

INFORMATION BROCHURE

# RESEARCH PROGRAMME DOCTOR OF PHILOSOPHY (Ph.D.)



Recognized by : UGC

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

**AISECT UNIVERSITY**

**Matwari Chowk, in front of Gandhi Maidan, Hazaribag (JHARKHAND)-825301**

**[www.aisectuniversityjharkhand.ac.in](http://www.aisectuniversityjharkhand.ac.in), Ph: 8252299990, 8404884433**

## **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. The outstanding contribution of AISECT has been lauded by many national and international organizations.

AISECT University was established in Hazaribag district of Jharkhand in 2016 as the district's first Private University and the first Skill University of the State. The University offers undergraduate and postgraduate programs through 8 major Faculties, namely Agriculture, Science, Arts & Humanities, Commerce & Management, Computer Science & Information Technology, Performing Arts, Journalism & Mass Communication, Yoga & Naturopathy. AISECT University has been launched with a vision to transform its students into competent, inspired and responsible professionals. The university aims to deliver not only world-class education in state-of-the-art facilities and infrastructure, but also an environment for holistic learning that will help groom students into confident and smart individuals.

## **Vision & Mission**

AISECT University has been established as an education platform that believes in conveying world-class education that is based on research and practical training to the students. This facilitates them to install necessary skills and information needed to create their identity within the complex and ever dynamical skilled world.

- To create a research driven environment.
- To ignite inventive approach and offer proper leadership to prepare industry ready professionals.
- To strengthen ties with prominent academic and corporate bodies across the world.
- To be regarded as an avant-grade institution.
- To contribute towards the social and economic development of the country.

## **Reasons to choose 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.

### Programme Offered by the University:

S.no.	Faculty	Department	Courses
1.	Agriculture	Department of Agriculture	B.sc (Ag), M.sc(Ag)
2.	Science	Dept. of Physics	B.Sc (Hons), M.Sc
		Dept. of Chemistry	B.Sc (Hons), M.Sc
		Dept. of Mathematics	B.Sc (Hons), M.Sc
		Dept. of Botany	B.Sc (Hons)
		Dept. of Zoology	B.Sc (Hons)
3.	Arts & Humanities	Dept. of Social Science	B.A, B.lib., MA, (Education, History, Economics, Political Science, Sociology, Psychology, Geography, Philosophy), MSW, M.Lib
		Dept. of Humanities	M.A – Hindi, English
4.	Commerce & Management	Dept. of Commerce	B.Com (Hons), M.Com
		Dept. of Management	BBA, MBA, MBA (Executive)
5.	Computer Science & Information Technology	Dept. of Computer Science	BCA, DCA, PGDCA
		Dept. of Information Technology	B.Sc (IT), M.Sc (IT)
6.	Performing Arts	Dept. of Performing Arts	BPA, MPA
		Dept. of Fine Arts	BFA, MFA
7.	Journalism Mass Communication	Dept. of Journalism Mass, Communication	BJMC , MJMC
8.	Yoga and Naturopathy	Dept. of Yoga & Naturopathy	PGDYN, MA (Yoga)

### 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:

AISECT University Hazaribag offers Ph.D. degree programme in various disciplines as per guidelines given by UGC regulation 2016 and Ordinance No. 17 of AISECT University Hazaribag. The award of 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](http://www.aisectuniversityjharkhand.ac.in).

S.No.	Faculty	Subjects
1.	Computer Science & Information Technology	Computer Science
2.	Commerce & Management	Commerce, Management
3.	Arts & Humanities	Hindi, Geography, History, Political Science, Education, Economics, Philosophy
4.	Agriculture	Agriculture

### Eligibility:

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 2016.

**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 30 questions (multiple choices) to assess the candidate's general awareness, verbal ability, quantitative ability, data interpretation, analysis, synthesis, reasoning, basics of computing and research aptitude (30 marks)

Section II consisting of 35 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(70 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 of Rs. 1500/-, also downloaded application form, from the website [www.aisectuniversityjharkhand .ac.in](http://www.aisectuniversityjharkhand.ac.in) can be submitted to Registrar along with a DD of Rs. 1500/- payable at Hazaribag **in favour of AISECT University.**

**Syllabus for Entrance exam:**

The syllabuses for entrance exam are as follows:

# AISECT University, Hazaribag (Jharkhand)

## Subject: Computer Science

- 1. Object Oriented Programming and Data Structure:** Object Oriented Programming Concepts: Class, Object, Overloading, Functions parameter passing, Constructors and destructors. Inheritance, Templates, Exception Handling, Data, Information, Definition of data structure. Arrays, stacks, queues, linked lists, trees, priority queues and heaps. File Structures: Fields, records and files. Sequential, direct, index sequential, Hashing, B trees and B +trees.
- 2. Computer Arithmetic:** Propositional (Boolean) Logic, Predicate Logic, Well-formed-formulae (WFF), I Satisfiability and Tautology. Logic Families: TTL, RTL and C-MOS gates. Boolean algebra and Minimization of Boolean functions. Flip-flops-types, race condition and comparison. Design of combinational and sequential circuits. Representation of numbers: Octal, Hexa. Decimal, and Binary. 2's complement and 1's complement arithmetic. Floating point representation.
- 3. Relational Database Management System:** E-R diagrams and their transformation to relational design, normalization-1NF, 2NF, 3NF, BCNF and 4NF, Limitations of 4NF and BCNF. SQL : Data Definition Language (DDL), Data Manipulation Language (DML), Data Control Language(DCL) commands, Database objects like-Views, indexes, sequences, synonyms, data dictionary.

**Software Engineering:** System Development Life Cycle (SDLC): Steps, Water fall model. Prototypes, Spiral model. Software Metrics: Software Project Management. Software Design, Coding and Testing.

- 4. Computer Networks:** Network fundamentals: Local Area Networks (LAN), Metropolitan Area Networks (MAN), Wide Area Networks (WAN), Wireless Networks, Inter Networks. Reference Models: The OSI Model, TCP/IP model, Internetworking: Switch/Hub, Bridge, Router, Gateways, Concatenated virtual circuits. Tunneling, Fragmentation Firewalls, Routing: Virtual circuits and datagram. Routing algorithms, Congestion control, Network Security: Cryptography-public key, secret key, Domain Name System (DNS)-Electronic Mail and Worldwide Web (WWW), DNS, Name servers, E-mail architecture and Serves.
- 5. Operating Systems:** Main functions of operating systems, Multiprogramming, multi-processing and multitasking, Memory Management: Virtual memory, paging, fragmentation, Scheduling: CPU scheduling, I/O scheduling, Banker's algorithm for dead-lock handling.

**Data Warehousing and Mining:** Data warehouse, Architecture of a data warehouse methodology, Data modeling strategy, OLAP, OLTP, Architectural component of Data warehousing. Data Mining: Extracting models data mining techniques, classification, regression, clustering, summarization.

### Reference Books:

1. Computer System Architecture by M. Morris Mano, Pearson Education India Publication.
2. Database System Concept by A. Silberschatz, H. F. Korth and S. Sudarshan, McGraw Hill International Edition.
3. Operating System Concepts by A. Silberschatz, Peter B. Galvin and Garge Gange, Wiley Publication.
4. Software Engineering by Roger S. Pressman , McGraw Hill International Edition.
5. The Complete R, C++ by Herbert Schildt, McGraw Hill International Edition.
6. Data Structure by Seymour Lipschutz, Tata McGraw Hill Edition.
7. Data Mining Concept and Techniques, by J. Han,M. Kamber and J. Pei, Morgan Kaufmann Publication

# AISECT University- Hazaribag (Jharkhand)

## Subject: Commerce

- 1. Business Environment:** Meaning and Elements of Business Environment, Economic Environment, Economic Policies, Economic Planning. Competition policy, Consumer protection, Environment protection Liberalization, Privatization and globalization, Second generation reforms, Industrial policy and implementation. Industrial growth and structural changes.
- 2. Financial & Management Accounting: Basic** Accounting concepts, Capital & Revenue, Financial statements. Partnership Accounts: Admission, Retirement, Death, Dissolution and cash Distribution. Advanced Company Accounts: Issue, Forfeiture, Purchase of Business, Liquidation, Valuation of shares, Amalgamation, Absorption and Reconstruction, Holding company accounts. Cost Management Accounting: Ratio Analysis, Funds Flow Analysis , Cash Flow Analysis, Marginal costing & Break-even analysis, Standard costing, Budgetary control, Costing for decision making, Responsibility accounting.
- 3. Business Economics:**Nature & uses of Business Economics, Concept of Profit & Wealth maximization. Demand Analysis & Elasticity of Demand, Curve Analysis Law Utility Analysis & Indifference Curve analysis, Laws of Returns and Law of Variable proportions.
- 4. Business Statistics & Data Processing:**Data types , Data collection and analysis, Sampling, need , errors, & method of sampling, Normal Distribution , Hypothesis testing, Analysis and Interpretation of data. Correlation and Regression , small sample tests-t-test, F-test and chi-square test
- 5. Business Management:**Concept of management Planning : Objectives, Strategies, Planning process, Decision-making.Staffing : Leading , Motivation, Leadership, Committees, Communication. Controlling: Corporate Governance and Business Ethics.
- 6. Marketing Management: The** evolution of marketing concepts, Concepts of Marketing, Marketing mix, Marketing environment, Product decision, Pricing decision, Distribution decision.
- 7. Financial Management: Capital** Structure, Financial & Operating leverage Cost of capital, Capital budgeting, working capital management. Dividend Policy.
- 8. Human Resources Management:** Concepts, Role and Functions of Human Resource management, Human Resource planning, Recruitment & Selection. Training & Development, Succession planning.Compensation : Wage & Salary Administration
- 9. Banking & Financial Institutions:** Importance of Banking to Business, Types of Banks & Their functions Development Banking: IDBI, IFCI, SFCs, UTI, SIDBI.
- 10. International Business:**World Trade Organisation : Its function & policies.

### Reference Books:

1. Chisnall, Peter M: The Essonce of Marketing Research Prentice Hall, New Delhi.
2. Davis, J.J.: Advertising Research, Prentice Hall, New Delhi.
3. Hooda, R.P.: Statistics for Business and Economics. Macmillan India, New Delhi.
4. Adhikary K: Conomic Environment of Business, Sultan Chand & Sons. New Delhi.
5. Ahluwalia. I. J: Industrial Growth in India, Oxford University Press. New Delhi.
6. Aswathappa K: Legal Environment of Business, Himalaya Publication New Delhi.
7. Ghose Biswanath: Economic Environment of Business, Vikas Publication. New Delhi.
8. Agrawal, K.N. Deeksha Agrawal: Business on the Net: What's & How's of E-Commerce MacMillan. New Delhi.
9. Agrawal, K.N. Deeksha Agrawal: Business on the Net: bridge to the Online Storeform: MacMillan. New Delhi.
10. Diwan Prag & Sunil Sharma: Electronic Commerce: A Manager's guide toE-Business, Vanity Books International, Delhi.

# AISECT University- Hazaribag (Jharkhand)

## Subject: Management

- 1. Management Process & Organizational Behavior-** Overview: Functions and Principles of management; Management Thought and Concepts; Management Decision Making Processes and Types. Overview of Organizational Behaviour; Understanding and managing Individual Behavior-personality, Perception, Values, Attitudes, Learning and Motivation; Group Dynamics and Team Work. Leadership; Overview of Organizational Development: Organizational structure; Organizational design; OD Interventions & Change Management.
- 2. Managerial Economics-** Overview of Micro-Economics : Basic Concepts of Demand and Supply; Demand Analysis; Production Function; Cost-Output Relations; market Structures; Pricing theories; Overview of macro-Economics; National Income Concepts; Budgeting.
- 3. Quantitative Techniques** Overview of Probability: Types of Probability distributions (e.g. Binomial, Poisson, Normal and Exponential). Co-relation & Regression Analysis; Overview of Sampling: Sampling distributions; Tests of Hypothesis; Large and small samples. Univariate and Bivariate Data Analysis: t-test, z-test, Chi-square tests; ANOVA.
- 4. Strategic Management-** Overview of Strategic Management: Concept of Corporate Strategy; BCG Model; GE-9 Cell Model ; Value Chain Analysis; SWOT & TOWS Analysis; Porter's Generic Strategies; Competitor Analysis. Overview of Strategy Formulation and Implementation at Corporate and Business level. Strategic Control.
- 5. Ethics in Business** Overview of Ethical issues in Business: Value Based Organizations; Ethical Issues on Individual in Organizations; Gender Issues; Ecological Consciousness; Environmental Ethics; Social Responsibilities of Business; Corporate Governance and Ethics; Benefits of Corporate Social Responsibility.
- 6. Human Resource management** Overview of HRM: Concepts and Perspectives in HRM; HRM in Changing Environment, Overview of HR Planning: Objectives Process and Techniques; Job Analysis; Recruitment and Selection, Induction; Training and Development; Performance & Potential Appraisal, Overview of Industrial Relations: Wage Policy and Determination; Trade Unions; Dispute Resolution and Grievance Management; Labour Welfare .Overview of e- HRM.
- 7. Finance-** Overview of Financial Accounting; Analysis of Balance Sheet Statement, Overview of Cost Accounting: Costing Methods and Techniques, Overview of Financial Management: Fund Flow Analysis; Management of Working Capital, Overview of Capital Budgeting: Capital Budgeting Decisions; Capital Structure and Cost of Capital. Overview of Dividend Policy: Determinants; Long-term and Short-term Financing Instruments; Mergers and Acquisitions.
- 8. Marketing Management:** Overview of Marketing: Marketing Mix, Market Segmentation, Targeting and Positioning; Overview of Product Management; Product Mix Decisions; Product Life Cycle, New Product Development, Branding; Pricing Methods and Strategies. Overview of Promotional Management: Promotion Mix; Advertising; Personal selling; Supply Chain Management; Viral & Niche Marketing; Customer Relation management. Overview of e-Marketing: Uses of Internet as Marketing Medium; Issues in Branding, Market Development, advertising and Retailing on Internet.
- 9. Production Management:** Overview of Production management: Demand Forecasting for Operations; Production Scheduling; Work Measurement; time and Motion Study; Statistical Quality Control; Facility Location; Layout Planning. Overview of Operations Research: Linear programming; Transportation model; Inventory control; Queuing theory; Decision theory; PERT/CPM.
- 10. Information System-** Overview of MIS: Application of Information Systems in management; MIS and Decision Making; System Analysis and Design. Overview of Database Management System; Overview of E-Commerce:

### Reference Books:

1. Stoner and Freeman, Management, Prentice Hall, N. Delhi.
2. Adam, E E & Ebert, RJ. Production & Operation Management, New Delhi , PHI.
3. Amrine Harold T. etc. Manufacturing Organization and management. Englewood Cliffs, New Jersey, PHI Inc.
4. Baker, Michael J., Marketing : An Introductory Text, McMillan Press Ltd., 1996.
5. Czinkota, Michael R., Massaki, Kotabe and David Mercer B., Marketing Management :Text and Cases,Blackwell Publishers, Massachusetts, 1997.
6. Hampton , john . Financial Decision Making. Englewood Cliffs, New Jersey, Prentice Hall Inc.
7. Van Baumol, W.J. Economic Theory and Operations Analysis, New Delhi, Prentice Hall Inc.
8. *Richard I.Levin and David S.Rubin, Statistics for Management (Seventh Edition), Prentice Hall of India, New Delhi.*
9. Gupta, S. P. and Gupta, M.P, Business Statistics, Sultan Chand and Sons, New Delhi, 1997.
10. A A Thompson Jr., A J Strickland III, J E Gamble, Crafting & Executing Strategy – The Quest for Competitive Advantage, Tata McGraw Hill, 4th ed., 2005.
11. Ranjan Das, Crafting the Strategy: Concepts and Cases in Strategic Management, Tata McGraw Hill, 2004.
12. Laura P. Hartman & Joe DesJardins, *Business Ethics: Business Ethics and values, Francis Cherunilum*



# AISECT University, Hazaribag (Jharkhand)

## 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 बोलियाँ-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 का इतिहास** – हिन्दी साहित्य का इतिहास, दर्शन, हिन्दी साहित्य के इतिहास लेखन की पद्धतियाँ। आदिकाल, मध्यकाल, हिन्दी संत काव्य, हिन्दी कृष्ण काव्य, हिन्दी राम काव्य, रीति काल, आधुनिक काल, द्विवेदीयुग, छायावाद, प्रगतिवाद, प्रयोगवाद।

3. **हिन्दी साहित्य की गद्य विधायें** – हिन्दी उपन्यास: प्रेमचन्द पूर्व उपन्यास, प्रेमचन्द और उनका युग, प्रेमचन्द के परवर्ती प्रमुख उपन्यासकार:-हजारीप्रसाद द्विवेदी, फणी वरनाथ रेणु, श्रीलाल भुक्ल, रांगेय राघव।

**हिन्दी कहानी:** बीसवीं सदी की हिन्दी कहानी और प्रमुख कहानी आंदोलन।

**हिन्दी नाटक:** हिन्दी नाटक और रंगमंच, विकास के चरण और प्रमुख नाट्यकृतियाँ: अंधेर नगरी, चंद्रगुप्त, अंधायुग, आधे-अधूरे, आठवाँ सर्ग, हिन्दी एकांकी।

**हिन्दी निबंध:** हिन्दी निबंध के प्रकार और प्रमुख निबंधकार- रामचंद्र भुक्ल, हजारीप्रसाद द्विवेदी, कुबेरनाथ राय, विद्यानिवास मिश्र, हरिशंकर परसाई।

**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 शक्तियाँ और ध्वनि का स्वरूप।

अलंकार – यमक, भ्रम, वक्रोक्ति, उपमा, रूपक, उत्प्रेक्षा, संदेह, भ्रांतिमान, अतिशयोक्ति, अन्योक्ति, समासोक्ति, अत्युक्ति, विशषोशोक्ति, दृष्टांत, उदाहरण, प्रतिवस्तूपमा, निदर्शना, अर्थान्तरन्यास, विभावना, असंगति तथा विरोधाभास।

5. **भाषा विज्ञान** :- भाषा परिवर्तन के कारण, ध्वनि परिवर्तन के कारण व दिशाएं, अर्थ परिवर्तन के कारण व दिशाएं, हिन्दी भाषा का विकास। देवनागरी लिपि की विशेषताएँ, हिन्दी शब्द समूह।

**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 की भूमिका – डॉ. हजारी प्रसाद द्विवेदी

# **AISECT University, Hazaribag (Jharkhand)**

## **Subject: Geography**

1. **Geomorphology:** Origin of the Earth – Theories regarding origin of the earth. Fundamental concepts, Endogenetic and Exogenetic forces; Denudation and weathering, Geosynclines, Continental Drift and plate tectonics, Concept of geomorphic cycle, Landforms associated with fluvial, glacial, arid, coastal and karst cycles.
2. **Economic Geography:** Location of economic activities and spatial organization of economics; classification of economics; sector of economy, primary, secondary, tertiary and quaternary; Natural resources; Renewable and non-renewable; conservation of resources; Theory of industrial location (Theory of agricultural location (von-Thunen); Major Industries of India, Iron & Steel and cotton textiles.
3. **Regional Planning & Development:** Regional Hierarchy; Type of regions; Regional planning in India- NCR region and planned city Chandigarh.
4. **History of Geographical Thoughts:** General character of Geographic knowledge during the ancient period and medieval period, Foundations of Modern Period.
5. **Climatology & Oceanography:** Composition and structure of the atmosphere, Heat budget of the earth, Distribution of temperature, Atmospheric pressure and general circulation of winds. Ocean deposits, Coral reefs, Temperature and salinity of the oceans, Density of sea water, Tides and ocean currents.
6. **Population & Settlement Geography:** Patterns of world distribution, Growth and density of population; Demographic transition theory, population resource regions.
7. **Geography of India:** Physiographic divisions, climate: its regional variations, vegetation types and vegetation regions; Major soil types, Irrigation and agriculture; Population distribution and growth; Settlement patterns; Mineral and power resources, major industries and industrial regions.

### **Reference Books:**

1. Climatology & Oceanography: D.S. Lal
2. Geomorphology: Sabindar Singh
3. Geography of India: Sabindar Singh
4. Economic Geography: Suresh Chandra Bansal

# **AISECT University, Hazaribag (Jharkhand)**

## **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 Gourids, The khaljis, The Tughlaqs and the Lodi's Foundation of the Mughal Empire Babar, Humayu, 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 Rise of British Power –Rise 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), Rise 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

### **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 20<sup>th</sup> century- Sanjeev Jain
6. Indian National Movement- Virkeshwar Prasad
7. History of Maratha- Luniya

# **AISECT University, Hazaribag (Jharkhand)**

## **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, Chef Minister, Council of Ministers, State Legislature. . Judiciary: Supreme Corte, 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 Relational;** 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 ; Acquit ion, 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, Nan 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 Reaserch; Meaning & Nature. Scientific Study of Political Science. Different Staps of Social Research, Research Design.

### **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 – RavindraNath Mukharji
5. Political behaviors– H.H.HYMAN
6. Theories of international relation – S.BURCHILL
7. Political through the ages – Appadorai delhi, Khanna publisher
8. Indian Polity – M.Laxmikant
9. Jharkhand Politics – Dr. Manish Ranjan, Prabhat Publication.

# **AISECT University, Hazaribag (Jharkhand)**

## **Subject: Education**

- 1. Philosophical & sociological foundation of Education.:** Relationship of education & philosophy., Western schools of philosophy- Idealism, Naturalism, Pragmatism., Contributions of John Dewey, Vivekananda, Tagore & M.K. Gandhi to educational fields., Relationship of education & Sociology, Sociology of Education & Educational sociology. Meaning and Factors influencing Social Change.
- 2. Psychological Foundation of Education. :** Educational psychology- concept, nature & scope. Meaning & Factors influencing Growth & Development. Theories of Learning- Pavlov's classical, Skinner's operant conditioning, learning by Insight, Lewin's Field Theory. Learning & Motivation. Intelligence- it's meaning, theories & measurement. Personality- Type & trait theories, Measurement of personality.
- 3. Methodology of Educational Research. :** Meaning, needs & scope of educational research. Fundamental, Applied & Action Research. Criteria & Sources for identifying the Research problem. Hypothesis- Meaning & types. Sampling- concept of population & sample, various methods of sampling. Tools & Techniques- Observation, Interview, Questionnaire. Inferential Statistics – Mean, Median, Mode, SD, 't' test, one way ANOVA, Chi-square.

### **Reference Books:**

1. Swroop & saxena - Educational philosophy.
2. Ramshakal Pandey - Educational philosophy
3. S.S.Chauhan - Advance Educational Psychology.
4. S.P.Gupta - Educational Psychology.
5. Lokesh Koul - Research Methodology.
6. C.R.Kothari - Research Methodology.

# AISECT University, Hazaribag (Jharkhand)

## Subject: Economics

1. **Economic Systems** - Capitalism, Socialism and mixed economy.
2. **Macro Economics** - National Income Concept and Measurement, keynessian and Modern Theory of employment.
3. **Consumer behaviour** - Law of demand, Elasticity of demand, utility analysis and indifference - curve techniques
4. **Producer's behaviour** - Production Function, Laws of Returns, Scale cost curves
5. **Price Theory** - Price determination under different maker condition
6. **Distribution** – Pricing of Factors of Production, Marginal Productivity Theory, Modern Theory.
7. **Money & Banking** – Defintion A function of Money, Origin A growth of banking in India, Central Banking An instrument of credit control.
8. **Public finance** - Principles of Public expenditure, objective 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.

### 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. Verian H. (2000) Microeconomic Analysis, W.W Norton New Yark.
6. Michale Perkin (1996) Economics, 3rd Edition, Addison Westey 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.

# **AISECT University, Hazaribag (Jharkhand)**

## **Subject: Philosophy**

### **1. Indian Ethics & Western Ethics**

Law of Karma and Purushartha , Rta and Rna, Emotivism and Prescriptivism, Ethical Cognitivism and Non-cognitivism.

### **2. Indian Logic & Western Logic**

Anumana Pramana: Nature and Kinds, Hetvabhasa: Nature and Kinds, Truth and Validity, Truth-functions and Propositional Logic.

### **3. Indian Epistemology & Western Epistemology**

Prama and Aprama., Pramana: Nature, Pratyaksa, Anumana, Sabda & Upamana. Nature and Definition of Knowledge, Belief, Knowledge and Scepticism.

### **4. Indian & Western Metaphysics**

Prameya and Padartha , Appearance and Reality, Appearance and Reality, Space and Time.

### **5. Modern Indian Thought**

Swami Vivekananda: Practical Vedanta, M. K. Gandhi: Truth and Non-violence.

### **6. Analytic Philosophy**

Moore: Defence of Common Sense, Wittgenstein: Picture Theory & Language-game.

### **7. Research Methodology**

Deductive and Inductive methods. , Analytical and Synthetic methods, Pure and Applied Research in Philosophy

### **Reference Books:**

1. Research Methodology: A.L.Koli
2. Neeti shaastr: R.K.jain, Ethics Integrity and Aptitude
3. Nitishaastr kee rooparekha bhaaratyeey even paschatya : Ashok kumar verma,
4. Western Ethics: RebertL.Arrington
5. Bhartya tarkashaastr: N.Ptiwari
6. A History of Indian logic: satish Chandra Vidyabhusan
7. Bharatiya darashan: Dr. Radha kisnan
8. Western Philosophy: jagadish Chandra mishra.
9. Indian political thought: Urmila Sharma and S.k Sharma.

# AISECT University- Hazaribag (Jharkhand)

## Subject:- Agriculture

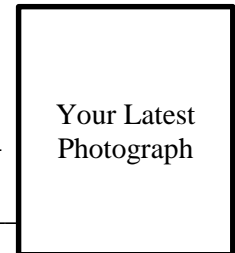
- 1. General Agriculture:** History of agriculture, Art and Science of Agriculture, Agro-climatic zones, AICRP(s), National Research Centres, Agricultural universities & institutes. **Agronomy:** Principle of Agronomy, Tillage, Agro-meteorology, climate, Weed management, Field crops (Kharif), Field crops (Rabi), Irrigation management, crop management. **Soil Science:** Fertilizers & Manures- Classification & properties, Nutrient management, Mineral nutrition, Soil chemistry- pH, EC, CEC, soil microbiology, soil colour, soil temperature, soil texture, soil structure, soil water- matric potential, osmotic potential, types of soil water, soil air.
- 2. Soil & Water conservation engineering:** Soil erosion- water & wind, Measures to check soil erosion, Rain water harvesting, Watersheds- meaning & types, Quantitative soil loss estimation, universal soil loss equation and its subsequent modifications. In-situ measurement of soil loss, Field practices in controlling erosion by water and wind. **Horticulture:** Branches of horticulture, Methods of propagation in plants, Production technology of fruits & vegetables, cut flowers, medicinal, spices & aromatic plants, Landscaping, Principles of landscaping, Post-harvest management of horticultural produce- storage structures, dryers, packaging materials; Growth and development of horticultural and plantation crop species. Physiological aspects of pruning and dwarfing, Growth measurements, Water relations of tree species, Sexual and asexual propagation, Rootstock and scion interactions. Physiology of flowering in perennial species.
- 3. Livestock management:** Breeds of cattle, buffalo, goat, sheep and their characteristics, Breeds of poultry & their characteristics, Diseases of livestock & poultry- causes & control, Vaccination schedule in livestock & poultry **General Genetics and Plant Breeding** Mendelian inheritance. Cell structure and division, Linkage, its detection and estimation. Epistasis. Gene concept, allelism and fine structure of gene. Gene regulation in prokaryotes and eukaryotes. Nuclear and cytoplasmic genome organization. Spontaneous and induced mutations and their molecular mechanisms, Plant Introduction, Plant breeding, Objective, Aims, Breeding Techniques and various method of self and cross pollinated crops, plant reproduction, mode of pollination, mutation breeding, self-incompatibility, polyploidy.
- 4. Research Ethics and Research Methodology:** Need of ethics, sector of research ethics, components of research ethics, Patent, Copyright etc., research integrity, welfare of animals in agricultural research, standards and problems in research ethics, National Agricultural Research stations (NARS), Experimental Design, Utilization of Various computational design, Sampling used of design, research problem, Hypothesis, factorial design.
- 5. Agricultural Extension:** Rural Development Programmes- CDP, TRYSEM, IADP etc., Communication- methods of communication, Learning & Teaching processes, Panchayati Raj institutions, Co-operatives **Seed Technology:** Seed, characteristics of quality seed, Types of seed- orthodox, recalcitrant with examples, Seed viability & vigour- meaning & tests, Seed germination, Factors affecting seed viability & germination, Breeder, Foundation & Certified seeds, Isolation distance of various self & cross pollinated crops, Seed processing, seed cleaning, seed grading, seed treatment, molecular seed technology, seed certification, seed storage, seed Act., UPOV, ISTA. **Agriculture entomology:** Classes and orders of insect pests- Hemiptera, Coleoptera, Lepidoptera etc, Major insect pests of field crops, Major insect pests of horticultural crops ( fruits & vegetables), Nature of damage and control, classification of insecticides with examples **Agricultural pathology:** History of plant pathology in India, Diseases of field crops, Diseases of horticultural crops ( fruits, vegetables, flowers & spices), Symptoms, Causal organism & control of diseases, Disease cycles, Soil & air borne pathogens with examples.

### References books:

1. Introduction to Principles of Plant Pathology & entomology - R.S. Singh & Mathur
2. Fundamentals of Agriculture- Arun Katyan
3. Principles of Plant Breeding- Robert W. Allard & B. D. Singh; P. Singh
4. Introduction to Horticulture- N. Kumar
5. Handbook of Post-Harvest Technology- Amalendu Chakravorty
6. Genetic Engineering- P. S. Verma
7. Research Methodology- R. S. Kothari,
8. Seed Technology- R. L. Agrawal
9. Statistics: Chandel.



**Ph.D. PROGRAMME ENTRANCE  
 EXAMINATION FORM**



1. Applied for Ph.D. in : \_\_\_\_\_
2. Name : \_\_\_\_\_
3. Name of Father/Husband : \_\_\_\_\_
4. Date of Birth : \_\_\_\_\_
5. Address for : \_\_\_\_\_  
 Communication \_\_\_\_\_
6. Contact Nos. : 1. \_\_\_\_\_ 2. \_\_\_\_\_
7. Educational Qualification:

	Subject	Year of passing	Percentage	Division	University
Graduation					
P.G.					

(Candidate is required to attach the self-attested copies of UG & PG mark sheets.)

8. Fees: Amount in cash: \_\_\_\_\_ Receipt No. : \_\_\_\_\_  
 DD No. : \_\_\_\_\_ DD Date : \_\_\_\_\_  
 Amount : \_\_\_\_\_ Bank : \_\_\_\_\_
9. Category: ST  SC  OBC  PH

I do hereby declare that all the information provided by me on this form are true to the best of my knowledge and belief. I have gone through all the norms and rules of admission and undertake to abide by them.

Date:

Signature