 franchises in 2010 and 2013.

His Excellency, the Governor of Jharkhand gave assent to the State Universities Act, which envisages establishing and incorporating universities for teaching and research in the state of Jharkhand.

The AISECT University of Jharkhand came into being under this Act on 16th May, 2016. The UGC, New Delhi has recognized the university and registered it under section (2F) of the UGC Act 1956. The University is located at Hazaribag, India and is sponsored by the AISECT.

Vision

To an advanced centre of professional learning of international standard where pursuit of knowledge and excellence shall reign supreme, unfettered by the barriers of nationality, language, cultural plurality and religion.

Mission

- Imparting value based quality education of international standard.
- Imbibing skill for solving real life problems.
- Inculcating global perspective in attitude.
- Creating leadership qualities with futuristic vision.
- Fostering spirit of entrepreneurship and realisation of societal responsibilities.
- Cultivating adaptation of ethics, morality and healthy practices in professional life.
- Encouraging and supporting creative abilities and research temperament.
- Promoting close interaction with industries.

Reasons to select AISECT University

- AISECT University functions under the guidance of one of the most established education groups in the country, the All India Society for Electronics and Computer Technology (AISECT).
- The University is recognised under section 2(f) of the UGC Act.
- The university is equipped with top-notch infrastructure facilities.
- We have a team of well qualified, experienced faculty members with good industry experience to groom the young and endeavouring minds of today.
- We facilitate our students to get involved in sports and extra-curricular activities, which helps in the all-around development and cultivates the team spirit nature among students.
- Every possible effort is made to hone the logical, reasoning and communication skills of the students, helping them to grow into confident and responsible individuals.
- Various student oriented facilities including training and placement, support is also offered by the university.
- The university provides research based quality education along with value added skill based courses for developing Leadership, Managerial and Entrepreneurial qualities.
- University gives equal attention to skill development of the students along with its regular curriculum.

Library Facility

- Well qualified and experienced staff to take care of the smooth library working.
- A collection of around 10,000 text and reference books on varied subjects to cater to the needs of variety of users.
- Disciplines wise journals and periodicals are available in the library.
- Well-furnished Reading Halls.
- Coverage by Intercom System.
- Aesthetic Interiors
- Adequate seating arrangement

Research Programme (Ph.D.)

AISECT University offers Ph.D. Programme through various disciplines. Award of Ph.D. degree will be made on the basis of academic achievements in research work and published work as well as the papers presented in seminars, conferences etc. in various disciplines.

The University also encourages interdisciplinary areas through a system of co-supervision and provides excellent opportunities for such programmes. The research work shall be an original work characterized either by the discovery of facts, or by a fresh approach towards the interpretation and application of facts. It shall demonstrate the candidate's capacity for critical examination and sound judgment and shall represent original contribution to the existing knowledge.

The degree of Doctor of Philosophy (Ph. D.) is awarded for research work in areas recognized by the academic departments of the University. The degree of Doctor of Philosophy (Ph. D.) will be awarded in the discipline of the department in which the candidate is registered.

Faculty & Subjects offering Ph. D Programme 2025-26:

AISECT University Hazaribag offers Ph.D. degree programme in various disciplines as per guidelines given by UGC regulation 2022 and Ordinance No. 17 of AISECT University Hazaribag. The awarded Ph.D. degree is in recognition of high academic achievements, independent research and application of knowledge to the solution of technical, economical, scientific, social, environmental etc. problems in various disciplines.

The University also offers interdisciplinary areas linked and allied through a system of co-supervision and provides excellent opportunities for such programmes. The research work shall be an original work characterized either by the discovery of the facts, or by a fresh approach towards the interpretation and application of facts. It shall demonstrate the candidate's capacity for critical examination and sound judgement and shall represent original contribution to the existing knowledge. The degree of Doctor of Philosophy is granted for research work in areas recognized by the academic departments of the University. The degree of Doctor of Philosophy will be awarded in the subject of the department in which the candidate is registered. The rules, regulations and structure for Ph.D. Programme is uploaded in the University website: www.aisectuniversityjharkhand.ac.in.

Sl. No.	Faculty	Subject
1	Agriculture	Agriculture
2	Arts and Humanities	Hindi, History, English, Economics, Library Science, Political Science
3	Commerce and Management	Commerce and Management
4	Science	Chemistry

Eligibility:

- 1 year or 2 Semester PG, after 4 year or 8 Semester UG.
- 2 year or 4 Semester PG after 3 year or 6 Semester UG
- A candidate for the degree of Doctor of Philosophy must, at the time of application, hold Master's degree with at least 55% marks (50% marks in case of SC/ST/PH category candidates) or an equivalent grade of Deemed University or any other University incorporated by any law for the time being in force and recognized by the University.

Admission Procedure:

Admission will be made through Entrance Test & Interview as per Ph.D. regulations of the University based on UGC regulation 2022.

*Those candidate who have been qualified UGC NET, would be exempted from Entrance Exam but required to register and need to appear for Interview for the final selection.

Structure of Entrance Exam:

The entrance exam for admission to Ph. D. programme consists of one theory paper of 100 marks having two sections. The duration of examination will be of 2 hours.

Section I- Contains 25 questions (multiple choices) to assess the candidate's knowledge on Research Methodology. (50 marks)

Section II consisting of 25 questions (multiple choices) to assess the candidates capability of defining certain concepts & knowledge from the relevant subject in which he/she seeks registration as indicated in application form (50 marks).

Fees Structure:

The fee structure of Ph.D. programme will be as decided by Board of Management (BOM) of the University.

Application Procedure:

Application form may be obtained from the Admission office at AISECT University, Hazaribag by Cash or DD also downloaded application form, and the website www.aisectuniversityjharkhand.ac.in can be submitted to Registrar along with a DD of Rs. 2000 /- payable in favour of AISECT University, Hazaribag.

Syllabus for Entrance exam:

The syllabuses for entrance exam are as follows:

Subject : Agriculture

Unit-1. Ancient Agriculture, Principle of Agronomy, Crop Production management, Concept and principles of Agro- meteorology, weed management, seed production of kharif, Rabi and Zaid crops, sowing management, organic farming in methods, production and benefits; and sustainable farming; Fertilizers and manures, Classification, Nutrient Management and soil textures and soil chemistry; soil erosion and measures and control of water harvesting; Water shade management; field practices in controlling of erosion by water and wind.

Unit-II: Introduction of Horticulture; methods of propagation in plants; production technology of fruits and vegetables, Medicinal, spices & Aromatic plants, Landscaping; Principles, post-harvest management; storage and value addition in uses of product and productivity; physiological aspects of training and pruning; Production and management of vegetables, ornamentals crops; aromatic and spices crops.

Unit- III: History of plant protection in India; Diseases cycles to managements of agricultural crops and horticultural crops and their managements; soil and air borne diseases, fungus, bacteria, virus and nematodes; plant quarantine; History and control, rules and regulations; IPM; Classification of Insects, mites and Pests and their management.

Unit- IV: History of mendelian, Inheritance law; cell division, linkages, quantitative and qualitative characters; Gene concepts and gene pools and tissue culture; their molecular mechanisms; History of Plant breeding, mode of pollination; breeding methods or tools of self; cross and often pollinated crops; heterosis; male sterility; methods and mechanism tools; molecular breeding; mutation breeding and polyploidy; Seed quality, maintenance and deterioration of varieties, Seed production techniques for cereals, pulses, fodder, oils and horticultural crops, Seed Acts, 1966, Plant Breeder Right, seed control order; seed processing & seed certification, seed testing and seed storage; seed marketing and distribution; statistical design; RBD, CRD, CRBD, LSD, SPD uses and roles; importance; data analysis.

Unit-V: Extension Education; Rural development programmes; communication; learning and teaching methods, Audio- visual system; livestock management and their animal breeding tools and control of diseases management; Economics; micro-economic and macro-economic; cost of benefit ration, linner programming, seed marketing and distribution chain system.

Unit-VI Research Methodology - Meaning, Definition and Importance of Research, Characteristics of Research, Types of Research, Steps in Research, Selection and Formulation of Research Problem.

Hypotheses - Meaning and Characteristics of Hypotheses, Sources of Hypotheses, Problem in formulating Hypotheses, Types of Hypotheses.

References Books:

1. Introduction to Principles and Plant Pathology and Entomology: R.S. Singh; Batacharya, Yadav & Yadav; Mathure, G. N. Agrios.
2. Fundamental of Plant Breeding: B. D. Singh, Phundan Singh,
3. Genetics: B. D. Singh; Robert W. Allard
4. Seed Technology: R. L. Agrawal
5. Statistics: S.R. Chandel and P.K. Naik
6. Hand book of Horticulture: N. Kumar
7. Fundamental of Agronomy: Chhida singh
8. Fundamental of Soil Science: D. K. Das
9. Research Methodology- Dr. P.K. Naik, Dr. Pushkar Dubey, APH Publishing

Subject : Hindi

1. **हिन्दी भाषा और उसका विकास** – अपभ्रंश और पुरानी हिन्दी का संबंध, काव्य भाषा के रूप में अवधी का उदय और विकास काव्य भाषा के रूप में ब्रज भाषा का उदय और विकास, साहित्यिक हिन्दी के रूप में खड़ी बोली का उदय और विकास, मानक हिन्दी का भाषा वैज्ञानिक विवरण, हिन्दी की बोलियों-वर्गीकरण तथा क्षेत्र, नागरी लिपि का विकास और उसका मानकीकरण। हिन्दी भाषा प्रयोग के विविध रूप- बोली, मानक भाषा, संपर्क भाषा, राज भाषा और राष्ट्र भाषा, संचार माध्यम और हिन्दी।
2. **हिन्दी साहित्य की गद्य विधायें** – हिन्दी उपन्यास: प्रेमचन्द पूर्व उपन्यास, प्रेमचन्द और उनका युग, प्रेमचन्द के परवर्ती प्रमुख उपन्यसकार:-हजारीप्रसाद द्विवेदी, फणी वरनाथ रेणु, श्रीलाल भुक्ल, रांगेय राघव।
क. हिन्दी कहानी: बीसवीं सदी की हिन्दी कहानी और प्रमुख कहानी आंदोलन।
ख. हिन्दी नाटक: हिन्दी नाटक और रंगमंच, विकास के चरण और प्रमुख नाट्यकृतियों: अंधेर नगरी, चंद्रगुप्त, अंधायुग, आधे-अधूरे, आठवाँ सर्ग, हिन्दी एकांकी।
3. **हिन्दी की अन्य गद्य विधायें** – रेखाचित्र, संस्मरण, यात्रा-साहित्य, आत्मकथा, जीवनी और रिपोर्टाज।
4. **काव्यशास्त्र और आलोचना** – भरत मुनि का रस और उसके प्रमुख व्याख्याकार। रस के अवयव। साधारणीकरण। शब्द शक्तियों और ध्वनि का स्वरूप।
5. **शोध विधि** – शोध का अर्थ, परिभाषा और महत्व, शोध की विशेषताएँ, शोध के प्रकार, शोध के चरण, शोध समस्या का चयन और डिजाइन।
परिकल्पनाएँ – परिकल्पनाओं का अर्थ और विशेषताएँ, परिकल्पनाओं के स्रोत, परिकल्पनाएँ बनाने में समस्याएँ, परिकल्पनाओं के प्रकार।

संदर्भ ग्रंथ:-

1. हिन्दी साहित्य का इतिहास – डॉ. नरेन्द्र
2. संत काव्य – परशुराम चतुर्वेदी
3. हिन्दी साहित्य का काव्यकाल – डॉ. हजारी प्रसाद द्विवेदी
4. हिन्दी साहित्य का इतिहास – आचार्य रामचन्द्र शुक्ला
5. हिन्दी साहित्य की भूमिका – डॉ. हजारी प्रसाद द्विवेदी
6. भाषा विज्ञान – डॉ. भोलानाथ तिवारी
7. हिन्दी साहित्य गद्य – डॉ. रामचन्द्र तिवारी
8. Research Methodology- Dr. P.K. Naik, Dr. Pushkar Dubey, APH Publishing

Subject : English

Unit 1. Indian Writing in English Literature : Mulk Raj Anand, Raja Rao, R K Narayan, I Allan Sealy, G V Desani **Indian English Poetry**: Nissim Ezekiel, Agha Shahid Ali, Jayant Mahapatra, Arun Kolatkar, Dilip Chitre **Indian English Novelists**: Salman Rushdie, Amitav Ghosh, Vikram Seth **Writings by the Indian Diaspora**: Bharti Mukherjee, Jhumpa Lahiri

Unit 2. The Age of Enlightenment: Dryden- Key concepts: poetic diction, classical influence, wit and balance Pope- Key technique: the heroic couplet and epigrammatic precision Johnson- Embodied Enlightenment ideals of reason, morality, and literary criticism, **the Graveyard poets**- Pre-Romantic sensibility with focus on death, mortality, and the sublime Themes: melancholia, transience of life, nature, spirituality.

Unit 3. British Literature (Victorian Age) Victorian Novel: Thomas Hardy, Charles Dickens, William Thackeray, the Bronte Sisters; George Eliot, Minor novelists Victorian Prose: Thomas Carlyle, John Ruskin Victorian Poetry: Robert Browning, Lord Tennyson,

Unit 4. American Literature: William Faulkner - Faulkner's narrative experimentation and use of multiple perspectives, Edward Fitzgerald- Narrative style, symbolism (e.g., the green light, the valley of ashes) Ernest Hemingway- Themes: war, masculinity, existentialism, loss, and resilience Black writing - Themes of racial identity, resistance, double consciousness, systemic oppression, and cultural pride Drama - **Tennessee Williams, Arthur Miller, Eugene O'Neill, August Wilson**

Unit 5. Research Methodology in English Literature & Language Studies- Introduction to Literary Research - Definition and scope of literary research, Purpose and significance of research in literature, Types of literary research, Difference between literary appreciation and scholarly research. Tools and Techniques of Research- Primary vs. secondary sources. Presentation and Evaluation of Research- Abstract writing and synopsis, Preparing for seminars and conferences, Visual aids: PowerPoint, handouts, posters, Peer review and responding to critiques, Publication process: selecting journals, writing cover letters, submission guidelines

References:

1. Mishra Vijay: Theorizing the Diasporic Imaginary, Routledge, 2007.
2. Ashcroft, Bill, et al. The Post-Colonial Studies: The Key Concepts. London: Routledge, 1998.
3. Jain, Jasbir (ed). Writers of the Indian Diaspora. Jaipur: Rawat Publishers.
4. Parameshwaran, Uma (ed), Writers of the Diaspora: Culture and Identity. Jaipur: Rawat Publishers
5. Levenson, Michael. A Genealogy of Modernism: A Study of English Literary Doctrine, 1908–1922. Cambridge University Press, 1986.
6. Bradbury, Malcolm. Modernism: 1890–1930. Penguin, 1991.
7. Esslin, Martin. The Theatre of the Absurd. Penguin Books, 1961.
8. Ranjit Kumar. Research Methodology: A Step-by-Step Guide for Beginners

Subject : History

1. Indian History-

Source - Archaeological Sources, Literary sources, Indus Valley Civilization –origin, date, Extent, characteristics, decline, survival and significance, Vedic period-dating the Vedic social and political institutions, Economic condition, Emergence of Jainism and Buddhism, Foundation of the Mauryan Empire-Chandragupta, Asoka and his dhamma, Mauryan administration, Economic, art and Architecture, disintegration of the Mauryan Empire, Imperial Guptas and Regional State of India.

2. Medieval Indian History

Source -Archaeological Sources, Literary sources, Administration, The Sultanate– The Gourdes, The khajjis, The Tughlaqs and the Lodi's Foundation of the Mughal Empire Babar, Humayun, Sure Decline of the mugal Empire etc. The Vijay Nagar and the Brahmanism- Rise Expansion and Disintegration History of Maratha The Maratha Moment the Foundation of Swaraj By Shivaji Socio Religious Moments- Cultural

3. Modern Indian History –

Source - Archaeological Sources, Literary sources, Concerns in Modern Indian Historiography- imperialist nationalist Marxist subaltern Rice of British Power –Rice of European power the Establishment and Expansion of British Domination Evolution of Central and Provincial Structure Under The East India Company 1773-1853, Local Self-Government – Constitutional Development From 1909-1935,Economic and Social Policies ,

4. National Movement and Post Independent-

(1947-1964), Rice of Nationalism, Revolt of 1857, Rehabilitation after Partition, Integration of Indian State – The Kashmir Question, the Making of the Indian Constitution.

5. Research in History –

Scope and value of History, Objectivity and Bias in History, Area of research – Proposed, Sources - Primary/ Secondary in the proposed area in research, Modern Historical Writing in the researcher's area of research

6. Research Methodology - Meaning, Definition and Importance of Research, Characteristics of Research, Types of Research, Steps in Research, Selection and Formulation of Research Problem.

Hypotheses - Meaning and Characteristics of Hypotheses, Sources of Hypotheses, Problem in formulating Hypotheses, Types of Hypotheses.

Reference Books:

1. Sharma, R.S., Aspects of Ancient Indian Political Ideas and Institutions, Manohar, reprint
2. Jha, D.N., Prachin Bharat (in Hindi)
3. Chandra, Satish, Medieval India (Society, the jagirdari crisis and the village), Macmillan
4. Indian History – A.k. Mittal –Shahitya Bhavan Pub.
5. History of 20th century- Sanjeev Jain
6. Indian National Movement- Virkeshwar Prasad
7. History of Maratha- Luniya
8. Research Methodology- Dr. P.K. Naik, Dr. Pushkar Dubey, APH Publishing

Subject : Economics

1. **Economic Systems** - Capitalism, Socialism and mixed economy.
2. **Macro Economics** - National Income Concept and Measurement, Keynesian and Modern Theory of employment.
3. **Consumer behavior** - Law of demand, Elasticity of demand, utility analysis and indifference - curve techniques
4. **Producer's behavior** - Production Function, Laws of Returns, Scale cost curves
5. **Price Theory** - Price determination under different market condition
6. **Distribution** – Pricing of Factors of Production, Marginal Productivity Theory, Modern Theory.
7. **Money & Banking** – Definition & function of Money, Origin & growth of banking in India, Central Banking & an instrument of credit control.
8. **Public finance** - Principles of Public expenditure, objectives and instruments of Budgetary and fiscal policy in a planned developing economy
9. **International trade** - Theory and policy of international trade, determination of exchange rates balance of payment
10. **International Financial institutions** - I. B.R.D. (World Bank) and I.M.F.
11. **Indian Economy** – Structure of the Indian economy, primary, secondary & tertiary, Economic and social infrastructure, Human capital, Health, Education & Housing.
12. **Agricultural development**- Agricultural Policy. Land reforms Green Revolution and its effects
13. **Industrial development** - Industrial Policy, Public and private sectors, Regional distribution of Industries in India. Pricing policies for agricultural and industrial outputs.
14. **Indian Planning** - Objectives and strategies, planned growth and distributive justice eradication of poverty, problems of Indian planning.
15. **Research Methodology** - Meaning, Definition and Importance of Research, Characteristics of Research, Types of Research, Steps in Research, Selection and Formulation of Research Problem.
Hypotheses - Meaning and Characteristics of Hypotheses, Sources of Hypotheses, Problem in formulating Hypotheses, Types of Hypotheses.

Reference Books:

1. Stigler G. (1996) Theory of Price, 4th Edition, Prentice Hall of India, New Delhi.
2. Sen A. (1999) Microeconomics: Theory and Application, Oxford University Press, New Delhi.
3. Kreps David M. (1990), A Course in Microeconomic Theory, Princeton University Press, Princeton.
4. Samuelson, P.A. and W.O. Nordhaus (1998), Economics, 16th Edition, Tata McGraw Hill, New Delhi.
5. Varian H. (2000) Microeconomic Analysis, W.W Norton New York.
6. Michale Perkin (1996) Economics, 3rd Edition, Addison Westley Publishing company, Inc. U.S.A.
7. Koutsoyiannis, A. (1979), Modern Microeconomics, 2nd edition Macmillan Press, London.
8. Macro Economics – JHINGAL M.L
9. Monetary Economics – S.B. Gupta Chand and Co. Delhi.
10. Research Methodology- Dr. P.K. Naik, Dr. Pushkar Dubey, APH Publishing

Subject : Political Science

1. Political Theory & Thought Indian & Western: Comparative Politics and Political Analysis, nature and scope. Approaches to the study of comparative politics: Traditional and modern perspective. Structural Functional, approach and Marxist. Forms Government: Unitary Federal, Parliamentary- Presidential. Organs of Government: Executive, Legislature, judiciary. Party System and Pressure Groups;

2. Indian Government and politics. National Movement, Constitutional Development and the Making of Indian Constitution. Preamble, Fundamental Rights and Duties and Directive Principles. Constitutional Amendments. Structure and Process – I: President, Prime Minister, Council of Minister, Working of the Parliamentary System. Structure and Process – II: Governor, Chief Minister, Council of Ministers, State Legislature. . Judiciary: Supreme Court, high Courts, Judicial review, Judicial Activism Including Public Interest litigation cases, Judicial Relation.

3. Local Government & Politics:

Panchayati Raj Institution: Rural and Urban, their working. Federalism: Theory and Practice in India, emerging trends in center state relation.

4. International Relations; Contending Theories and Approaches to the Study of international Relation; Idealist Realist, System, Game, Communication and Decision Making. Power, Interest and Ideology in International Relation; Elements of Power ; Acquisition, Use and Limitation of Power, Perception, formulation and Promotion of National Interest, making, Role and Relevance of Ideology in International relation. Arms control and Disarmament. Cold War, Non Alignment, End of Cold War, Globalization. North- South Dialogue, South-South Cooperation, WTO, SAARC, ASEAN, OPEC, OAS, United Nation; Aims, Objectives, Structure and Evaluation of the working of UN, Peace of Development, India's Relation with its neighbors, distinguishing features of Indian Foreign policy and Diplomacy

5. Jharkhand Politics: Introducing Jharkhand; Demography & culture of Tribal Population. Role of Ideology in Jharkhand Movement. Socio– economic Determinants of Jharkhand Politics. Emerging Trends in State of Jharkhand.

6. Research in Political Science: Social Research; Meaning & Nature. Scientific Study of Political Science. Different Steps of Social Research, Research Design.

7. Research Methodology - Meaning, Definition and Importance of Research, Characteristics of Research, Types of Research, Steps in Research, Selection and Formulation of Research Problem.

Hypotheses - Meaning and Characteristics of Hypotheses, Sources of Hypotheses, Problem in formulating Hypotheses, Types of Hypotheses.

Reference Books:

1. Politics and administration in changing societies-R.K.ARORA
2. Comparative public administration- R.K.ARORA
3. Bureaucracy Development and change – A.D.PANT AND S.K.GUPTA
4. Sociology Thinkers – Ravindra Nath Mukherji
5. Political behaviors– H.H.HYMAN
6. Theories of international relation – S.BURCHILL
7. Political through the ages – Appadurai Delhi, Khanna publisher
8. Indian Polity – M. Laxmi Kant
9. Jharkhand Politics – Dr. Manish Ranjan, Prabhat Publication.
10. Research Methodology- Dr. P.K. Naik, Dr. Pushkar Dubey, APH Publishing

Subject : Library and Information Science

Unit 1: Knowledge organization and Access

- Classification and Ontology
- Cataloguing and Metadata
- Trends in classification, Classaurus, automatic classification, Web Dewey
- Metadata: Types, Dublin Core
- Ontologies and Folksanonomies: OWL and SKOS

Unit 2: Knowledge Society

- Knowledge Society- Genesis, Characteristics and Implications
- Changing Role of Library and Information Centres in Society
- Information Industry: Generators, Providers and Intermediaries

Unit 3: Library Management and Administration

- Library as a System
- Management functions
- Human Resource Management
- Financial Management
- Performance parameters

Unit 4: Fundamental of Information Communication Technologies

- Library Housekeeping Operations.
- Library Automation
- Digitization process & Digital Library
- Institutional Repositories
- AI in Library

Unit 5: Research Methodology and Metric Studies in LIS

- Overview of Research
- Research Method
- Data Analysis and Interpretation
- Statistical Packages
- Citation Tools
- Metric Studies in LIS
- h-Index, g-Index, i10 Index

Reference Books:

1. Arp, R., Smith, B., & Spear, A. D. (2015). Building ontologies with basic formal ontology. Cambridge: MIT Press. ISBN: 978-0262527811
2. Chan, L. M., & Salaba, A. (2023). Cataloging and classification: An introduction (Fifth edition). Rowman & Littlefield. ISBN: 978-1538132920
3. Gellatly, P. (2019). Management of serials automation: Current technology and strategies for future planning. Routledge. ISBN: 978-0367418250
4. Mittal, R. L. (2007). Library administration: Theory and practice. Ess Ess Publications. ISBN: 978-8170005094
5. Adams, K. A., & McGuire, E. K. (2022). Research methods, statistics, and applications (3rd Ed.). SAGE Publications. ISBN: 978-107181784

Subject : Commerce

1. **Banking & Financial Institutions** : Commercial Banking , Central Banking , NPA , IDBI , IFCI , NABARD, Digital Banking.
2. **Business Statistics** : Types of Sampling , Types of data , Meaning & Types of hypothesis, Correlation & Regression T- test , Z- test , Chi- Square Test , Anova.
3. **Management Accounting** : Break Even Analysis, Ratio Analysis, Fund Flow , Cash Flow.
4. **Business Economics** : Law of Demand , Elasticity of Demand , Perfect Competition , Monopoly, Monopolistic, Indifference Curve.
5. **International Business** : WTO , World Bank , ASIAN, SAARC.
6. **Financial Management** : Operating Leverage , Financial Leverage , Combined Leverage, Dividend Policy.
7. **Research Methodology** - Meaning, Definition and Importance of Research, Characteristics of Research, Types of Research, Steps in Research, Selection and Formulation of Research Problem.
Hypotheses - Meaning and Characteristics of Hypotheses, Sources of Hypotheses, Problem in formulating Hypotheses, Types of Hypotheses.

Reference Books :

1. Hooda, R.P. : Statistics for Business & Economics . Macmillan India, New Delhi.
2. C.R Kothari : Research Methodology & Techniques.
3. I.M Pandey : Principles of Financial Management .
4. P. L Mehta : Principles & Practical Application of Business Economics.
5. R.K Sharma & S.K Gupta : Management Accounting.
6. Charles WL Hill : International Business.
7. D.N Dwivedi : Managerial Economics.
8. S.P Gupta : Statistical Hypothesis Testing.
9. M.L Tandon : Indian Banking Law.
10. Prasanna Chandra : Financial Management.
11. Research Methodology- Dr. P.K. Naik, Dr. Pushkar Dubey, APH Publishing

Subject : Management

Unit-1: Business Analytics-

Role of Business statistics for the research in Business Administration, Use of Open source software for the empirical analysis in Business Administration, Recent trends & advancements in statistical tools for research papers in Business Administration.

Unit-2 financial Management-

Cost Information for Decision making, Corporate Social Responsibility, Capital market Microstructure, Financial Analysis, Leverage, Risk Adjusted Method.

Unit-3: Human Resource Management-

A brief introduction to Human Resource Management, Applications of Human Resource Management in the field of research, Recent Trends in Human Resource Management: Employee Empowerment, Stress Management, Employee Welfare, Talent Management, Discussion on Research Paper Writing.

Unit-4: Marketing Management-

Introduction to Marketing Management as an area of research, Research method in Marketing Management, Innovative Marketing Practices: Affiliates Marketing, Agile Marketing, Viral Marketing, Neuro Marketing, Preparing Research report/paper with field data.

Unit-5: Information Technology-

Brief introduction on Information Technology in Management, Application of Information Technology in Management Science research, Research methods in Information Technology Management, Research paradigms in Information Technology, Grand challenges for Information Technology research, Discussion on development of research paper.

Unit-6: Research Methodology - Meaning, Definition and Importance of Research, Characteristics of Research, Types of Research, Steps in Research, Selection and Formulation of Research Problem.

Hypotheses - Meaning and Characteristics of Hypotheses, Sources of Hypotheses, Problem in formulating Hypotheses, Types of Hypotheses.

Reference Books:

1. Dr Anil Maheshwari, Data Analytics Made Accessible, Publisher: Amazon.com Services LLC.
2. Financial Management, IM Pandey, Vikas Publishing House, New Delhi
3. Gary Desler, Human Resource Management ,PHI
4. Kotler, P. (2015). Marketing Management, Analysis, Planning, Implementations and Control. New Delhi: Pearson, Education.
5. Peter Nortorn"s, "Introduction to Computer", TMH, 2004, ISBN-0-07-05-3 142-0 N. Chetan Shrivastava "Fundamentals of Information Technology", Kalyani publishers, 2002,
6. Research Methodology- Dr. P.K. Naik, Dr. Pushkar Dubey, APH Publishing

Subject: Chemistry

- 1. Introduction techniques in chemistry:** UV- Visible spectroscopy, Infrared Spectroscopy (IR) spectroscopy, nuclear magnetic resonance (NMR)- ^1H , ^{13}C - NMR, Mass Spectroscopy, Atomic absorption spectroscopy, chromatography techniques (GC, HPLC, TLC and paper chromatography), cyclic voltammetry, Thermal analysis techniques (TGA, DTA, DSC) , TEM, SEM, XRD.
- 2. Polymer Chemistry:** Introduction to polymers, classification, polymerization techniques, physical property of polymers, polymer characterization, synthesis and use of some polymer including, PVC, polystyrene, nylon-6, 6, Polycarbonate, PMMA.
- 3. Inorganic Chemistry:** Organometallic chemistry, Coordination chemistry, Bio- Inorganic Chemistry.
- 4. Organic Chemistry:** Stereo Chemistry, Asymmetric synthesis, Spectroscopic analysis of organic compounds, Oxidation and reduction of organic compounds.
- 5. Physical Chemistry:** Thermodynamic, advance quantum mechanics, electrochemistry, chemical kinetics, spectroscopy (rotational spectra, Ramman spectroscopy, Mossbauer spectra), statistical thermodynamics, Photo Chemistry.
- 6. Research Methodology** - Meaning, Definition and Importance of Research, Characteristics of Research, Types of Research, Steps in Research, Selection and Formulation of Research Problem.
Hypotheses - Meaning and Characteristics of Hypotheses, Sources of Hypotheses, Problem in formulating Hypotheses, Types of Hypotheses.

Reference books:

1. Physical Chemistry- P. W. Atkins & Julio de Paula
2. Inorganic Chemistry- J. E. Huheey, Ellen A. Keiter & Richard L. Keiter
3. Basic Inorganic Chemistry- F. A. Cotton & G. Wilkinson
4. Principles of Inorganic Chemistry- Puri sharma kalia
5. Principles of Physical Chemistry- Puri Sharma Pathania
6. Advanced Organic Chemistry- by jagdamba singh
7. Modern methods organic chemistry - William Carruthers and Iain Coldham
8. Research Methodology- Dr. P.K. Naik, Dr. Pushkar Dubey, APH Publishing