



**SOUTH KOKAN EDUCATION SOCIETY'S**  
**RANI PARVATI DEVI COLLEGE OF ARTS AND COMMERCE, BELAGAVI.**  
**(AUTONOMOUS)**

Affiliated to Kitturu Rani Channamma University, Belagavi

**THE COURSE STRUCTURE & SYLLABUS OF B.A**

**GEOGRAPHY**

**V SEMESTER**

**Academic Year 2026-27 Onwards**



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**DEPARTMENT OF GEOGRAPHY**  
**BOARD OF STUDIES**

| Sl.No. | Name                                                                                                                                                | Designation                                                      |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| 1      | Dr.Sunanda I. Kittali<br>Head, Associate Professor in Geography,<br>R.P.D. College, Belagavi.                                                       | Chairperson                                                      |
| 2      | Dr.Manjunath N. K<br>Assistant Professor in Geography,<br>Rani Channamma University, Belagavi.                                                      | Member<br>(V.C. Nominee)                                         |
| 3      | Dr. D.H. Pawar<br>Associate Professor in Geography,<br>Shivaji University, Kolhapur, Maharashtra.                                                   | Member<br>(Expert from Outside<br>Parent University)             |
| 4      | Dr.(Mrs). Bhanumati Pilli<br>Assistant Professor in Geography,<br>ParvatibaiChowgule College of Arts and Science,<br>Autonomous, Margao. South Goa. | Member<br>(Expert from Outside<br>Parent University)             |
| 5      | Dr. G.N. Sheeli<br>Associate Professor in Geography,<br>Lingaraj College (Autonomous), Belagavi.                                                    | Member<br>( Meritorious Alumni)                                  |
| 6      | Mr.Prateek P. Joshi<br>Wise Tech Global Company, Bangaluru.                                                                                         | Member<br>(Representative from<br>Industry /Corporate<br>Sector) |
| 7      | Dr. M.S. Kurani<br>Associate Professor in Geography, R.P.D. College,<br>Belagavi                                                                    | Member                                                           |
| 8      | Miss. Sanskruti. B.Halagali<br>Lecturer, Dept. of Geography,<br>R.P.D. College, Belagavi                                                            | Member                                                           |
| 9      | Mr. Manjunath B. Dodamani<br>Lecturer, Dept. of Geography,<br>R.P.D. PU College, Belagavi                                                           | Invitee                                                          |



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**DEPARTMENT OF GEOGRAPHY**  
**COURSE STRUCTURE (V Semester)**

| Sem | Type of Course | Theory/Practical | Course Code | Course Title                                                               | Teaching Hrs./Week | Total Hrs./Sem | Duration of Exam in Hrs | MARKS     |           |       | Credits |
|-----|----------------|------------------|-------------|----------------------------------------------------------------------------|--------------------|----------------|-------------------------|-----------|-----------|-------|---------|
|     |                |                  |             |                                                                            |                    |                |                         | Formative | Summative | Total |         |
| V   | DSC-5.1        | Theory           |             | Economic and Commercial Geography of the World                             | 4                  | 56             | 3                       | 20        | 80        | 100   | 3       |
| V   | DSC-5.2        | Theory           |             | Evolution of Geographical Thought                                          | 4                  | 56             | 3                       | 20        | 80        | 100   | 3       |
| V   | DSC-5.3        | Practical        |             | Statistical Methods in Geography                                           | 4                  | 52             | 3                       | 10        | 40        | 50    | 2       |
| V   | SEC-2          | Practical        |             | Skill Enhancement Course<br>Basics of Quantitative Techniques in Geography | 4                  | 52             | 3                       | 10        | 40        | 50    | 2       |



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**GEOGRAPHY**

**FIFTH SEMESTER (THEORY)**

**Course Title : DSC- 5.1 ECONOMIC AND COMMERCIAL GEOGRAPHY OF THE WORLD**

**Subject code: 1556**

**Credits : 03**

**Contact Hours : 56**

**Weekly Hours : 04**

**Semester End Examination : 80 marks**

**Internal Assessment : 20 Marks**

**Course aims and objectives:**

- To provide a basic understanding of the concepts and scope of Economic and Commercial Geography.
- To develop knowledge of agricultural, industrial, transport, and trade activities.
- To promote understanding of sustainable development and resource conservation.

**Course Outcomes (COs):**

After the completion of course, the students will have the ability to:

**CO1:** Explain concepts and approaches of economic and commercial geography.

**CO2:** Analyze agricultural systems, productivity, and traditional farming practices.

**CO3:** Analyze industrial pattern and factors influencing their location

**CO4:** Evaluate role of transport and trade in economic development.

**CO5:** Apply sustainable development and resource conservation principle in regional development.

**Pedagogy:** Computer-Assisted Learning. Use of Multimedia (Audio-Video), use of Equipment, Apparatus, Maps and Charts in teaching, Sessions, Project and field Based Learning, Study Tours, Case studies, Presentations, Classroom Seminars and group discussion.

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| <b>TITLE OF THE PAPER- I: 5.1-<br/>ECONOMIC AND COMMERCIAL GEOGRAPHY OF THE WORLD</b>                                                                                                                                                                                                                                                                                                                                                     |  | <b>56 Hours</b> |
| <b>UNIT I : Fundamentals of Economic Geography:</b>                                                                                                                                                                                                                                                                                                                                                                                       |  | <b>10 Hours</b> |
| <ul style="list-style-type: none"> <li>• Meaning, Definition, Nature and Scope of Economic and Commercial Geography</li> <li>• Significance of Economic and Commercial Geography</li> <li>• Types of Economic and Commercial Activities</li> </ul>                                                                                                                                                                                        |  |                 |
| <b>UNIT II: Primary Economic Activities (Agriculture):</b>                                                                                                                                                                                                                                                                                                                                                                                |  | <b>12 Hours</b> |
| <ul style="list-style-type: none"> <li>• Types of Agriculture: Subsistence Agriculture, Commercial Agriculture, Plantation Agriculture and Mixed Farming</li> <li>• Factors Affecting Agricultural Productivity: Physical Factors and Socio-economic Factors. Agricultural Productivity and Food Security.</li> <li>• Indian Knowledge System : Traditional Agricultural Practices and Indigenous Irrigation Systems in India.</li> </ul> |  |                 |
| <b>UNIT III: Secondary Economic Activities (Industries):</b>                                                                                                                                                                                                                                                                                                                                                                              |  | <b>12 Hours</b> |
| <ul style="list-style-type: none"> <li>• Meaning and classification of industries</li> <li>• Traditional Cottage and Village industries</li> <li>• Industrial Location: Factors influencing industrial location</li> <li>• Major Industrial Regions of the World<br/>weather station and submit a report</li> </ul>                                                                                                                       |  |                 |
| <b>UNIT IV: Tertiary Economic Activities (Transport, Trade)</b>                                                                                                                                                                                                                                                                                                                                                                           |  | <b>12 Hours</b> |
| <ul style="list-style-type: none"> <li>• Significance of transportation in regional economic development</li> <li>• Trade and Commerce: Types of trade, Internal trade, International trade, Global trade, and WTO.</li> <li>• E-Commerce, Retail store management, and high-tech transportation</li> </ul>                                                                                                                               |  |                 |
| <b>UNIT V: Sustainable Development:</b>                                                                                                                                                                                                                                                                                                                                                                                                   |  | <b>10 Hours</b> |
| <ul style="list-style-type: none"> <li>• Concept of sustainable development</li> <li>• Green economy and Resource conservation</li> <li>• Community-based Natural Resource Management and sustainable Resource management in India.</li> </ul>                                                                                                                                                                                            |  |                 |
| <b>Assignment/ Field Work/ Report Writing:</b> <ol style="list-style-type: none"> <li>a) Local and Regional Economic Activities: A case study of Belagavi Region.</li> <li>b) Visit to nearby industrial areas in your local Region</li> <li>c) Markets, trading centres and commercial activities of Belagavi region</li> </ol>                                                                                                          |  |                 |
| <b>Total Teaching Hours</b>                                                                                                                                                                                                                                                                                                                                                                                                               |  | <b>56</b>       |

**Essential References:**

1. Economic Geography – H.M. Saxena
2. A Comprehensive Economic Geography (Rajesh Publications)
3. Economic and Commercial Geography of India – Sharma & Coutinho
4. Economic and Commercial Geography of India – C.B. Mamoria
5. Physical, Human & Economic Geography – D.R. Khullar

**Additional References:**

1. Economic Geography of India- Geography BA/BSc (NEP Syllabus) by D.R. Khullar
2. Alexander, J. W. (1988). *Economic Geography*. Prentice Hall, New Jersey.
3. Siddhartha, K. & Mukherjee, S. (1998). *Economic Geography*. Kitab Mahal, Allahabad.
4. Tirtha, R. (2002). *Geography of India*. Rawat Publications, Jaipur.
5. Maurya, S. D. (2013). *Economic Geography*. Pravalika Publications, Allahabad.
6. Saxena, H. M. (2004). *Economic Geography*. Rawat Publications, Jaipur.

**Web Resources:**

1. <https://www.scribd.com/document/882092428/Unit-1-Economic-Geography>
2. <https://www.scribd.com/document/908942259/Economic-geography>
3. <https://www.geographynotespdf.com/आर्थिक-भूगोल/>
4. <https://www.tandfonline.com/journals/recg20>



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**GEOGRAPHY**

**FIFTH SEMESTER (THEORY)**

**Course Title : DSC- 5.2 EVOLUTION OF GEOGRAPHICAL THOUGHT**

**Subject code: 1558**

**Credits : 03**

**Contact Hours : 56**

**Weekly Hours : 04**

**Semester End Examination : 80 marks**

**Internal Assessment : 20 Marks**

**Course aims and objectives:**

- to understand the evolution of Geographical ideas
- to use them for scientific analysis of man-environment relationship for better planning and human welfare.

**Course Outcomes (COs):**

After the completion of course, the students will have ability to:

**CO1:** Trace the origin and development of geographical ideas across ancient time.

**CO2:** Evaluate the contributions of eminent geographers

**CO3:** Examine the development of possibilism

**CO4:** Appraise the scientific contributions of Modern Geographical Thinkers

**CO5:** Apply concepts to contemporary issues and compare and contrast the different approaches to scientific geography.

**Pedagogy:** Computer-Assisted Learning. Use of Multimedia (Audio-Video), use of Equipment, Apparatus, Maps and Charts in teaching,, Project and field Based Learning, Study Tours, Case studies, Presentations, Classroom Seminars and group discussion.

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| <b>TITLE OF THE PAPER 2:<br/>5.2: EVOLUTION OF GEOGRAPHICAL THOUGHT</b>                                                                                                                                                                                                                                                                                                                                     | <b>56 Hours</b> |
| <b>UNIT I : Evolution of Geographical Thought</b>                                                                                                                                                                                                                                                                                                                                                           | <b>12 Hours</b> |
| <ul style="list-style-type: none"> <li>● Origin and Development of Geography</li> <li>● Geographical knowledge in ancient times: Contributions of Greek, Roman, Arab and Indian</li> <li>● Geography during Medieval and renaissance periods</li> <li>● Development of modern Geography</li> <li>● Transition from descriptive to scientific and analytical geography.</li> </ul>                           |                 |
| <b>UNIT II: Determinism</b>                                                                                                                                                                                                                                                                                                                                                                                 | <b>12 Hours</b> |
| <ul style="list-style-type: none"> <li>● Concept and principles of Environmental Determinism and its relevance in modern world</li> <li>● Contributions of Friedrich Ratzel, Ellen Churchill Semple and Ellsworth Huntington, W.M Devis.</li> </ul>                                                                                                                                                         |                 |
| <b>UNIT III: Possibilism and Neo-determinism</b>                                                                                                                                                                                                                                                                                                                                                            | <b>12 Hours</b> |
| <ul style="list-style-type: none"> <li>● Concept and development of possibilism and its relevance in modern world</li> <li>● Contributions of Vidal de la Blache and Lucien Febvre;</li> <li>● Neo-determinism and its relevance in modern geographical studies.</li> </ul>                                                                                                                                 |                 |
| <b>UNIT IV: Contributions of Modern Geographical Thinkers:</b>                                                                                                                                                                                                                                                                                                                                              | <b>12 Hours</b> |
| <ul style="list-style-type: none"> <li>● Contribution of Alexander von Humboldt in modern scientific geography</li> <li>● Scientific contributions of Carl Ritter in Development of Regional Geography</li> <li>● Contributions of Richard Hartshorne in modern geography</li> </ul>                                                                                                                        |                 |
| <b>UNIT V: Contemporary approaches and Trends in Geographical Thought:</b>                                                                                                                                                                                                                                                                                                                                  | <b>8 Hours</b>  |
| <ul style="list-style-type: none"> <li>● Contemporary approaches : Behavioral , radical and scientific approaches</li> <li>● Trends in Geographical Thought with special reference to India</li> </ul> <p><b>Assignment/ Field Work/ Report Writing:</b></p> <p>a) Relevance of Determinism and Possibilism in Environmental Planning</p> <p>b) Quantitative Revolution in Modern Geographical Analysis</p> |                 |
| <b>Total Teaching Hours</b>                                                                                                                                                                                                                                                                                                                                                                                 | <b>56</b>       |

**Essential References:**

1. Majid Husain - Evolution of Geographical Thought, (7th ed.). Rawat Publications. New Delhi
2. Geographical Thought — R.D. Dikshit
3. Sudeeptha Adhikari: Fundamentals of Geographical Thought
4. Geographical Thought — Lalita Rana
5. Husain, M. (2014). Evolution of Geographical Thought (7th ed.). Rawat Publications.
6. Dikshit, R. D. (2013). Geographical Thought: A Contextual History of Ideas. Prentice Hall India.
7. Adhikary, S. (2011). Fundamentals of Geographical Thought. Orient BlackSwan.
8. Rana, L. (2010). Geographical Thought. Prentice Hall India.
9. R. D. Dikshit – Geographical Thought: A Contextual History of Ideas
10. Tim Unwin – The Place of Geography
11. Richard Peet – Modern Geographical Thought
12. David Livingstone – The Geographical Tradition
13. R. J. Johnston – Geography and Geographers: Anglo-American Human Geography Since 1945

**Additional References**

1. Unwin, Tim – The Place of Geography
2. Haggett, Peter – Geography: A Modern Synthesis
3. Hartshorne, Richard – The Nature of Geography
4. James, Preston E. – All Possible Worlds: A History of Geographical Ideas
5. Taylor, Peter J. & Flint, Colin – Political Geography: World-Economy, Nation-State and Locality,

**Web Resources:**

1. <https://lotusarise.com/evolution-of-geographical-thought-notes/>
2. <https://youtu.be/cjyQuaMOvv0?si=nfZn-MNdSSmwkMW2>
3. [https://tnou.ac.in/eslm/PG/M.SC%20GEOGRAPHY/III%20Sem/MGEOS-31%20Geographical%20Thought\\_Book.pdf](https://tnou.ac.in/eslm/PG/M.SC%20GEOGRAPHY/III%20Sem/MGEOS-31%20Geographical%20Thought_Book.pdf)
4. <https://www.scribd.com/document/410101002/Geographical-Thought-Class-Notes>



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**GEOGRAPHY**

**FIFTH SEMESTER (PRACTICAL)**

**Course Title : DSC- 5.3 STATISTICAL METHODS IN GEOGRAPHY**

**Subject code: 1557**

**Credits : 02**

**Contact Hours : 52**

**Weekly Hours : 04**

**Semester End Examination : 40 marks**

**Internal Assessment : 10 Marks**

**Course aims and objectives:**

- to analysis spatial data objectively to understand patterns, relationship and to support scientific planning.

**Course Outcomes (COs):**

Students will be able to:

**CO1:** Understand the role of Statistics in Geography .

**CO2:** Calculate and interpret the central data points of spatial distributions.

**CO3:** Measure and compare the variability and spread of geographical phenomena.

**CO4:** Analyze and interpret the strength of relationships between geographical variables

**CO5:** Apply correlation and regression.

**Pedagogy:** Computer-Assisted Learning. Use of Multimedia (Audio-Video), use of Equipment, Apparatus, Maps and Charts in teaching, One-to-One teaching method in Practical Sessions.

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| <b>TITLE OF THE PAPER :5.3-STATISTICAL METHODS IN GEOGRAPHY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>52 Hours</b> |
| <b>UNIT I : Basic Statistical Methods in Geography</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>10 Hours</b> |
| <ul style="list-style-type: none"> <li>• Meaning, nature and importance of statistics in geography</li> <li>• Types and sources of geographical data – quantitative and qualitative data</li> <li>• Techniques of data collection: Preparation of questionnaires and schedules for field surveys.</li> <li>• Sampling: concept, methods and types of sampling: Sampling of households, population, agricultural land or other geographical features.</li> <li>• Tabulation and presentation of local / regional data</li> </ul> |                 |
| <b>UNIT II: Measures of Central Tendency :</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>10 Hours</b> |
| <ul style="list-style-type: none"> <li>• Frequency Table, Histograms, Frequency Polygons and Cumulative Frequency Curves.</li> <li>• Concept and calculation of measures of central tendency :               <ol style="list-style-type: none"> <li>i. Arithmetic Mean</li> <li>ii. Median and</li> <li>iii. Mode</li> </ol>               (Practical exercise by using local/ regional data related to population, agriculture, temperature etc.)             </li> </ul>                                                      |                 |
| <b>UNIT III: Measures of Dispersion:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>10 Hours</b> |
| <ul style="list-style-type: none"> <li>• Concept and calculation of measures of dispersion :               <ol style="list-style-type: none"> <li>i. Range</li> <li>ii. Quartile Deviation</li> <li>iii. Mean Deviation</li> <li>iv. Standard Deviation and its Coefficient of variation</li> </ol>               (Practical exercise by using local or regional data related to population, agriculture, temperature etc.)             </li> </ul>                                                                             |                 |
| <b>UNIT IV: Correlation and Regression Techniques</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>12 Hours</b> |
| <ul style="list-style-type: none"> <li>• Meaning, concept and types of correlation in geographical studies</li> <li>• Scatter diagrams and interpretation of correlation<br/>Practical applications by using local/regional data               <ol style="list-style-type: none"> <li>1. Rainfall and agriculture production</li> <li>2. Population and Urbanisation</li> <li>3. Temperature and crop productivity</li> <li>4. Distance from market and agriculture land value</li> </ol> </li> </ul>                           |                 |
| <b>UNIT V: Spatial Statistical Techniques:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>10 Hours</b> |
| <ul style="list-style-type: none"> <li>• Identification and Applications of Statistical methods in :</li> <li>• Population data (Ex: Population distribution of Belagavi district)</li> <li>• Agriculture data (Ex: Agricultural production in selected talukas)</li> <li>• Weather and Climatic data (Ex: Spatial and temporal variation in rainfall)</li> </ul>                                                                                                                                                               |                 |
| <b>Total Teaching Hours</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>52</b>       |

**Essential References:**

1. Gregory, S. – Statistical Methods and the Geographer  
A classic reference for statistical techniques and their applications in geographical analysis.
2. Yeates, M. – An Introduction to Quantitative Analysis in Human Geography  
Useful for understanding quantitative methods and their application to human geographical problems.
3. Hammond, R. & McCullagh, P. S. – Quantitative Techniques in Geography: An Introduction
4. Mahmood, A. – Statistical Methods in Geographical Studies. Rajesh Publications.
5. Sarkar, A. – Practical Geography: A Systematic Approach. Orient BlackSwan.
6. Singh, R. L. & Singh, R. P. B. – *Elements of Practical Geography*. Kalyani Publishers.

**Additional References:**

1. Haining, R. – Spatial Data Analysis: Theory and Practice  
An important reference for spatial statistics and quantitative geographical analysis.
2. Taylor, P. J. – Quantitative Methods in Geography: An Introduction to Spatial Analysis  
Useful for understanding spatial analysis and quantitative approaches in geography.
3. Cliff, A. D. & Ord, J. K. – Spatial Processes: Models & Applications  
Useful for advanced study of spatial statistical techniques and spatial patterns.
4. King, L. J. – Statistical Analysis in Geography Covers statistical concepts and their applications to Geographical data.

**Web Resources:**

1. [https://www.researchgate.net/publication/391237105\\_Statistical\\_Techniques\\_in\\_Geography\\_Descriptive\\_Inferential](https://www.researchgate.net/publication/391237105_Statistical_Techniques_in_Geography_Descriptive_Inferential)
2. <https://www.internetgeography.net/statistical-techniques-in-geography/>
3. <https://methods.sagepub.com/book/download/statistical-methods-for-geography/back-matter/d158.pdf>
4. <https://www.scribd.com/document/859970566/Practical-3>



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**GEOGRAPHY**

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| <b>FIFTH SEMESTER (SEC)</b>                                                                                                                                                                                                                                                                                                                                                                                      |                                       |
| <b>COURSE TITLE : SEC-2: BASICS OF QUANTITATIVE TECHNIQUES IN GEOGRAPHY</b>                                                                                                                                                                                                                                                                                                                                      |                                       |
| <b>(SKILL ENHANCEMENT COURSE)</b>                                                                                                                                                                                                                                                                                                                                                                                |                                       |
| <b>Subject code: 6556</b>                                                                                                                                                                                                                                                                                                                                                                                        | <b>Credits : 02</b>                   |
| <b>Contact Hours : 52</b>                                                                                                                                                                                                                                                                                                                                                                                        | <b>Weekly Hours : 04</b>              |
| <b>Semester End Examination : 40 marks</b>                                                                                                                                                                                                                                                                                                                                                                       | <b>Internal Assessment : 10 Marks</b> |
| <b>Course aims and objectives:</b> <ul style="list-style-type: none"><li>• To introduce statistical techniques, relevant to geographical research.</li><li>• To acquaints students about their potentials and applications.</li></ul>                                                                                                                                                                            |                                       |
| <b>Course Outcomes (COs):</b>                                                                                                                                                                                                                                                                                                                                                                                    |                                       |
| Students will be able to:<br><b>CO1:</b> Understand the scope and relevance of quantification.<br><b>CO2:</b> Apply foundational math operations such as to calculate ratios, proportions, growth rates,<br><b>CO3:</b> Develop the analytical skills to model temporal variations and spatial distributions.<br><b>CO4:</b> Evaluate real-world population and agricultural dynamics Computer-assisted learning |                                       |
| <b>Pedagogy:</b> Computer-Assisted Learning. use of Multimedia (Audio-Video), use of Equipment, Apparatus, Maps and Charts in teaching, One-to-One teaching method in Practical Sessions, Project and field Based Learning, Presentations, Classroom Seminars and group discussion.                                                                                                                              |                                       |
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| <b>TITLE OF THEPPER : SKILL ENHANCEMENT COURSE</b><br><b>SEC-2: BASICS OF QUANTITATIVE TECHNIQUES IN GEOGRAPHY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | <b>52 Hours</b> |
| <b>UNIT I : Fundamentals of Quantitative Techniques</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | <b>10 Hours</b> |
| <ul style="list-style-type: none"> <li>Nature, Scope and significance of quantitative techniques in Geography</li> <li>Quantitative Revolutions in Geography</li> <li>Types and sources of quantitative data<br/>Collection and use of Local and Regional Geographical Data: Population, rainfall, temperature, agriculture, land use, transport, industries, trade and other socio-economic data.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                 |
| <b>UNIT II: Basic Mathematical Techniques</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | <b>14 Hours</b> |
| <ul style="list-style-type: none"> <li><b>Ratios and Proportions:</b><br/>Application to population density, sex and literacy ratio, worker–population ratio and land-use proportions using local/regional data.</li> <li><b>Percentages, Averages and Growth Rates:</b><br/>Application to population growth, agricultural production, rainfall variation, urban growth and changes in industrial activities of the local/regional area.</li> <li><b>Index Numbers and their Applications:</b><br/>Application to changes in prices, agricultural production, cost of living, transport fares and other economic indicators at the local/regional level.</li> <li><b>Basic Algebraic Methods:</b><br/>Application to solving simple geographical problems involving population, distance, area, production, growth and resource distribution.</li> </ul> |  |                 |
| <b>UNIT III: Quantitative Methods in Geography</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | <b>14 Hours</b> |
| <ul style="list-style-type: none"> <li><b>Time Series Analysis:</b> Concept, methods and interpretation of time-dependent geographical data</li> <li><b>Trend Analysis:</b> Identification and measurement of trends in geographical data</li> <li><b>Spatial Distribution Analysis:</b> Concept, methods and interpretation of spatial patterns</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                 |
| <b>UNIT IV: Applications of Quantitative Methods in Geography</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | <b>14 Hours</b> |
| <ul style="list-style-type: none"> <li><b>Time Series Analysis:</b> Application to local and regional data on population, rainfall, temperature, agricultural production and industrial growth.</li> <li><b>Trend Analysis:</b> Application to population growth, urbanisation, agricultural production, land-use change and economic activities of Belagavi region and Karnataka.</li> <li><b>Spatial Distribution Analysis:</b> Application to the distribution of population, industries, agriculture, transport, settlements and other geographical phenomena at the local and regional levels.</li> </ul>                                                                                                                                                                                                                                            |  |                 |
| <b>Total Teaching Hours</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | <b>52</b>       |

**Essential References:**

1. Ebdon, D. – Statistics in Geography: A Practical Approach. Basil Blackwell.
2. Gregory, S. – Statistical Methods and the Geographer. Longman.
3. Hammond, R. & McCullagh, P. S. – Quantitative Techniques in Geography: An Introduction. Clarendon Press.
4. Yeates, M. – An Introduction to Quantitative Analysis in Human Geography. McGraw-Hill.
5. Taylor, P. J. – Quantitative Methods in Geography: An Introduction to Spatial Analysis. Houghton Mifflin.
6. King, L. J. – Statistical Analysis in Geography. Prentice-Hall.
7. Haining, R. – Spatial Data Analysis: Theory and Practice. Cambridge University Press.
8. Johnston, R. J. – Multivariate Statistical Analysis in Geography: A Primer on the General Linear Model. Longman.

**Additional References:**

1. Provides a systematic introduction to quantitative techniques used in geographical research.
2. Ebdon, D. – Statistics in Geography: A Practical Approach. Particularly useful for practical statistical analysis, data interpretation and geographical applications.
3. Taylor, P. J. – Quantitative Methods in Geography: An Introduction to Spatial Analysis.
4. Haining, R. – Spatial Data Analysis: Theory and Practice..

**Web Resources:**

1. <https://www.scribd.com/document/866556518/Chapter-one-two-quantitative-Geography>
2. <https://orca.cardiff.ac.uk/59957/1/report-130906041556-.pdf>
3. <https://academic.oup.com/reference/62356/reference-article/554498467>
4. <https://www.scribd.com/document/853420764/Techniques-in-Geog-1-Complete>
5. <https://www.rawatbooks.com/geography/quantitative-methods-in-geography>
6. [https://www.academia.edu/Documents/in/Quantitative\\_Techniques\\_in\\_Geography](https://www.academia.edu/Documents/in/Quantitative_Techniques_in_Geography)



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**GEOGRAPHY**

**CERTIFICATE COURSE IN GIS**  
**(GEOGRAPHICAL INFORMATION SYSTEM)**

|                                                                                                                                                                                                                                                                                                                      |                                       |  |          |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--|----------|-----------|
| Program Name                                                                                                                                                                                                                                                                                                         | Certificate Course                    |  | Semester | V         |
| Course Title                                                                                                                                                                                                                                                                                                         | GEOGRAPHICAL INFORMATION SYSTEM (GIS) |  |          |           |
| Contact Hours                                                                                                                                                                                                                                                                                                        | 40 Hours                              |  |          |           |
| <b>Course Aims and Objectives:</b> <ul style="list-style-type: none"><li>To provide basic students with basic theoretical knowledge and hands on practical skills in Geographical information System (GIS)</li><li>To develop skills in spatial data analysis and digital interpretation</li></ul>                   |                                       |  |          |           |
| <b>Course learning outcomes:</b> <p>Students will be able to:</p> <p>CO1. to understand, manage, and analyze spatial information</p> <p>CO2. To define data structure in GIS</p> <p>CO3. Analyze geographical change analysis using geo processing tool</p> <p>CO4. Production of thematic maps in Arc GIS, QGIS</p> |                                       |  |          |           |
| <b>Pedagogy:</b> Assisted learning, Hands on Training of Practical with GIS Software, Project based learning, Spatial Analysis and Applications.                                                                                                                                                                     |                                       |  |          |           |
| CERTIFICATE COURSE                                                                                                                                                                                                                                                                                                   |                                       |  |          | 40 HOURSE |

| TITILE OF THE PAPER: GEOGRAPHICAL INFORMATION SYSTEM (GIS) |                                                                                                                                                                                                                       |          |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| I                                                          | Contents (Theory)                                                                                                                                                                                                     | 15 Hours |
|                                                            | <ul style="list-style-type: none"> <li>• <b>Basic spatial perspective and GIS concepts:</b> GIS definitions, concept of spaces, approaches and components, history and development of GIS.</li> </ul>                 |          |
|                                                            | <ul style="list-style-type: none"> <li>• <b>Spatial &amp; Non-spatial Data:</b> Data information, data type, data sources, characteristics of spatial and non-spatial data, raster and vector data models.</li> </ul> |          |
|                                                            | <ul style="list-style-type: none"> <li>• <b>Data Collection:</b> Data capture &amp; geo-processing sources, input methods for spatial &amp; non-spatial data, Editing, Re-Projection, Geo- Referencing.</li> </ul>    |          |
|                                                            | <ul style="list-style-type: none"> <li>• <b>Manipulation and Analysis of Data:</b> Measurement of lengths, perimeter and areas, queries, buffer analysis, topology</li> </ul>                                         |          |

| II                   | Contents (Practical)                                                                                                                                                                   | 25 Hours |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|                      | <ul style="list-style-type: none"> <li>• Introduction to GIS Software and its tools</li> </ul>                                                                                         |          |
|                      | <ul style="list-style-type: none"> <li>• GIS interpretation procedure</li> </ul>                                                                                                       |          |
|                      | <ul style="list-style-type: none"> <li>• Extraction data sources for GIS</li> </ul>                                                                                                    |          |
|                      | <ul style="list-style-type: none"> <li>• Introduction to satellite data products and maps types</li> </ul>                                                                             |          |
|                      | <ul style="list-style-type: none"> <li>• Cartesian coordinate system</li> </ul>                                                                                                        |          |
|                      | <ul style="list-style-type: none"> <li>• Displaying the data: Classification of spatial Data</li> </ul>                                                                                |          |
|                      | <ul style="list-style-type: none"> <li>• Spatial data Labeling and Creating Map Layout</li> </ul>                                                                                      |          |
|                      | <ul style="list-style-type: none"> <li>• Geo-processing Tools:               <ul style="list-style-type: none"> <li>○ Clip</li> <li>○ Dissolve</li> <li>○ Merge</li> </ul> </li> </ul> |          |
|                      | <ul style="list-style-type: none"> <li>• Buffering</li> </ul>                                                                                                                          |          |
| TOTAL TEACHING HOURS |                                                                                                                                                                                        | 40 Hours |

**Essential References:**

1. Basudebh Bhatta – Remote sensing and GIS
2. Aronoff, S. (1989). Geographic Information Systems: A Management Perspective. WDL Publications
3. DeMers, M. N. (2009). Fundamentals of Geographic Information Systems. Wiley.
4. Lo, C. P. & Yeung, A. K. W. (2007). Concepts and Techniques of Geographic Information Systems. Prentice Hall.
5. Clarke, K. C. (2014). Getting Started with Geographic Information Systems. Pearson.
6. Chrisman, N. (2002). Exploring Geographic Information Systems. Wiley.
7. Jensen, J. R. (2015). Introductory Digital Image Processing: A Remote Sensing Perspective. Pearson

#### **Additional References:**

1. Sarkar, A. (2015). Practical Geography: A Systematic Approach. Orient BlackSwan.
2. Reddy, A. S. (2002). Textbook of Remote Sensing and Geographical Information Systems. BS Publications.
3. Anji Reddy, M. (2008). Textbook of Remote Sensing and Geographical Information Systems. BS Publications.
4. Nag, P. & Kudra, M. (1998). Digital Remote Sensing. Concept Publishing Company.

#### **Web Resources:**

1. <https://www.esri.com/en-us/what-is-gis/overview>
2. <https://www.geeksforgeeks.org/dbms/spatial-data-types-and-models/>
3. <https://atlan.com/spatial-data/>
4. <https://www.paulamoraga.com/book-spatial/types-of-spatial-data.html>
5. <https://zoom.earth/maps/satellite/>
6. <https://eos.com/products/landviewer/>
7. <https://earth.google.com/web>

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**DEPARTMENT OF GEOGRAPHY**

**FORMATIVE ASSESSMENT FOR THEORY**

| <b>Assessment Type</b>                            | <b>Marks</b> |
|---------------------------------------------------|--------------|
| Internal Assessment Test 1                        | <b>05</b>    |
| Internal Assessment Test 2                        | <b>05</b>    |
| Assignment                                        | <b>05</b>    |
| Classroom Activities                              | <b>05</b>    |
| Total                                             | <b>20</b>    |
| <b>Formative Assessment as per the guidelines</b> |              |

**FORMATIVE ASSESSMENT FOR PRACTICAL**

| <b>Assessment Type</b>                            | <b>Marks</b> |
|---------------------------------------------------|--------------|
| Internal Assessment Test                          | <b>05</b>    |
| Lab records/lab work                              | <b>05</b>    |
| Total                                             | <b>10</b>    |
| <b>Formative Assessment as per the guidelines</b> |              |



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**GEOGRAPHY**  
**QUESTION PAPER PATTERN FOR THEORY**

**PAPER:**

**Time: 3 Hours**

**Maximum Marks-80**

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**Instructions to Candidates:**

- 1) All Sections are Compulsory.
  - 2) Draw neat maps and Diagrams wherever necessary.
- 

**SECTION- A**

**Answer any TEN of the following, each not exceeding 50 words.**

**2x10=20**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

**SECTION-B**

**Answer any FOUR of the following, each not exceeding 200 words**

**5x4=20**

- 13.
- 14.
- 15.
- 16.
- 17.
- 18.

**SECTION-C**

**Answer any THREE of the following, each not exceeding 500 words.**

**10x3=30**

- 19.
- 20.
- 21.
- 22.
- 23.

**SECTION-D**

**Answer any ONE of the following each not exceeding 500 words.**

**10x1=10**

24. -----
- OR**
-



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## **GEOGRAPHY THEORY**

### **QUESSTION PAPER BLUE PRINT FOR DSC**

| <b>Q</b> | <b>Section</b> | <b>Blue Print</b>                                         |
|----------|----------------|-----------------------------------------------------------|
| Q1.      | Section A      | 10X 2 (Out of 12)<br>Minimum Two questions from each unit |
| Q2.      | Section B      | 4X5 (Out of 6)<br>Minimum one question from each unit     |
| Q3.      | Section C      | 3 X10 (Out of 5)<br>Minimum one question from each unit   |
| Q4.      | Section D      | 1X10 (Out of 2)<br>Two questions from any unit            |