

RAJEEV GANDHI GOVT. P.G. COLLEGE AMBIKAPUR

DISTT- SURGUJA, C.G.



SYLLABUS

BA (OLD Course)

Semester –V and VI

SESSION 2023 – 24

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Rajeev Gandhi Govt. P. G. College Ambikapur , Chhattisgarh

B.A. Semester - V

Theory (OLD Course)

Paper-REMOTE SENSING AND GIS

Max. Marks : 50

Unit I	Basics of Remote Sensing: definition, history, and scope; Electro magnetic Radiation: Characteristics, Spectral Regions and and Bonds; Interaction with earth surface features and atmosphere; Spectrul Signature.
Unit II	Types of Remote Sensing: Air born and Space brne; Aeral photos: Types and Characteristics; Remote Sensing satellites: Platforms and sensors: activ and Passive, sensor charactoristics: spatial resolution, spectrol Resolution, radiometric resolution, temporal resolution. Product.
Unit III	Visual and Digital image processing techniques; Remote sensing application inresource mapping and environmental monitoring, remote sensing in India: development and Growth. Indian Satelites, Space Organizations and data products.
Unit IV	Introduction of GIS : Definition of Geoinformatics , Scope and Importance of Geoinformatics, History of GIS, Components of GIS, Functions of GIS, GIS Tasks- Input, Manipulation, Management,Query analysis, Visualization, Toposheets, Surveying, Aerial photographs, Satellite data and images, Data Types - Spatial and Non spatial.
Unit V	Data model and data analysis: Raster Data and their characteristics, Vector data and their characteristics, Raster data analysis- grid cells or pixels. Vector data analysis- Spatial data, Generation in Vector Format, Spatial and non Spatial data Management. Spatial information Technology.

Books Recommended:

1. Bhatta, B. (2010) : Remote Sensing and GIS, Oxford University Press,New Delhi.
2. Campbell, J.B. (2002) : Introduction of Remote Sensing. 5th edition, Taylor and Francis, London.
3. Curran, P.J. (1985) : Principles of Remote Sensing . Longman , London.
4. Kang-tsung Change (2003) Geographic Information System, Tata Macgraw Hill, New Delhi.
5. Lillesand, T.M. and Kiefer, R.W. (2000): Remote Sensing and Image Interpretation. 4th edition. John Wiley and Sons, Ney Yark.
6. Lo Albert, C.P. and Young, K.W. (2003): Concepts and Techniques of Geographical Information System, Prentice Hall of India Pvt. Ltd., New Delhi.
7. Nag Prithvish and Kudrat M. (1998): Disital Remote Sensing, Concept Publishing Company, New Delhi.
8. Star J, and J. Estes, (1994), Geographic Information Systems : An Introduction , Prentice Hall, New Jersey.
9. Williams J. (1995): Geographic information from space, John Wiley and Sons, England,

GEOGRAPHY OF CHHATTISGARH (Theory)

Max. Marks : 50

(Paper Code-0249)

Unit I	Physical Features : Geographical Structure, Relief and Physiographic Rgions, Drainage, Climate.
Unit II	Natural Resources: Soils - Types, characteristics and their Distribution. Water Resources (Major Irrigation and Hydel Power Projects), Forests- types, Distribution , Conservation of Forest. Mineral Resources - iron - ore, Coal, Dolomite Lime Stone, Bauxite, etc. Power Resources of Chhattisgarh.
Unit III	Agriculture and Population - Agriculture: Cereals, Pulses and other crops. Population: Growth, Distribution and Density; Tribal Populations; and Urban and Rural Population.
Unit IV	Industries- Iron and Steel, Cement , Sugar, Aluminum; Industrial Regions of Chhattisgarh.
Unit V	Trade and Transport, Tourism, Socio- Economic Development of Chhattisgarh.

Books Recommended:

1. Jha, Vibhash Kumar and Saumya Naiyyar (2013) Chhattisgarh Samagra, Chhattisgarh Rajya Hindi Granth Akadami Raipur.
2. Kumar, Pramila (2003): Chhattisgarh Ek Bhaugolik Addhyayan. Madhya Pradesh Hindi Granth Akadami.
3. Nagesh Jitendra and at all (2014) : Chhattisgarh Sandarbh 2014 Jansampark Vibhag, C.G. Govt. Raipur.
4. Tiwari, Vijay Kumar () : Geography of Chhattisgarh , Himalaya Publishing House, Pvt. Ltd.
5. Tripathi, Kauslendra and Purshottam Chandrakar (2001): Geography of Chhattisgarh, Sharda Prakashan, Aazad Nagar, Bilaspur.
6. Verma, L.N. (2017) : Geograpy of Chhattisgarh, Madhya Pradesh Hindi Granth Kcadami, Bhopal.

Rajeev Gandhi Govt. P. G. College Ambikapur , Chhattisgarh

B.A. Semester - VI

PRACTICAL

Max. Marks : 50

SECTION A (M.M. 20)

Unit I	Graphical Representation: Band Graph, Climograph, Square Root, Cube- Root.
Unit II	Topographical Sheets: Classification and Numbering System (National and International), Interpretation, Interpretation of Topographical Sheets with respect to cultural and physical features.
Unit III	Satellite Imageries : Describing the Marginal Information, Image Interpretation: Visual Methods - Landuse/ Landcover Mapping. Use and Application of GPS.

SECTION B

SURVEYING AND FIELD REPORT

(M.M. 20)

Unit IV	Surveying: Plane Table Survey, Basic Principles of plane Table surveying, Plane table survey including intersection and resection.
Unit V	Field work and field report: physical, social and economic survey of a micro-region.

PRACTICAL RECORD AND VIVA VOICE

(M.M. 10)

Books Recommended:

1. Archer, J.E. and Dalton, T.H. (1968) : *Field Work in Geography*. William Clowes and Sons Ltd. London and Beccles.
2. Bolton, T. and Newbury, P.A. (1968) : *Geography through Fieldwork*. Blandford Press, London.
3. Campell, J.B. (2003) : *Introduction to Remote Sensing*. 4th edition. Talor and Francis, London.
4. Chauniyal, D.D. (2004) : *Remote Sensing and Geographical Information System (in Hindi)*, Sharda Pustak Bhawan , Allahabad.
5. Cracknell, A. and Ladson, H. (1990) : *Remote Sensing Year Book*. Taylor and Francis, London.
6. Curran, P.J. (1985) : *Principles of Remote Sensing*. Longman , London.
7. Davis, RE. and Foote, F.S. (1953) : *Surveying* 4th edition, McGraw Hill Publication, New York.
8. Deekshatulu, B.L. and Ranjan, Y.S. (ed) (1984) : *Remote Sensing*. Indian Academy of Science, Bangalore.
9. Floyd, F. and Sbins, Jr. (1986) : *Remote Sensing : Principles and Interpretation*. W.H. Freeman, New York.

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