



BON SECOURS COLLEGE FOR WOMEN **(Autonomous)**

Accredited with A++ Grade by NAAC in Cycle II
Affiliated to Bharathidasan University, Tiruchirappalli
UGC Recognized 2(f) and 12(B) Institution
VILAR BYPASS, THANJAVUR – 613 006, TAMIL NADU

DEPARTMENT OF HISTORY

SEMESTER-I

24UHI501: HISTORY OF ANCIENT INDIA

Contact hours/week: 05

Internal Marks: 25

Credit: 04

External Marks: 75

Course outcomes: At the end of the course the student will be able to

CO 1	Knowledge about Harappan art, architecture, writing system, and social organization and Exploration of the archaeological evidence for early human habitation and cultural development in the Indian subcontinent.
CO2	Analysis of the political fragmentation and regional kingdoms that emerged after the decline of the Mauryan Empire.
CO3	Understand the political fragmentation and regional kingdoms that emerged after the decline of the Mauryan Empire. Study of the Sunga, Satavahana, and Kushan dynasties and their contributions to art, religion, and trade.
CO4	Analysis of the rise and golden age of the Gupta Empire under Chandragupta I, Samudragupta, and Chandragupta II.
CO5	Understand the emergence of regional kingdoms and the transition to the early medieval period.

SYLLABUS

UNIT-I

Physical Features of Indian –Sources of Ancient Indian - Elements Pre History: – Paleolithic, Mesolithic and Neolithic Ages - Indus valley Civilization –Vedic Age: Early Vedic Age– Later Vedic Age: Iron Age Culture in India

UNIT-II

Jainism and Buddhism: social, Economic, Religious and Political Dimensions– Mahajanapadas Republics and Kingdoms: Rise of Territorial States.– Persian (Iranian) Greek and Invasions – The Mauryan Empire Administration and Economy

UNIT-III

Sangam Age : Chola,Chera and Pandya Kingdoms Literature,Society, and Megalithic Culture –Political Development North India in Post - Mauryan Times.-ShungasSakas and IndoBactrain Rulers- The Satavahanas – The Kushanas: Kanishka: The Gandhara and Mathura School of Art.

UNIT-IV

Gupta Rulers:Golden Age of Gupta Administration, Art and Architecture, - VardhanasDynasit:Harsh –Development in South :Administration,Temples, Art and Architecture,-Bhakti Movement-Chalukyas,Pallavas,Cholas–Polity and Economy in North India and Deccan-Rajputs,Gurjaras,Pratiharas,Palas,Senas and Rashtrakutas

UNIT –V

Arab Invasion – Social Economic and Cultural Condition in North India-Rich Legacy of Ancient India-Social Development--Status of Women-Invasions ofMahmud Ghaznavi and–MohammadGhori and their Impact

Textbooks

1. "Ancient India" by RomilaThapar
2. "The Wonder That Was India: A Survey of the Culture of the Indian Sub-Continent Before the Coming of the Muslims" by A.L. Basham
3. "A History of Ancient and Early Medieval India: From the Stone Age to the 12th Century" by Upinder Singh
4. "The Early History of India: From the Origins to AD 1300" by R. Thapar
5. "India's Ancient Past" by R.S. Sharma
6. "Ancient Indian History and Civilization" by SailendraNathSen
7. "The Penguin History of Early India: From the Origins to AD 1300" by RomilaThapar

Reference Books

1. "The Oxford Handbook of Ancient Indian History" edited by Upinder Singh
2. "Ancient India: New Research" edited by D. P. Chattopadhyaya
3. "The Cultural History of Ancient India: A Socio-economic Survey" by S.N. Sadasivan
4. "Ancient Indian History and Civilization" by B.L. Grover and Alka Mehta
5. "Indian Archaeology: A Review" by K.N. Dikshit
6. "A Comprehensive History of Ancient India" by P. N. Chopra, Prabha Chopra, and A.C. Pradhan
7. "India: A History" by John Keay

24UHU401: CULTURAL HERITAGE OF INDIA

Contact hours/week: 05

Credit: 04

Internal Marks: 25

External Marks: 75

Course outcomes: At the end of the course the student will be able to

CO 1	Understand the Evolution of Indian Culture & Explore the diverse cultural heritage of India from ancient times of Pre Historic and Indus valley Civilization
CO2	Understand the cultural artifacts, texts, and historical sources of Vedic Period , Early Indian Society, Maurya and Gupta Periods of Golden Age of Indian Culture
CO3	Understanding of Cultural Diversity of Indian culture, including its regional, linguistic, religious, and artistic variations of Classical Indian Arts, Indian Philosophy and Religion of Hinduism, Buddhism and Jainism
CO4	Knowledge of Indian Cultural History of the cultural history of India, including key historical periods, developments, and cultural expressions of Medieval Indian Culture
CO5	Preservation and Conservation Practices will gain awareness of the importance of preserving and conserving India's cultural heritage and preservation and conservation practices and initiatives of Contemporary Indian Culture.

SYLLABUS

UNIT-I

Meaning-Scope-Nature-Cultural Heritage-Introduction to Indian Culture and Heritage – Pre Historic and Indus valley Civilization

UNIT –II

Vedic Period and Early Indian Society – Maurya and Gupta Periods: Golden Age of Indian Culture

UNIT-III

Classical Indian Arts: Music, Dance, and Theatre –Indian Philosophy and Religion: Hinduism, Buddhism, Jainism.

UNIT- IV

Medieval Indian Culture: Mughal and Sultanate Periods - Colonial Impact on Indian Culture-
Modern Indian Culture: Renaissance and Independence Movement

UNIT-V

Contemporary Indian Culture: Literature, Cinema, and Art –Preservation, Conservation of Indian

Cultural Heritage – Field Trips and Case Studies

Textbooks

1. "Indian Art and Culture" by NitinSinghania
2. "Ancient India" by R.S. Sharma
3. "A History of Ancient and Early Medieval India: From the Stone Age to the 12th Century" by Upinder Singh
4. "Classical Dances of India" by Sunil Kothari and AvinashPasricha
5. "An Introduction to Indian Philosophy" by SatischandraChatterjee and DhirendramohanDatta
6. "Medieval India: From Sultanate to the Mughals" by Satish Chandra
7. "The Making of Colonial India" by RanajitGuha
8. "India After Gandhi: The History of the World's Largest Democracy" by RamachandraGuha
9. "Contemporary Indian Literature: A Critical Study" by M.K. Naik
10. "Conservation and Preservation of Indian Heritage" by GurmeetRai

Reference Books

1. "The Wonder That Was India" by A.L. Basham
2. "History of Indian Art" by VidyaDehejia
3. "Early India: From the Origins to AD 1300" by RomilaThapar
4. "The Rigveda: A Historical Analysis" by Shrikant G. Talageri
5. "The Age of the Gupta
as and Other Essays" by A.S. Altekar
6. "Indian Classical Dance: The Renaissance and Beyond" by Ashish Mohan Khokar
7. "A Sourcebook in Indian Philosophy" edited by SarvepalliRadhakrishnan and Charles A. Moore
8. "The Mughal Empire" by John F. Richards
9. "Colonialism and Its Forms of Knowledge: The British in India" by Bernard S. Cohn
10. "The Modernity of Tradition: Political Development in India" by Lloyd I. Rudolph and Susanne Hoeber Rudolph

EMESTER-II

24UHI502: Historical Perspectives of Science and Technology

Contact hours/week: 05

Credit: 04

Internal Marks: 25

External Marks: 75

Course outcomes: At the end of the course the student will be able to

UNIT		COURSE OUTCOME	LEVEL
UNIT I	CO 1	Explain how scientific thought and technological innovations have developed across different historical periods and cultures.	K1-K4
UNIT II	CO2	Break down and examine the significance of the Scientific Revolution and Enlightenment in transforming scientific practice and societal norms.	K1- K4
UNIT III	CO3	Investigate the connections between technological advancements and social changes during the Industrial Revolution.	K1-K4
UNIT IV	CO4	Assess the impact of major scientific breakthroughs and technological innovations in the 20th century on global politics, society, and culture.	K1- K4
UNIT V	CO5	Critically evaluate contemporary issues related to science and technology and predict future developments and challenges.	K1- K4

Syllabus

Unit I: Early Science and Technology in Ancient Civilizations

Definition and scope - Prehistoric technology: Stone Tools, Metals, Wheel, fire, and Permanent Settlement and the beginnings of agriculture - Ancient civilizations: Mesopotamia, Egypt, Indus Valley, China, Greece, Rome and their contributions - Science and technology in the middle Ages.

Unit II: The Renaissance and the Scientific Revolution

Revival of classical knowledge during the Renaissance - The Scientific Revolution: Key figures: Leonardo da Vinci, Copernicus, Galileo, Kepler, Newton and their contributions – The Renaissance technology: Printing press, Gunpowder and Navigation.

Unit III: The Industrial Revolution and the Modern Era

The Industrial Revolution: Mechanization, Steam power, and the Factory system - Transportation and Communication - Inventions: Railways, Telegraph and Steamships - Scientific advancements in the 19th century.

Unit IV: Growth of Science and Technology in the 20th Century

The role of Science and technology in the two World Wars: Radar, medicine, and nuclear weapons. -Post-war advancements: Space exploration, computing and climate Science - Contemporary issues: The internet, artificial intelligence, and sustainability.

Unit V: Development of Science and Technology in India

Ancient to Modern – Contemporary Science and Technology- Nuclear Energy – ISRO
– Research and Development – Information Technology

Textbooks

1. James E. McClellan III, Harold Dorn (2015), *Science and Technology in World History: An Introduction*, Johns Hopkins University Press, Baltimore.

Reference Books

1. David C. Lindberg (2007), *THE BEGINNINGS OF WESTERN SCIENCE*, University of Chicago Press, Chicago.
2. Thomas S. Kuhn (1962), *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS*, University of Chicago Press, Chicago.
3. Steven Shapin (1996), *THE SCIENTIFIC REVOLUTION*, University of Chicago Press, Chicago.
4. Joel Mokyr (1990), *THE LEVER OF RICHES: TECHNOLOGICAL CREATIVITY AND ECONOMIC PROGRESS*, Oxford University Press, Oxford.
5. Robert C. Allen (2009), *THE BRITISH INDUSTRIAL REVOLUTION IN GLOBAL PERSPECTIVE*, Cambridge University Press, Cambridge.
6. John Gribbin (1984), *IN SEARCH OF SCHRÖDINGER'S CAT: QUANTUM PHYSICS AND REALITY*, Bantam Books, New York.
7. James Gleick (2011) *THE INFORMATION: A HISTORY, A THEORY, A FLOOD*, Pantheon Books New York.
8. Naomi Oreskes, Erik M. Conway (2014), *THE COLLAPSE OF WESTERN CIVILIZATION: A VIEW FROM THE FUTURE*, Columbia University Press, New York.
9. Martin Rees (2018), *ON THE FUTURE: PROSPECTS FOR HUMANITY*, Princeton University Press, Princeton.

24UHI502: History of Tamil Nadu upto 1600 CE

Contact hours/week: 05

Credit: 04

Internal Marks: 25

External Marks: 75

Course outcomes: At the end of the course the student will be able to

UNIT		COURSE OUTCOME	LEVEL
UNIT I	CO 1	Explain the societal structure and cultural contributions of the Sangam Age.	K1-K4
UNIT II	CO2	Apply knowledge of economic and social structures to analyze the growth of urban centers.	K1- K4
UNIT III	CO3	Break down the factors contributing to the Chola Empire's rise and dominance.	K1-K4
UNIT IV	CO4	Analyze the causes behind the decline of the Chola Empire and the resurgence of the Pandyas.	K1- K4
UNIT V	CO5	Synthesize information from various sources to create a cohesive narrative of Tamil Nadu's history during the Vijayanagara & Nayak period.	K1- K4

K1- Remember K2 – Understand K3- Apply K4- Analysis K5- Evaluate K6- Create

SYLLABUS

Unit 1: Ancient Tamil Nadu

Geography and Archaeological Sources of Tamil Nadu – Pre Historic Age – Stone Age to Iron Age

Unit 2: The Sangam Age

The Sangam Literature – Polity – Society - Culture and Economy – Development of Literature under Kalabras.

Unit 3: The Rise of Pallavas and Cholas

The Pallavas – Administration - Art and Architecture - Bhakthi Movement and Literature – The Cholas – Political Condition – Local Administration - Art and Architecture.

Unit 4: The Pandyas

The Early and Later Pandyas – Literature – Socio-Cultural and Religious Conditions - Art and Architecture – Trade and Economy – Decline of the Pandyas

Unit 5: The Vijayanagar

The Vijayanagar Administration - The Nayaks of Madurai, Thanjavur, and Gingee - Social and Economic Structures under the Nayaks – Religious Development – Art and Architecture – Advent of European.

Textbooks

1. Subrahmanian, N.(1988), *History of Tamil Nadu: From Sangam Age to 1800 A.D.*, Ennes Publications, Udumalpet.

Reference Books

1. Pillay, K.K.(1977), *The History of Tamil Nadu*, Madurai University, Madurai.
2. Devanesan, A. (2004), *A History of Tamil Nadu*, Renu Publications, Marthandam
3. Rajan, K. (1994), *Tamil Nadu: An Archaeological Perspective*, ManooPathippakam, Thanjavur
4. Sastri, K.A. Nilakanta (1935), *The Political History of the Cholas*, University of Madras, Chennai
5. Sastri, K.A. Nilakanta (1955), *A History of South India*, Oxford University Press, Oxford
6. Menon, A. Sreedhara (1965), *The Tamils: From the Earliest Times to the Present Day*, Kerala Historical Society, Trivandrum
7. Champakalakshmi, R.(1996), *The Cholas*, Cambridge University Press, Cambridge.
8. Stein, B.(1989), *South India under the Vijayanagara Empire*, Oxford University Press, Delhi.
9. Shulman, D.D.(1980), *Tamil Temple Myths: Sacrifice and Divine Marriage in the South Indian Saiva Tradition*, Princeton University Press, Princeton.

SEMESTER-III

HISTORY OF MEDIEVAL INDIA: 24UHI503

Contact hours/week: 05

Credit: 04

Internal Marks: 25

External Marks: 75

Course outcomes: At the end of the course the student will be able to

UNIT		COURSE OUTCOME	LEVEL
UNIT I	CO 1	Identify and evaluate various indigenous and foreign sources related to Medieval Indian History.	K1-K4
UNIT II	CO2	Analyse the political, administrative, and cultural developments of the Delhi Sultanate and assess its impact on Indian society.	K1- K4
UNIT III	CO3	Examine the political history and administrative reforms under the Mughals, and interpret their contributions to Indian art, architecture, and religious policies.	K1-K4
UNIT IV	CO4	Assess the socio-economic and cultural aspects of Medieval India including caste, trade, religious movements, and educational developments.	K1- K4
UNIT V	CO5	Evaluate the causes for the decline of the Mughal Empire and the emergence of regional powers, as well as the early stages of British ascendancy in India.	K1- K4

K1- Remember K2 – Understand K3- Apply K4- Analysis

SYLLABUS

UNIT 1: EARLY MEDIEVAL INDIA

Sources of Medieval India—Indigenous and Foreign Accounts.

UNIT 2: THE DELHI SULTANATE

Political History- Establishment of the Delhi Sultanate, the Slave Dynasty, Khiljis, Tughlaqs, Sayyids, and Lodis - Administrative Reforms- and political strategies - Cultural and Religious Influence- The introduction of Islamic India- culture and architecture, and Sufi mysticism - Impact on Indian Society- The establishment of a new class structure, rise of regionalism.

UNIT 3: THE MUGHAL EMPIRE

Political History-The rise of Babur, Akbar's reign, Mughal administration - Cultural and Economic Developments- Mughal architecture, the golden age of Indian art and culture, land revenue system - Religious and Social Developments - role of women politics -Akbar's religious policies.

UNIT 4: SOCIETY, ECONOMY, AND CULTURE IN MEDIEVAL INDIA

The role of caste, feudal system, urbanization, and rural economy – Religious Movements-Bhakti, and Sufism, -Economic Activities- Agriculture, trade, commerce, and the role of guilds - Cultural Life- Literature, education, art, science and Technology.

UNIT 5: DECLINE OF THE MUGHAL EMPIRE AND RISE OF REGIONAL POWERS

Political Decline: The weakening of central power after Aurangzeb, rise of regional powers (Marathas, Sikhs, Rajputs, etc.) - The invasions of Nadir Shah, Ahmad Shah Abdali - The Rise of British Power.

Textbooks

1. "Medieval India: From Sultanat to the Mughals" by Satish Chandra
2. "History of Medieval India" by Dr. S. R. Sharma
3. "The Delhi Sultanate: A Political and Military History" by Peter Jackson
4. "The Mughal Empire" by John F. Richards

Reference Books

1. "Medieval India: A History" by K.K. Aziz
2. "The Mughals and the Arts of India" by M. S. Naravane
3. "History of India, Volume II" by Romila Thapar
4. "The Delhi Sultanate: A History" by Amita Sharma
5. "Medieval India: Society, Culture, and Religion" by M. D. R. Kothari
6. "The Mughal Empire" by J. A. Boyle
7. "The Cholas: A History" by R. Nagaswamy

24UHU403: INTRODUCTION TO LAW

Contact Hours/Week: 4

Credits: 4

Internal Mark: 25

External Mark: 75

Course outcomes: At the end of the course the student will be able to

UNIT		COURSE OUTCOME	LEVEL
UNIT I	CO 1	Define and explain the nature, scope, and historical development of law in India.	K1-K4
UNIT II	CO2	Describe the evolution of Indian legal institutions and analyze their significance.	K1- K4
UNIT III	CO3	Examine the structure and functions of the Indian Constitution and assess fundamental rights and duties.	K1-K4
UNIT IV	CO4	Interpret key features of criminal and civil laws and apply basic legal concepts to examples.	K1- K4
UNIT V	CO5	Evaluate the role of law in contemporary issues and societal reforms such as human rights, environment, and cyber law.	K1- K4

K1- Remember K2 – Understand

K3- Apply

K4- Analysis

SYLLABUS

UNIT 1: INTRODUCTION TO LEGAL SYSTEMS

Definition, Nature, and Scope of Law -Types of Law: Civil, Criminal- Historical Development of Law in India

UNIT 2: EVOLUTION OF LEGAL INSTITUTIONS

Ancient and Medieval Indian Legal Systems - British Influence on Indian Law- Charter Acts and Indian Penal Code (IPC) - Development of Judicial System in India- Establishment of High Courts, and Subordinate Courts.

UNIT 3: INDIAN CONSTITUTION AND FUNDAMENTAL RIGHTS

Indian Constitution - Fundamental Rights, Fundamental Duties, and Directive Principles of State Policy - Separation of Powers: Legislature, Executive, and Judiciary - Constitutional Amendments and Landmark Judgments

UNIT 4: CRIMINAL AND CIVIL LAWS IN INDIA

Criminal Law: Indian Penal Code (IPC) and Criminal Procedure Code (CrPC) - Civil Law: Contract Law, Tort Law, and Property Law - Law of Evidence and Judicial Process.

UNIT 5: LAW AND SOCIETY: CONTEMPORARY ISSUES

Human Rights and Legal Protection in India - Women's Rights, Child Rights, and Protection Laws - Environmental Law and Sustainable Development - Cyber Law.

Textbooks:

1. M.P. Jain, "Indian Constitutional Law" – LexisNexis
2. V.D. Mahajan, "Constitution of India" – Eastern Book Company
3. P. Ishwara Bhat, "Law and Social Transformation in India" – Eastern Book Company
4. Ratanlal & Dhirajlal, "The Indian Penal Code" – LexisNexis
5. H.L. Ahuja, "Introduction to Law" – Cambridge University Press

Reference Books:

1. Granville Austin, "The Indian Constitution: Cornerstone of a Nation" – Oxford University Press
2. Durga Das Basu, "Introduction to the Constitution of India" – LexisNexis
3. P. Leelakrishnan, "Environmental Law in India" – LexisNexis
4. S.P. Sathe, "Judicial Activism in India" – Oxford University Press
5. H.K. Saharay, "Textbook on Indian Penal Code" – Universal Law Publishing

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SEMESTER-IV

24UHI501: HISTORY OF TAMIL NADU (1600 CE – 2000 CE)

Contact hours/week: 04

Credit: 04

Internal Marks: 25

External Marks: 75

Course outcomes: At the end of the course the student will be able to

UNIT	CO. NO.	COURSE OUTCOME	LEVEL
UNIT I	CO 1	Identify the key political and cultural changes in Tamil Nadu under Nayak and Maratha rule.	K1-K4
UNIT II	CO2	Explain the impact of British rule and early nationalist movements in Tamil Nadu.	K1- K4
UNIT III	CO3	Analyze Tamil Nadu's role in the Indian freedom struggle and socio-political movements.	K1-K4
UNIT IV	CO4	Evaluate the political, economic, and social developments of post-independence Tamil Nadu.	K1- K4
UNIT V	CO5	Assess contemporary trends and challenges in Tamil Nadu's political and cultural landscape.	K1- K4

K1- Remember K2 – Understand K3- Apply K4- Analysis K5- Evaluate K6- Create

SYLLABUS

UNIT 1: Tamil Nadu under Nayaks and Marathas (1600 – 1800 CE)

Nayaks of Madurai, Tanjore, and Senji: Administration and Cultural Contributions - Maratha Rule in Tanjore and Its Impact - European Settlements in Tamil Nadu: Portuguese, Dutch, French, and British - Anglo-French Rivalry in Tamil Nadu - Poligar Rebellions: Puli Thevar, Kattabomman, Maruthu Brothers

UNIT 2: British Rule and Early Nationalism (1800 – 1900 CE)

British Administration in Madras Presidency - Role of Missionaries and Social Changes - Ryotwari System and Agrarian Distress - Role of Tamil Nadu in the First War of Independence (1857) - Emergence of Tamil Nationalism and Press

UNIT 3: Freedom Struggle and Tamil Nadu (1900 – 1947 CE)

Swadeshi Movement and Tamil Nadu - V.O. Chidambaram Pillai and the Swadeshi Steam Navigation Company - Role of Subramania Bharathi and Other Nationalist Leaders - Justice Party and Self-Respect Movement - Quit India Movement and Tamil Nadu's Contribution

UNIT 4: Post-Independence Tamil Nadu (1947 – 1980 CE)

Formation of Tamil Nadu State (1956) and Language Policy - Dravidian Movement and the Rise of DMK & AIADMK - Tamil Nadu's Role in Green Revolution & Industrialization - Kamaraj Plan and Political Developments - Social Welfare Reforms: Reservation Policies, Women's Rights, and Education

UNIT 5: Contemporary Tamil Nadu (1980 – 2000 CE)

Political and Economic Developments - Role of Tamil Nadu in Indian Economy: IT Industry and Globalization - Social and Cultural Movements in Modern Tamil Nadu - Cinema and Politics: M.G. Ramachandran, Karunanidhi, Jayalalithaa - Tamil Nadu's Contribution to Science, Literature, and Technology

Textbooks

1. Srinivasa Iyengar, P. T. (1929). *History of the Tamils from the Earliest Times to 600 A.D.* Madras: C. S. Srinivasa Iyengar.
2. Subramanian, N. (2006). *History of Tamil Nadu (To A.D. 1336)*. Koodal Publishers, Madurai.
3. Rajayyan, K. (1982). *History of Tamil Nadu (1565 to the present day)*. Madurai Publishing House, Madurai.

Reference Books

1. Hardgrave, R. L. (1965). *The Dravidian Movement*. Bombay: Popular Prakashan.
2. Barnett, M. R. (1976). *The Politics of Cultural Nationalism in South India*. Princeton University Press.
3. Geetha, V., & Rajadurai, S. V. (1998). *Towards a Non-Brahmin Millennium: From Iyothee Thass to Periyar*. Calcutta: Samya.
4. Pandian, M. S. S. (1992). *The Image Trap: M.G. Ramachandran in Film and Politics*. New Delhi: Sage Publications.
5. Baker, C. J. (1976). *The Politics of South India 1920–1937*. Cambridge University Press.
6. Dirks, Nicholas B. (1987). *The Hollow Crown: Ethnohistory of an Indian Kingdom*. Cambridge University Press.
7. Arnold, D. (1984). *The Congress in Tamil Nadu: Nationalist Politics in South India, 1919–1937*. New Delhi: Manohar.
8. Ramaswamy, Sumathi. (1997). *Passions of the Tongue: Language Devotion in Tamil India, 1891–1970*. University of California Press.

TOURISM AND TRAVEL: 24UHI601

Contact Hours/Week: 4
Internal Mark: 25

Credits: 4
External Mark: 75

Course outcomes: At the end of the course the student will be able to

Unit No.	Expected Learning Outcomes (ELOs)	LEVEL
Unit 1	Understand the definitions, types, and historical evolution of tourism, and recognize its cultural and economic significance.	K1-K4
Unit 2	Identify key heritage and historical tourism sites, especially UNESCO heritage sites in India, and understand the importance of preserving cultural heritage.	K1- K4
Unit 3	Demonstrate knowledge of tourism management, marketing, and the role of public and private sectors in promoting tourism.	K1-K4
Unit 4	Analyze the concept of sustainable and eco-tourism, related policies, and the impact of tourism on heritage sites.	K1- K4
Unit 5	Acquire practical skills in tour planning, guiding, interpretation, and report writing through field visits.	K1- K4

K1- Remember K2 – Understand K3- Apply K4- Analysis

SYLLABUS

UNIT 1: INTRODUCTION TO TOURISM AND TRAVEL

Definition and types of tourism (domestic, international, cultural, eco-tourism etc.) - historical development of tourism - importance of tourism in history and culture -tourism and economic development.

UNIT 2: HERITAGE AND HISTORICAL TOURISM

Concept of heritage tourism - Major historical and cultural sites in India (UNESCO Heritage Sites) - Preservation of historical monuments and cultural heritage

UNIT 3: TOURISM MANAGEMENT AND PROMOTION

Tourism Management and marketing - Travel agencies, Tour operators, and hospitality management - Role of government and private sectors in tourism development - Digital marketing and tourism promotion strategies.

UNIT 4: SUSTAINABLE TOURISM AND POLICIES

Concept of sustainable tourism and eco-tourism - Impact of tourism on historical sites - Tourism policies and regulations - Functions of ITDC, TTDC, – Negative Impact of Tourism.

UNIT 5: TOURISM PLANNING

Basics of Tourism Principles, Tour guiding and interpretation - Planning and managing heritage tours - Skills required for tourism professionals - Field visit and report on a historical tourism site

Textbooks

1. Bhatia, A.K. "Tourism Development: Principles and Practices" – Sterling Publishers
2. Hall, C.M. "Tourism Planning: Policies, Processes and Relationships" – Pearson
3. Boniface, P., & Cooper, C. "Worldwide Destinations: The Geography of Travel and Tourism" – Routledge

Reference Books

1. Sharma, J.K. "Tourism & Development: Principles & Practices" – Kanishka Publishers
2. Holloway, J.C. "The Business of Tourism" – Pearson
3. Dixit, M., & Sheela, C. "Tourism Products" – New Royal Publishers
4. Cooper, C., & Fletcher, J. "Tourism: Principles and Practice" – Pearson
5. UNESCO Reports on Heritage Tourism and Sustainable Development

SEMESTER: V**24UHU404: HISTORIOGRAPHY: 24UHU404****Contact Hours/Week: 4****Credits: 4****Internal Mark: 25****External Mark: 75****COURSE OUTCOMES (COs)**

UNIT	CO	COURSE OUTCOME	LEVEL (Bloom's Taxonomy)
Unit I	CO1	Explain the meaning, nature, scope, and significance of history and historiography	K1–K4
Unit II	CO2	Classify types of history and examine its interdisciplinary relationships	K1–K4
Unit III	CO3	Analyze the contributions of ancient and medieval historians	K1–K4
Unit IV	CO4	Evaluate major schools of modern and contemporary historiography	K1–K5
Unit V	CO5	Apply historical research methods and develop academic writing with citation	K1–K6

K1- Remember K2 – Understand K3- Apply K4- Analysis K5-Evaluate K6-Create**SYLLABUS****Unit I: Fundamentals of Historiography**

Meaning, definition, and scope of history- History as science and art - Nature and purpose of historiography - Value of history in contemporary society - objectivity and subjectivity in historical writing

Unit II: History and Allied Discipline

Kinds of history: Political, Social, Economic, Cultural, Intellectual, Diplomatic, and Oral - History and allied social sciences: History and Geography, History and Political Science, History and Economics, History and Sociology - Emerging fields: Environmental history, Gender history and History - Digitalization

Unit III: Ancient and Medieval Historiography

Greco-Roman historiography: Herodotus and Thucydides - Church historiography: St. Augustine - Medieval Arab historiography: Ibn Khaldun and Al-Tabari - Indian historiography: Banabhatta, Kalhana, Alberuni, Amir Khusru, and Abul Fazl

Unit IV: Modern and Contemporary Historiography

Enlightenment historiography: Voltaire, Leopold von Ranke - Positivism and empiricism in history - Marxist historiography: Karl Marx and E.P. Thompson - Subaltern studies - Annales School: Marc Bloch, Lucien Febvre, Fernand Braudel - Postmodern and Feminist historiography

Unit V: Historical Research and Writing

Nature and stages of historical research - Hypothesis formulation, data collection, and interpretation - Objectivity, bias, and ethics in historical writing - Recent trends: Digital archives - Preparing a historiographical essay and citation methods (MLA/Chicago style)

Textbooks

1. Majumdar Rk, Historiography, Surjeet Book Depot, Delhi
2. Palan Jaya, Historiography Atlantic Publishers, Delhi.
3. Talware Mahendra, Indian Historiography, Sri Ramakrishna Publications, Madras
4. Siddiqui Iqtidar Husain, Indo-Persian Historiography, Primus Books, New Delhi
5. Sheick Ali, History its theory and method
6. Manickam. S., A Theory of History and Method of Research

Reference Books

1. E.H. Carr – *What is History?* (Penguin Books, 1961)
2. Marc Bloch – *The Historian's Craft* (Manchester University Press, 1954)
3. Arthur Marwick – *The Nature of History* (Macmillan, 1970)
4. R.G. Collingwood – *The Idea of History* (Oxford University Press, 1946)
5. Dr. K. Rajayyan – *Historiography: History and Its Theory* (Ratna Publications, Madurai)
6. John Tosh – *The Pursuit of History* (Routledge, 2015)
7. Keith Jenkins – *Re-thinking History* (Routledge, 2003)
8. Georg G. Iggers – *Historiography in the Twentieth Century: From Scientific Objectivity to the Postmodern Challenge* (Wesleyan University Press, 1997)
9. Subaltern Studies (Series) – *Ranajit Guha et al.*
10. Peter Burke (ed.) – *New Perspectives on Historical Writing* (Polity Press, 2001)

24UHU405: CONSTITUTION OF INDIA

Contact Hours/Week: 4

Credits: 4

Internal Mark: 25

External Mark: 75

COURSE OUTCOMES (COs)

UNIT		COURSE OUTCOME	LEVEL
UNIT I	CO 1	Identify the sources and historical background of the Indian Constitution.	K1-K5
UNIT II	CO2	Explain the fundamental principles, features, and structure of the Constitution.	K1- K4
UNIT III	CO3	Analyze the roles of the Legislature, Executive, and Judiciary.	K1-K4
UNIT IV	CO4	Evaluate constitutional rights, duties, and directive principles in practice.	K1- K5
UNIT V	CO5	Demonstrate civic responsibility and respect for constitutional values.	K1- K6

K1- Remember K2 – Understand K3- Apply K4- Analysis K5-Evaluate K6-Create

SYLLABUS

Unit I: Historical Background and Making of the Constitution

Historical evolution: Regulating Act (1773) to Indian Independence Act (1947) - Constituent Assembly: Composition, working, and adoption of the Constitution - Philosophical foundations: Preamble – Ideals and significance - Sources and influences of the Indian Constitution

Unit II: **Salient features of the Indian Constitution**

Salient features of the Indian Constitution - Federal and Unitary features - Citizenship provisions - Fundamental Rights – meaning, types, and significance - Fundamental Duties and Directive Principles of State Policy

Unit III: Union Government and State Government

President, Vice President, Prime Minister, and Council of Ministers - Parliament: Lok Sabha and Rajya Sabha – Powers and Functions - Governor, Chief Minister, and Council of Ministers of State - State Legislature - Emergency provisions – National, State, and Financial

Unit IV: Judiciary and Constitutional Bodies

Structure and Functions of Supreme Court and High Courts - Judicial review and judicial activism – Attorney General of India - Election Commission: Powers and functions - Comptroller and Auditor General (CAG) - Union Public Service Commission (UPSC) and State Public Service Commissions (SPSC)

Unit V: Local Governance and Working of the Constitution

73rd and 74th Amendments – Panchayati Raj and Urban Local Bodies - Centre-State relations and Inter-State Council - Amendment procedure of the Constitution - Fundamental Rights and contemporary debates - Challenges to Indian democracy – Land mark Judgments.

Textbooks

1. Basu, D.D. INTRODUCTION TO THE CONSTITUTION OF INDIA. LexisNexis, 2020.
2. Pylee, M.V. AN INTRODUCTION TO THE CONSTITUTION OF INDIA. Vikas Publishing, 2017.
3. Bakshi, P.M. THE CONSTITUTION OF INDIA. Universal Law Publishing, 2018.
4. Lakshmi Khanth, Indian Polity

Reference Books

1. Subhash C. Kashyap. OUR CONSTITUTION: AN INTRODUCTION TO INDIA'S CONSTITUTION AND POLITICAL SYSTEM. National Book Trust, 2018.
2. Granville Austin. THE INDIAN CONSTITUTION: CORNERSTONE OF A NATION. Oxford University Press, 2014.
3. Sharma, B.K. INTRODUCTION TO THE CONSTITUTION OF INDIA. Prentice-Hall, 2020.
4. Noorani, A.G. CONSTITUTIONAL QUESTIONS AND CITIZENS' RIGHTS. Oxford University Press, 2006.

24UH505: HISTORY OF MODERN INDIA

Contact Hours/Week: 4

Credits: 4

Internal Marks: 25

External Marks: 75

Course Outcomes

UNIT	CO	COURSE OUTCOME	LEVEL
UNIT I	CO1	Recall and explain major events and processes in the making of Modern India.	K1–K4
UNIT II	CO2	Analyze the socio-economic and political consequences of British rule in India.	K1–K4
UNIT III	CO3	Evaluate the reform movements and their role in shaping modern Indian society.	K1–K4
UNIT IV	CO4	Examine the various phases and ideological currents of Indian nationalism.	K1–K4
UNIT V	CO5	Formulate independent interpretations on the nature of colonialism and nationalism through research-based assignments.	K1–K4

K1- Remember K2 – Understand K3- Apply K4- Analysis K5-Evaluate K6-Create

SYLLABUS

UNIT I – Decline of the Mughal Empire and Rise of British Power (1707–1857)

Disintegration of the Mughal Empire – Rise of Regional States - Anglo-French Rivalry and British Expansion-Battles of Plassey and Buxar – Establishment of British Rule-Colonial Administration and Revenue Policies: Permanent Settlement, Ryotwari, Mahalwari -Revolt of 1857 – Causes, Course, and Results

UNIT II – Socio-Religious Reform Movements

Social Conditions in 19th Century India - Brahmo Samaj, Arya Samaj, Prarthana Samaj, Theosophical Society and the Indian Renaissance and Aligarh Movement- Reformers: Raja Ram Mohan Roy, Swami Vivekananda, Dayananda Saraswati, Sir Syed Ahmad Khan- Women's Reform Movements – Ishwarchandra Vidyasagar and Pandita Ramabai

UNIT III – Economic and Cultural Transformation under Colonial Rule

Impact of Colonial Economy – Drain of Wealth and Deindustrialization -Land Revenue Systems and Agrarian Unrest -Transport, Communication, and Industrial Growth -Rise of New Social Classes and the Middle Class Intelligentsia -Cultural Awakening: Press, Literature, and Education Policies

UNIT IV – Rise of Indian Nationalism (1885–1919)

Birth of Indian National Congress – Swadeshi and Boycott Movements - Revolutionary Movements – Ghadr Party, Home Rule League - Role of Tilak, Lajpat Rai, Annie Besant, and Bipin Chandra Pal - Constitutional Developments

UNIT V – Gandhian Era and Freedom Struggle (1919–1947)

Non-Cooperation and Civil Disobedience Movements - Quit India Movement -Towards Indian Independence: Role of Indian National Army and Contribution of Subhas Chandra Bose – II World War and its Impact - Rise of Muslim League and Demand for Pakistan - Mountbatten Plan and Independence.

Textbooks

1. Grover, B.L. & Alka Mehta. A NEW LOOK AT MODERN INDIAN HISTORY. S. Chand & Co., New Delhi.
2. Bandyopadhyay, Sekhar. FROM PLASSEY TO PARTITION AND AFTER. Orient BlackSwan, Hyderabad.
3. Sarkar, Sumit. MODERN INDIA 1885–1947. Macmillan, New Delhi.
4. Mahajan.V.D., *Modern Indian History from 1707 to present day*. S. Chand & Co., New Delhi.
5. A cultural History of India edited by A.L. Basham, Oxford University

Reference Books

1. Chandra, Bipan et al. INDIA'S STRUGGLE FOR INDEPENDENCE. Penguin, New Delhi.
2. Desai, A.R. SOCIAL BACKGROUND OF INDIAN NATIONALISM. Popular Prakashan, Mumbai.
3. Metcalf, Thomas. IDEOLOGIES OF THE RAJ. Cambridge University Press.
4. Judith Brown. MODERN INDIA: THE ORIGINS OF AN ASIAN DEMOCRACY. Oxford University Press.

Majumdar, R.C. BRITISH PARAMOUNTCY AND INDIAN

24UHI506: HISTORY OF EUROPE FROM 1453 CE TO 1789 CE

Contact Hours/Week: 4

Credits: 4

Internal Mark: 25

External Mark: 75

COURSE OUTCOMES (COs)

UNIT	CO	COURSE OUTCOME	LEVEL
Unit I	CO1	Explain the major developments such as Renaissance, Reformation, and rise of nation-states in Europe (1453–1600)	1 – 4
Unit II	CO2	Analyze the causes and consequences of religious wars, absolutism, and political changes in Europe	1 – 4
Unit III	CO3	Evaluate the ideas of Enlightenment thinkers and their influence on European society	1 – 5
Unit IV	CO4	Analyze economic and social transformations including capitalism and class structure	1 – 4
Unit V	CO5	Evaluate the causes, course, and impact of the French Revolution	1 – 5

K1- Remember K2 – Understand K3- Apply K4- Analysis K5-Evaluate K6-Create

SYLLABUS

Unit I: Dawn of Modern Europe (1453–1600 CE)

Fall of Constantinople (1453) and its impact on Europe - Renaissance: Humanism, art, science, and literature - Geographical discoveries and their global impact - The Reformation and Counter-Reformation - Rise of Nation-States: France, England, and Spain.

Unit II: Age of Religious Wars and Absolutism (1600–1715 CE)

Thirty Years' War (1618–1648): Causes and results - Rise of absolute monarchies – Louis XIV of France, Peter the Great of Russia - Decline of Feudalism and Rise of Mercantilism - England under the Tudors and Stuarts: Civil War and the Glorious Revolution (1688) - Development of Parliamentary Institution in England.

Unit III: Enlightenment Despotism

Meaning of Enlightenment Despotism - Enlightenment Thinkers (Voltaire, Montesquieu, Jean-Jacques Rousseau, Denis Diderot) - Main Features - Important Rulers (Frederick II of Prussia, Catherine II, Joseph II)

Unit IV: Economic and Social Transformations (17th–18th Centuries)

Agrarian changes and early industrial developments - Rise of bourgeoisie and capitalism - Colonial expansion and competition - Social hierarchies and peasantry in Europe - Role of women in European Society.

Unit V: The French Revolution (1789 CE)

Background: Political, social, and economic causes - Role of social thinkers and middle class - Course of the Revolution: National Assembly, Reign of Terror, Directory - Impact of the Revolution.

Textbooks

1. Mahajan V. D., 2000, History of Modern Europe Since 1789, S. Chand & Sons, New Delhi.
2. Mukherjee, 2005, Study of European History, n.p., Chennai.
3. Ishwari Prasad, 1999, History of Modern Europe, Surjeet Book Depot, Delhi.
4. R. H. C. Davis, 1998, History of Medieval Europe, Surjeet Book Depot, Delhi.
5. B. V. Rao, 2004, History of Europe 1450–1815, Sterling Publishers, New Delhi.

Reference Books

1. Southgate, Donald. A TEXTBOOK OF MODERN EUROPEAN HISTORY 1453–1789. London: Longman, 2002.
2. Fisher, H. A. L. A HISTORY OF EUROPE. London: Harper & Row, 1990.
3. Rao, B.V. HISTORY OF MODERN EUROPE 1453–1789. Sterling Publishers, 2005. C
4. Thomson, David. EUROPE SINCE NAPOLEON. Penguin, 1990.
5. Hayes, Carlton J.H. A POLITICAL AND CULTURAL HISTORY OF MODERN EUROPE. Macmillan, 1994.
6. Mukherjee, S. HISTORY OF MODERN EUROPE (1453–1789). Macmillan India, 2008.
7. Edward Burns. WESTERN CIVILIZATIONS: THEIR HISTORY AND CULTURE.W.W. Norton, 1992.

24UHI701: INTRODUCTION TO ARCHAEOLOGY

Contact Hours/Week: 4

Credits: 4

Internal Mark: 25

External Mark: 75

COURSE OUTCOMES (COs)

UNIT	CO	COURSE OUTCOME	LEVEL
Unit I	CO1	Explain the meaning, scope, and interdisciplinary nature of archaeology	1 – 4
Unit II	CO2	Analyze archaeological sources and material culture such as artifacts, inscriptions, and coins	1 – 4
Unit III	CO3	Apply archaeological methods and techniques including excavation and dating	1 – 4
Unit IV	CO4	Analyze prehistoric and protohistoric cultures with reference to Indian sites	1 – 4
Unit V	CO5	Evaluate the importance of heritage monuments and conservation practices	1 – 5

K1- Remember K2 – Understand K3- Apply K4- Analysis K5-Evaluate K6-Create

SYLLABUS

Unit I: Introduction to Archaeology

Definition, scope, and purpose of Archaeology - History and its relations of Archaeology - Archaeology and Physical Science.

Unit II: Sources and Material Culture

Artifacts and Remains, Paleography, Epigraphy, - Numismatics, Monuments, and Iconography - Analysis and interpretation of antiquities.

Unit III: Archaeological Methods and Techniques

Surface Survey methods: Site location and Mapping - Excavation techniques and stratigraphy - Documentation: Field notes, Recordings, photography, sketches - Relative and absolute dating methods (Carbon dating, Dendrochronology, Thermoluminescence)

Unit IV: Pre and Proto History

Paleolithic, Mesolithic, Neolithic, Chalcolithic, Megalithic culture: burial practices and monuments – Major Archaeological sites in India.

Unit V: Archaeology and Heritage Monuments

Monuments, forts, temples, art and Architecture - Museums, collections of Artifacts, and conservation techniques - Heritage management.

Textbooks

1. S. P. Gupta, 1995, Aspects of Indian History and Archaeology, B.R. Publishing, Delhi.
2. H. C. Kush Waha, 2002, History of Indian Archaeology, Kunal Books, New Delhi.

Reference books

1. Colin Renfrew & Paul Bahn, ARCHAEOLOGY: THEORIES, METHODS AND PRACTICE, Thames & Hudson, 2018
2. R.s. Sharma & b. Chattopadhyay, INDIAN ARCHAEOLOGY: AN INTRODUCTION, Oxford University Press, 2015
3. K.a. Nilakanta Sastri, THE ARCHAEOLOGY OF INDIA, Bharatiya Kala Prakashan, 2017
4. Singh, Upinder, A HISTORY OF ANCIENT AND EARLY MEDIEVAL INDIA, Pearson, 2016
5. Wheeler, Mortimer, ARCHAEOLOGY FROM THE EARTH, Harper & row, 2013
6. Chakrabarti, Dilip K., ARCHAEOLOGY OF ANCIENT INDIAN CITIES, Oxford University Press, 2014
7. Mukherjee, r.k., PRINCIPLES OF ARCHAEOLOGY, Allied Publishers, 2012

24UHI751: SKILL – EPIGRAPHY AND PALEOGRAPHY

Contact Hours/Week: 4

Credits: 2

Internal Mark: 40

External Mark: 60

COURSE OUTCOMES (COs)

CO	Course Outcome	Level
CO1	Explain basic concepts of paleography and epigraphy	1-4
CO2	Identify types of inscriptions and materials	1-4
CO3	Recognize simple scripts and writing systems	1-5
CO4	Perform basic transcription and interpretation	1-6
CO5	Prepare simple epigraphical records and reports	1-6

SYLLABUS

UNIT I: Introduction to Epigraphy and Paleography

Meaning and definition – Scope and importance – Origin and Development of Scripts – Different kinds of Scripts.

UNIT II: Types of Materials

Types: Palm-leaf, Terracotta, Wood, Stone and Copper plates, – Nature of inscriptions: royal orders, donations, temple records – Purpose and importance – Introduction to Preservation and digital sources.

UNIT III: Scripts and Writing Systems (Core Skill Unit)

Basic scripts: Tamil-Brahmi, Brahmi, Damizhi, Grantha, Devanagari, Vattezhuthu – Simple comparison – Identification of letters – Basic alphabet practice.

UNIT IV: Reading, Transcription, and Translation (Core Practical Unit)

Basic techniques for reading inscriptions – Simple transcription methods – Introduction to transliteration – Meaning and interpretation (basic level) – Problems like damage and missing letters.

UNIT V: Applications of Epigraphy

Inscriptions as historical sources – Simple examples: Ashokan edicts, Chola inscriptions – Basic dating methods - Eras – Astronomical details - Short case study – Introduction to documentation.

PRACTICAL COMPONENT (VERY IMPORTANT – UG LEVEL)

Record Notebook (Compulsory)

Students should maintain a simple and structured record:

1. Definitions (short notes)
2. Pictures of inscription types (with labels)
3. Script practice (basic letters only)
4. One simple transcription exercise
5. One case study (short)
6. Observation notes (challenges in reading inscriptions)

TEXTBOOKS

1. Majumdar, R. K., HISTORIOGRAPHY, Surjeet Book Depot, Delhi, 2001.
2. Siddiqui, Iqtidar Husain, INDO-PERSIAN HISTORIOGRAPHY, Primus Books, New Delhi, 2010.

REFERENCE BOOKS

1. Sircar, D. C., INDIAN EPIGRAPHY, Motilal Banarsidass.
2. Bühler, Georg, INDIAN PALEOGRAPHY.
3. Salomon, Richard, INDIAN EPIGRAPHY: A GUIDE TO THE STUDY OF INSCRIPTIONS IN SANSKRIT, PRAKRIT AND OTHER INDO-ARYAN LANGUAGES.
4. Dani, A. H., INDIAN PALEOGRAPHY.
5. Mahalingam, T. V., SOUTH INDIAN POLITY (for inscriptional references).

24UAB381: REMOTE SENSING TECHNOLOGY: GIS AND GPS

Contact Hours/Week: 4

Credits: 2

Internal Mark: 40

External Mark: 60

Course Outcomes (COs)

At the end of the course, the student will be able to:

UNIT		COURSE OUTCOME	LEVEL
UNIT I	CO 1	Understand principles and components of RS, GIS, and GPS	K1-K5
UNIT II	CO2	Acquire, process, and analyze satellite images and spatial data	K1- K4
UNIT III	CO3	Apply GIS techniques for spatial data modeling and analysis	K1-K4
UNIT IV	CO4	Evaluate geospatial data for decision-making in environmental and urban planning	K1- K5
UNIT V	CO5	Develop a small RS/GIS/GPS project integrating all tools	K1- K6

SYLLABUS

Unit I: Introduction to Remote Sensing (12 Hours)

Definition, concepts, and types of remote sensing - Electromagnetic spectrum and sensors - Satellite systems and orbital characteristics - Applications of remote sensing.

Unit II: Geographic Information Systems (GIS) (12 Hours)

GIS concepts, components, and architecture - Spatial data models: vector and raster - Georeferencing and digitization - GIS applications in environmental and urban planning.

Unit III: Global Positioning System (GPS) (12 Hours)

Principles of GPS and satellite navigation - GPS receivers, accuracy, and errors - Data collection, processing, and mapping - Applications of GPS in field surveys.

Unit IV: Data Analysis and Integration (12 Hours)

Remote sensing image processing techniques - Spatial analysis, overlay, and geostatistical methods - Integration of RS, GIS, and GPS data - Case studies on environmental monitoring and disaster management.

Unit V: Practical Component / Project (12 Hours)

Hands-on exercises in RS image interpretation - GIS data modeling and spatial analysis
- GPS-based field data collection - Project: Integrating RS, GIS, and GPS for real-world applications.

Textbooks

1. Lillesand, T., Kiefer, R. W., & Chipman, J. (2015). REMOTE SENSING AND IMAGE INTERPRETATION. Wiley.
2. Burrough, P. A., & McDonnell, R. A. (2015). PRINCIPLES OF GEOGRAPHICAL INFORMATION SYSTEMS. Oxford University Press.
3. Jensen, J. R. (2016). INTRODUCTORY DIGITAL IMAGE PROCESSING: A REMOTE SENSING PERSPECTIVE. Pearson.

Reference Books

1. Chang, K. (2017). INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS. McGraw-Hill.
2. Campbell, J. B., & Wynne, R. H. (2011). INTRODUCTION TO REMOTE SENSING. Guilford Press.
3. DeMers, M. N. (2009). FUNDAMENTALS OF GEOGRAPHIC INFORMATION SYSTEMS. Wiley.