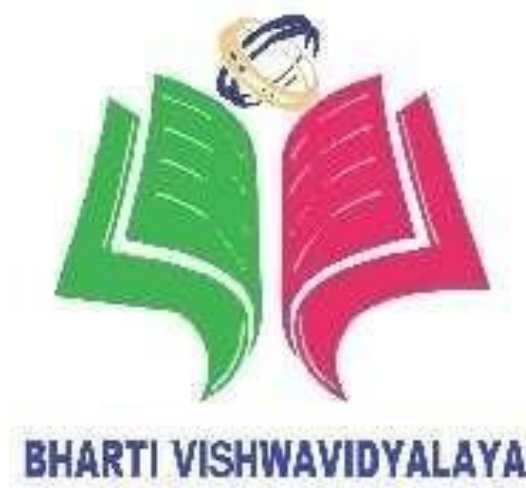


BHARTI VISHWAVIDHYALAYADURG (C.G.)

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SCHEME OF EXAMINATION

&

SYLLABUS

of

B.A. (Honours) Geography Semester Exam

UNDER

FACULTY OF

ARTS & HUMANITIES

(Approved by Board of Studies)

Effective from 2021- 2022



BHARTI VISHWAVIDYALAYA DURG
SCHEME OF TEACHING AND EXAMINATION
Courses of Study and Scheme of Examination
B.A. (Geography Honours)
Semester I

PAPER CODE	PAPER	THEORY MARKS	TEACHERS ASSESSMENT/ PRACTICAL	TOTAL MARKS
BA/H/GEO/101	Geomorphology (CD 1)	70	30	100
BA/H/GEO/102	Cartographic Techniques (Practical) (CD 2)	70	30	100
BA/H/GEO/AE-1	Environmental Studies And Human Rights (AE)	70	30	100
BA/H/GEO/GE-1	General Elective (GE)-I	70	30	100

CD- Core Discipline

AE- Ability Enhancement Course (Compulsory)

GE- General Elective I (Choose any one from below).

GE- 1.1 Disaster Management

GE-1.2 Geography of Tourism



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Semester II

PAPER CODE	PAPER	THEORY MARKS	TEACHER ASSESSMENT/ PRACTICAL	TOTAL MARKS
BA/H/GEO/201	Human Geography (CD-3)	70	30	100
BA/H/GEO/202	Thematic Cartography (Practical) (CD-4)	70	30	100
BA/H/GEO/AE-2	English (A.E)	70	30	100
BA/H/GEO/GE-2	General Elective-II	70	30	100

CD- Core Discipline

AE- Ability Enhancement Course (Compulsory)

GE- General Elective- II (Choose any one from below).

GE-2.1 Spatial Information Technology/

GE- 2.2 Regional Development



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Semester III

PAPER CODE	PAPER	THEORY MARKS	TEACHER ASSESSMENT/ PRACTICAL	TOTAL MARKS
BA/H/GEO/301	. Climatology (CD-5)	70	30	100
BA/H/GEO/302	Statistical Methods in Geography (Practical) (CD- 6)	70	30	100
BA/H/GEO/305	Geography of India (CD-7)	70	30	100
BA/H/GEO/SE-1	Skill Enhancement - I	70	30	100
BA/H/GEO/GE-3	General Elective - III	70	30	100

CD- Core Discipline

SCE- Skill Enhancement I (Skill Based) (Choose any one from below)

SE- 1.1 Remote Sensing (Practical)

SE- 1. 2 Advanced Spatial Statistical Techniques

GE- General Elective III (Choose any one from below).

GE-3.1 . Climate Change : Vulnerability and Adaptation

GE-3.2 . Rural Development



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Semester IVth

PAPER CODE	PAPER	THEORY MARKS	TEACHER ASSESSMENT/ PRACTICAL	TOTAL MARKS
BA/H/GEO/401	Economic Geography (CD-8)	70	30	100
BA/H/GEO/402	Environmental Geography (CD-9)	70	30	100
BA/H/GEO/405	Field Work and Research Methodology (Practical) (CD-10)	70	30	100
BA/H/GEO/SE-2	Skill Enhancement – II	70	30	100
BA/H/GEO/GE-4	Generic Elective –IV (Interdisciplinary)	70	30	100

CD- Core Discipline

SCE- Skill Enhancement I (Skill Based) (Choose any one from below)

SE-2.1 Geographical Information System (Practical)

SE-2.2 Research Methods (Practical)

GE- General Elective IV (Choose any one from below).

GE-4.1 Industrial Geography

GE-4.2 Sustainable Development



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Semester Vth

PAPER CODE	PAPER	THEORY MARKS	TEACHER ASSESSMENT/ PRACTICAL	TOTAL MARKS
BA/H/GEO/501	Regional Planning and Development (CD- 11)	70	30	100
BA/H/GEO/502	Remote Sensing and GIS (Practical) (CD-12)	70	30	100
BA/H/GEO/DSE-1	Discipline Specific Elective (DSE- 1)	70	30	100
BA/H/GEO/DSE-2	Discipline Specific Elective (DSE-2)	70	30	100

CD- Core Discipline

DSE- Discipline Specific Elective (DSE 1) (Choose any one).

DSE-1.1 Population Geography

DSE-1.2 Resource Geography

DSE- Discipline Specific Elective (DSE-2)(Choose any one).

DSE/2.1 . Urban Geography

DSE/2.2 Agricultural Geography



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Semester VI

PAPER	PAPER	THEORY MARKS	TEACHER ASSESSMENT/ PRACTICAL	TOTAL MARKS
BA/H/GEO/601	Evolution of Geographical Thought (CD- 13)	70	30	100
BA/H/GEO/602	Disaster Management based Project Work (Practical) (CD-14)	70	30	100
BA/H/GEO/DSE-3	Discipline Specific Elective (DSE-3)	70	30	100
BA/H/GEO/DSE-4	Discipline Specific Elective (DSE-4)	70	30	100

CD- Core Discipline

DSE- Discipline Specific Elective (DSE 3) (Choose any one).

DSE/3.1 . Geography of Health and Wellbeing

DSE/3.2 Political Geography

DSE- Discipline Specific Elective (DSE 4) (Choose any one).

DSE/4.1- Hydrology and Oceanography

DSE/4.2 - Social Geography

SCHEME	Semester I	Semester II	Semester III	Semester IV	Semester V	Semester VI	TOTAL
Total marks	400	400	500	500	400	400	2600



BHARTI VISHWAVIDYALAYA DURG
B.A. (Honours) Geography
भूगोल Geography

Semester I

Paper 101 : Geomorphology (CD 1)

UNIT 1	<ul style="list-style-type: none">• Geomorphology: Nature and Scope
UNIT 2	<ul style="list-style-type: none">• Earth: Interior Structure and Isostasy
UNIT 3	<ul style="list-style-type: none">• Earth Movements: Plate Tectonics, Types of Folds and Faults, Earthquakes and Volcanoes.
UNIT 4	<ul style="list-style-type: none">• Geomorphic Processes: Weathering, Mass Wasting, Cycle of Erosion (Davis and Penck).
UNIT 5	<ul style="list-style-type: none">• Evolution of Landforms (Erosional and Depositional): Fluvial, Karst, Aeolian, Glacial, and Coastal..

Select Readings:

1. Bloom A. L., 2003: *Geomorphology: A Systematic Analysis of Late Cenozoic Landforms*, Prentice-Hall of India, New Delhi.
2. Bridges E. M., 1990: *World Geomorphology*, Cambridge University Press, Cambridge.
3. Christopherson, Robert W., (2011), *Geosystems: An Introduction to Physical Geography*, 8 Ed., Macmillan Publishing Company
4. Kale V. S. and Gupta A., 2001: *Introduction to Geomorphology*, Orient Longman, Hyderabad.
5. Knighton A. D., 1984: *Fluvial Forms and Processes*, Edward Arnold Publishers, London.
6. Richards K. S., 1982: *Rivers: Form and Processes in Alluvial Channels*, Methuen, London.
7. Selby, M.J., (2005), *Earth's Changing Surface*, Indian Edition, OUP
8. Skinner, Brian J. and Stephen C. Porter (2000), *The Dynamic Earth: An Introduction to physical Geology*, 4th Edition, John Wiley and Sons
9. Thornbury W. D., 1968: *Principles of Geomorphology*, Wiley.
10. Gautam, A (2010): *Bhautik Bhugol*, Rastogi Publications, Meerut
11. Tikkaa, R N (1989): *Bhautik Bhugol ka Swaroop*, Kedarnath Ram Nath, Meerut
12. Singh, S (2009): *Bhautik Bhugol ka Swaroop*, Prayag Pustak, Allahabad.



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B.A. (Honours) Geography

भूगोल Geography

Semester I

Paper 102 : Cartographic Techniques (Practical)

(CD 2)

UNIT 1	<ul style="list-style-type: none"> • Cartography – Nature and Scope.
UNIT 2	<ul style="list-style-type: none"> • Scales – Concept and application; Graphical Construction of Plain, Comparative and Diagonal Scales.
UNIT 3	<ul style="list-style-type: none"> • Map Projections – Classification, Properties and Uses; Graphical Construction of Polar Zenithal Stereographic, Bonne's and Mercator's Projections, and reference to Universal Transverse Mercator (UTM) Projection.
UNIT 4	<ul style="list-style-type: none"> • Topographical Map – Interpretation of a Mountain area with the help of Cross and Longitudinal Profiles.
UNIT 5	<ul style="list-style-type: none"> • Slope Analysis – Wentworth's method

Practical Record: A Project File in pencil, comprising one exercise *each*, on scale, map projection, interpretation of topographic sheet and slope analysis.

Select Readings:

1. Anson R. and Ormelling F. J., 1994: *International Cartographic Association: Basic Cartographic Vol.* Pregmen Press.
2. Gupta K.K. and Tyagi, V. C., 1992: *Working with Map*, Survey of India, DST, New Delhi.
3. Mishra R.P. and Ramesh, A., 1989: *Fundamentals of Cartography*, Concept, New Delhi.
4. Monkhouse F. J. and Wilkinson H. R., 1973: *Maps and Diagrams*, Methuen, London.
5. Rhind D. W. and Taylor D. R. F., (eds.), 1989: *Cartography: Past, Present and Future*, Elsevier, International Cartographic Association.
6. Robinson A. H., 2009: *Elements of Cartography*, John Wiley and Sons, New York.
7. Sharma J. P., 2010: *Prayogic Bhugol*, Rastogi Publishers, Meerut.
8. Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers.
9. Sarkar, A. (2015) *Practical geography: A systematic approach*. Orient Black Swan Private Ltd., New Delhi
10. Singh R L & Rana P B Singh(1991) *Prayogtmak Bhugol ke Mool Tatva*, Kalyani Publishers, New Delhi
11. Sharma, J P (2010) *Prayogtmak Bhugol ki Rooprekha*, Rastogi Publications, Meerut
12. Singh, R L & Dutta, P K (2012) *Prayogtmak Bhugol*, Central Book Depot, Allahabad



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B.A. (Honours) Geography

भूगोल Geography

Semester I

General Elective

(GE-1)

Paper GE-1.1 : Disaster Management

UNIT 1	<ul style="list-style-type: none">Disasters: Definition and Concepts: Hazards, Disasters; Risk and Vulnerability; Classification
UNIT 2	<ul style="list-style-type: none">Disasters in India: (a) Flood: Causes, Impact, Distribution and Mapping; Landslide: Causes, Impact, Distribution and Mapping; Drought: Causes, Impact, Distribution and Mapping
UNIT 3	<ul style="list-style-type: none">Disasters in India: (b) Earthquake and Tsunami: Causes, Impact, Distribution and Mapping; Cyclone: Causes, Impact, Distribution and Mapping.
UNIT 4	<ul style="list-style-type: none">Manmade disasters: Causes, Impact, Distribution and Mapping
UNIT 5	<ul style="list-style-type: none">Response and Mitigation to Disasters: Mitigation and Preparedness, NDMA and NIDM; Indigenous Knowledge and Community-Based Disaster Management; Do's and Don'ts During and Post Disasters

Select Readings:

1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
4. Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3
5. Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
6. Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
7. Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.
8. Singh Jagbir (2007) "Disaster Management Future Challenges and Oppurtunities", 2007. Publisher- I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India (www.ikbooks.com).



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B.A. (Honours) Geography

भूगोल Geography

Semester I

General Elective

(GE)-I

Paper GE-1.2 Geography of Tourism

UNIT 1	<ul style="list-style-type: none">• Scope and Nature: Concepts and Issues, Tourism, Recreation and Leisure Inter-Relations; Geographical Parameters of Tourism by Robinson.
UNIT 2	<ul style="list-style-type: none">• Type of Tourism: Nature Tourism, Cultural Tourism, Medical Tourism, Pilgrimage
UNIT 3	<ul style="list-style-type: none">• Recent Trends of Tourism: International and Regional; Domestic (India); Eco-Tourism, Sustainable Tourism, Meetings Incentives Conventions and Exhibitions (MICE)
UNIT 4	<ul style="list-style-type: none">• Impact of Tourism: Economy; Environment; Society
UNIT 5	<ul style="list-style-type: none">• Tourism in India: Tourism Infrastructure; Case Studies of Himalaya, Desert and Coastal Areas; National Tourism Policy

• Select Readings:

- 1. Dhar, P.N. (2006) International Tourism: Emerging Challenges and Future Prospects.
Kanishka, New Delhi.
- 2. Hall, M. and Stephen, P. (2006) Geography of Tourism and Recreation – Environment,
Place and Space, Routledge, London.
- 3. Kamra, K. K. and Chand, M. (2007) Basics of Tourism: Theory, Operation and Practise,
Kanishka Publishers, Pune.
- 4. Page, S. J. (2011) Tourism Management: An Introduction, Butterworth-Heinemann-
USA. Chapter 2.
- 5. Raj, R. and Nigel, D. (2007) Morpeth Religious Tourism and Pilgrimage Festivals
Management: An International perspective by, CABI, Cambridge, USA,
www.cabi.org.
- 6. Tourism Recreation and Research Journal, Center for Tourism Research and
Development, Lucknow
- 7. Singh Jagbir (2014) “Eco-Tourism” Published by - I.K. International Pvt. Ltd. S-25,
Green Park Extension, Uphaar Cinema Market, New Delhi, India (www.ikbooks.com).



BHARTI VISHWAVIDYALAYA DURG
B.A./B.Sc. (Honours) Geography
भूगोल Geography
Semester II
Paper 201 : Human Geography (CD 3)

UNIT 1	<ul style="list-style-type: none">• Introduction: Defining Human Geography; Major Themes; Contemporary Relevance
UNIT 2	<ul style="list-style-type: none">• Space and Society: Cultural Regions; Race; Religion and Language
UNIT 3	<ul style="list-style-type: none">• Population: Population Growth and Distribution; Population Composition; Demographic Transition Theory
UNIT 4	<ul style="list-style-type: none">• Settlements: Types of Rural Settlements; Classification of Urban Settlements; Trends and Patterns of World Urbanization
UNIT 5	Population-Resource Relationship

• **Select Readings:**

- 1. Chandna, R.C. (2010) Population Geography, Kalyani Publisher.
- 2. Hassan, M.I. (2005) Population Geography, Rawat Publications, Jaipur
- 3. Daniel, P.A. and Hopkinson, M.F. (1989) The Geography of Settlement, Oliver & Boyd, London.
- 4. Johnston R; Gregory D, Pratt G. et al. (2008) The Dictionary of Human Geography, Blackwell Publication.
- 5. Jordan-Bychkov et al. (2006) The Human Mosaic: A Thematic Introduction to Cultural Geography. W. H. Freeman and Company, New York.
- 6. Kaushik, S.D. (2010) Manav Bhugol, Rastogi Publication, Meerut.
- 7. Maurya, S.D. (2012) Manav Bhugol, Sharda Pustak Bhawan. Allahabad.
- 8. Hussain, Majid (2012) Manav Bhugol. Rawat Publications, Jaipur



BHARTI VISHWAVIDYALAYA DURG
B.A. (Honours) Geography
भूगोल Geography
Semester II

Paper 202 : Thematic Cartography (Practical) (CD 4)

UNIT 1	<ul style="list-style-type: none"> • Maps – Classification and Types; Principles of Map Design
UNIT 2	<ul style="list-style-type: none"> • Diagrammatic Data Presentation – Line, Bar and Circle.
UNIT 3	<ul style="list-style-type: none"> • Thematic Mapping Techniques – Properties, Uses and Limitations; Areal Data -- Choropleth, Dot, Proportional Circles; Point Data – Isopleths.
UNIT 4	<ul style="list-style-type: none"> • Cartographic Overlays – Point, Line and Areal Data.
UNIT 5	<ul style="list-style-type: none"> • Thematic Maps – Preparation and Interpretation.

Practical Record: A Thematic Atlas should be prepared on a specific theme with five plates of any state in India.

• **Select Readings:**

- 1. Cuff J. D. and Mattson M. T., 1982: *Thematic Maps: Their Design and Production*, Methuen Young
- Books
- 2. Dent B. D., Torguson J. S., and Holder T. W., 2008: *Cartography: Thematic Map Design* (6th Edition), Mcgraw-Hill Higher Education
- 3. Gupta K. K. and Tyagi V. C., 1992: *Working with Maps*, Survey of India, DST, New Delhi.
- 4. Kraak M.-J. and Ormeling F., 2003: *Cartography: Visualization of Geo-Spatial Data*, Prentice-Hall.
- 5. Mishra R. P. and Ramesh A., 1989: *Fundamentals of Cartography*, Concept, New Delhi.
- 6. Sharma J. P., 2010: *Prayogic Bhugol*, Rastogi Publishers, Meerut.
- 7. Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers.
- 8. Slocum T. A., McMaster R. B. and Kessler F. C., 2008: *Thematic Cartography and Geovisualization* (3rd Edition), Prentice Hall.
- 9. Tyner J. A., 2010: *Principles of Map Design*, The Guilford Press.
- 10. Sarkar, A. (2015) *Practical geography: A systematic approach*. Orient Black Swan Private Ltd., New Delhi
- 11. Singh, L R & Singh R (1977): *Manchitra or Pryaogatamek Bhugol* , Central Book, Depot, Allahabad
- 12. Bhopal Singh R L and Dutta P K (2012) *Prayogatama Bhugol*, Central Book Depot, Allahabad



BHARTI VISHWAVIDYALAYA DURG

B.A. (Honours) Geography

भूगोल Geography

Semester II

General Elective

(GE)-II

Paper GE-2.1 Spatial Information Technology

UNIT 1	<ul style="list-style-type: none">• Introduction: Definitions, Concept and Historical Development
UNIT 2	<ul style="list-style-type: none">• Spatial Information/Data: Web data sources; Registration and projection; Data structures; Data interpolation and modeling
UNIT 3	<ul style="list-style-type: none">• Working of spatial information system
UNIT 4	<ul style="list-style-type: none">• Functions of Spatial information system: Information retrieval; Topological modeling; Networks; Overlay; Data output
UNIT 5	<ul style="list-style-type: none">• Application of Spatial Information Technology

• Select Readings:

1. C. Esperança and H. Samet, An overview of the SAND spatial database system, to appear in Communications of the ACM, 1997. <http://www.cs.umd.edu/~hjs/pubs/sandprog.ps.gz>
2. G. Hjaltason and H. Samet, Ranking in Spatial Databases in Advances in Spatial Databases —4th Symposium, SSD'95, M. J. Egenhofer and J. R. Herring, Eds., Lecture Notes in Computer Science 951, Springer-Verlag, Berlin, 1995, 83-95. <http://www.cs.umd.edu/~hjs/pubs/incnear.ps>
3. H. Samet, Spatial Data Structures in Modern Database Systems: The Object Model, Interoperability, and Beyond, W. Kim, Ed., Addison-Wesley/ACM Press, 1995, 361-385. <http://www.cs.umd.edu/~hjs/pubs/kim.ps>
4. H. Samet, Applications of Spatial Data Structures: Computer Graphics, Image Processing, and GIS, Addison-Wesley, Reading, MA, 1990. ISBN 0-201- 50300-0.
6. H. Samet, The Design and Analysis of Spatial Data Structures, Addison-Wesley, Reading, MA, 1990. ISBN 0-201-50255-0.
7. H. Samet and W. G. Aref, Spatial Data Models and Query Processing in Modern Database Systems: The Object Model, Interoperability, and Beyond, W. Kim, Ed., Addison-Wesley/ACM Press, 1995, 338-360. <http://www.cs.umd.edu/~hjs/pubs/kim2.ps>
8. C. D. Tomlin, Geographic Information Systems and Cartographic Modeling, Prentice-Hall, Englewood Cliffs, NJ, 1990. ISBN 0-13-350927-3.



BHARTI VISHWAVIDYALAYA DURG

B.A. (Honours) Geography

भूगोल Geography

Semester II

General Elective

(GE)-II

Paper GE-2.2 Regional Development

UNIT 1	<ul style="list-style-type: none"> • Definition of Region, Evolution, Types and Need of Regional planning: Formal, Functional, and Planning Regions and Regional Development.
UNIT 2	<ul style="list-style-type: none"> • Regional Imbalances and Problems of Functional Regions.
UNIT 3	<ul style="list-style-type: none"> • Choice of a Region for Planning: Characteristics of an Ideal Planning Region; Delineation of Planning Region; Regionalization of India for Planning (Agro Ecological Zones)
UNIT 4	<ul style="list-style-type: none"> • Strategies/Models for Regional Planning: Growth Pole Model of Perroux; Growth Centre Model in Indian Context; Village Cluster
UNIT 5	<ul style="list-style-type: none"> • Problem Regions and Regional Planning: Backward Regions and Regional Plans- Special • Area Development Plans in India; DVC-The Success Story and the Failures.

• Select Readings:

- 1. Adell, Germán (1999) Literature Review: Theories and Models Of The Peri-Urban Interface: A
- Changing Conceptual Landscape, Peri-urban Research Project Team, Development Planning Unit, University College London at
- 2. Bhatt, L.S. (1976) Micro Level Planning in India. KB Publication, Delhi
- 3. Deshpande C. D., 1992: *India: A Regional Interpretation*, ICSSR, New Delhi.
- 4. Dreze J. and A. Sen, Indian Development: Select Regional Perspectives (Oxford: Oxford University Press, 1996).
- 5. Ses, Amratya (2000) Development as Freedom. Random House, Toronto
- 6. Raza, M., Ed. (1988). Regional Development. Contributions to Indian Geography. New Delhi, Heritage Publishers.
- 7. Rapley, John (2007) Understanding Development: Theory and Practice in the 3rd World. Lynne Rienner, London.
- 8. Schmidt-Kallert, Einhard (2005) A Short Introduction to Micro-Regional Planning, Food and
- Agriculture Organization of the United Nations (FAO) at
- 9. Sdyasuk Galina and P Sengupta (1967): *Economic Regionalisation of India*, Census of India



BHARTI VISHWAVIDYALAYA DURG

B.A. (Honours) Geography

भूगोल Geography

Semester III

Paper 301 : Climatology (CD 5)

UNIT 1	<ul style="list-style-type: none">• Atmospheric Composition and Structure – Variation with Altitude, Latitude and Season.
UNIT 2	<ul style="list-style-type: none">• Insolation and Temperature – Factors and Distribution, Heat Budget, Temperature Inversion.
UNIT 3	<ul style="list-style-type: none">• Atmospheric Pressure and Winds – Planetary Winds, Forces affecting Winds, General Circulation, Jet Streams.
UNIT 4	<ul style="list-style-type: none">• Atmospheric Moisture – Evaporation, Humidity, Condensation, Fog and Clouds, Precipitation Types, Stability and Instability; Climatic Regions (Koppen)
UNIT 5	<ul style="list-style-type: none">• Cyclones – Tropical Cyclones, Extra Tropical Cyclones, Monsoon - Origin and Mechanism.

• Select Readings:

- 1. Barry R. G. and Carleton A. M., 2001: *Synoptic and Dynamic Climatology*, Routledge, UK.
- 2. Barry R. G. and Corley R. J., 1998: *Atmosphere, Weather and Climate*, Routledge, New York.
- 3. Critchfield H. J., 1987: *General Climatology*, Prentice-Hall of India, New Delhi
- 4. Lutgens F. K., Tarbuck E. J. and Tasa D., 2009: *The Atmosphere: An Introduction to Meteorology*, Prentice-Hall, Englewood Cliffs, New Jersey.
- 5. Oliver J. E. and Hidore J. J., 2002: *Climatology: An Atmospheric Science*, Pearson Education, New Delhi.
- 6. Trewartha G. T. and Horne L. H., 1980: *An Introduction to Climate*, McGraw-Hill.
- 7. Gupta L S (2000): *Jalvayu Vigyan*, Hindi Madhyam Karyanvay Nidishalya, Delhi Vishwa Vidhyalaya, Delhi
- 8. Lal, D S (2006): *Jalvayu Vigyan*, Prayag Pustak Bhavan, Allahabad
- 9. Vatal, M (1986): *Bhautik Bhugol*, Central Book Depot, Allahabad
- 10. Singh, S (2009): *Jalvayu Vigyan*, Prayag Pustak Bhawan, Allahabad



BHARTI VISHWAVIDYALAYA DURG

B.A. (Honours) Geography

भूगोल Geography

Semester III

**Paper 302 : Statistical Methods in Geography
(Practical) (CD 6)**

UNIT 1	<ul style="list-style-type: none"> • Use of Data in Geography: Geographical Data Matrix, Significance of Statistical Methods in Geography; Sources of Data, Scales of Measurement (Nominal, Ordinal, Interval, Ratio).
UNIT 2	<ul style="list-style-type: none"> • Tabulation and Descriptive Statistics: Frequencies (Deciles, Quartiles), Cross Tabulation, Central Tendency (Mean, Median and Mode, Centro-graphic Techniques, Dispersion (Standard Deviation, Variance and Coefficient of Variation)..
UNIT 3	<ul style="list-style-type: none"> • Sampling: Purposive, Random, Systematic and Stratified.
UNIT 4	<ul style="list-style-type: none"> • Theoretical Distribution: Probability and Normal Distribution.
UNIT 5	<ul style="list-style-type: none"> • Association and Correlation: Rank Correlation, Product Moment Correlation, and Simple Regression, Residuals from regression

● **Select Readings:**

- **Class Record:** Each student will submit a record containing five exercises:
 1. Construct a data matrix of about (10 x 10) with each row representing an areal unit (districts or villages or towns) and about 10 columns of relevant attributes of the areal units.
 2. Based on the above table, a frequency table, measures of central tendency and dispersion would be computed and interpreted for any two attributes.
 3. Histograms and frequency curve would be prepared **on the entire data set** and attempt to fit a normal curve and interpreted for one or two variables.
 4. From the data matrix a sample set (20 Percent) would be drawn using, random - systematic and stratified methods of sampling and locate the samples on a map with a short note on methods used.
 5. Based on of the sample set and using two relevant attributes, a scatter and regression line would be

- plotted and residual from regression would be mapped with a short interpretation.
- **Reading List**
- 1. Berry B. J. L. and Marble D. F. (eds.): *Spatial Analysis – A Reader in Geography*.
- 2. Ebdon D., 1977: *Statistics in Geography: A Practical Approach*.
- 3. Hammond P. and McCullagh P. S., 1978: *Quantitative Techniques in Geography: An Introduction*,
Oxford University Press.
- 4. King L. S., 1969: *Statistical Analysis in Geography*, Prentice-Hall.
- 5. Mahmood A., 1977: *Statistical Methods in Geographical Studies*, Concept.
- 6. Pal S. K., 1998: *Statistics for Geoscientists*, Tata McGraw Hill, New Delhi.
- 7. Sarkar, A. (2013) *Quantitative geography: techniques and presentations*. Orient Black Swan Private
Ltd., New Delhi
- 8. Silk J., 1979: *Statistical Concepts in Geography*, Allen and Unwin, London.
- 9. Spiegel M. R.: *Statistics, Schaum's Outline Series*.
- 10. Yeates M., 1974: *An Introduction to Quantitative Analysis in Human Geography*, McGraw Hill, New
York.
- 11. Shinha, Indira (2007) *Sankhyiki bhugol*. Discovery Publishing House, New Delhi



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B.A. (Honours) Geography

भूगोल Geography

Semester III

Paper 303 : Geography of India(CD7)

UNIT 1	<ul style="list-style-type: none"> Physical: Physiographic Divisions, soil and vegetation, climate (characteristics and classification)
UNIT 2	<ul style="list-style-type: none"> Population: Distribution and growth, Structure
UNIT 3	<ul style="list-style-type: none"> Economic: Mineral and power resources distribution and utilisation of iron ore, coal, petroleum, gas; agricultural production and distribution of rice and wheat, industrial development : automobile and Information technology
UNIT 4	<ul style="list-style-type: none"> Social: Distribution of population by race, caste, religion, language, tribes and their correlates
UNIT 5	<ul style="list-style-type: none"> Regionalisation of India: Physiographic (R. L. Singh), Socio – cultural (Sopher), Economic (Sengupta)

• Select Readings:

- 1. Deshpande C. D., 1992: *India: A Regional Interpretation*, ICSSR, New Delhi.
- 2. Johnson, B. L. C., ed. 2001. *Geographical Dictionary of India*. Vision Books, New Delhi.
- 3. Mandal R. B. (ed.), 1990: *Patterns of Regional Geography – An Intentional Perspective*. Vol. 3 –
Indian Perspective.
- 4. Sdyasuk Galina and P Sengupta (1967): *Economic Regionalisation of India*, Census of India
- 5. Sharma, T. C. 2003: *India - Economic and Commercial Geography*. Vikas Publ., New Delhi.
- 6. Singh R. L., 1971: *India: A Regional Geography*, National Geographical Society of India.
- 7. Singh, Jagdish 2003: *India - A Comprehensive & Systematic Geography*, Gyanodaya Prakashan,
Gorakhpur.
- 8. Spate O. H. K. and Learmonth A. T. A., 1967: *India and Pakistan: A General and Regional
Geography*, Methuen.
- 9. Tirtha, Ranjit 2002: *Geography of India*, Rawat Pubs., Jaipur & New Delhi.
- 10. Pathak, C. R. 2003: *Spatial Structure and Processes of Development in India*. Regional Science
Assoc., Kolkata.
- 11. Tiwari, R.C. (2007) *Geography of India*. Prayag Pustak Bhawan, Allahabad
- 12. Sharma, T.C. (2013) *Economic Geography of India*. Rawat Publication, Jaipur.



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Semester III

Skill Enhancement Course (SEC-1)

Paper SE-1.1 : Remote Sensing (Practical)

UNIT 1	<ul style="list-style-type: none"> Remote Sensing: Definition and Development; Platforms and Types; Photogrammetry.
UNIT 2	<ul style="list-style-type: none"> Satellite Remote Sensing: Principles, EMR Interaction with Atmosphere and Earth Surface; Satellites (Landsat and IRS); Sensors
UNIT 3	<ul style="list-style-type: none"> Image Processing (Digital and Manual): Pre-processing (Radiometric and Geometric Correction); Enhancement (Filtering); Classification (Supervised and Un-supervised)
UNIT 4	<ul style="list-style-type: none"> Satellite Image Interpretation
UNIT 5	<ul style="list-style-type: none"> Application of Remote Sensing: Land Use Land Cover.

- **Practical Record:** A project file consisting of 5 exercises on using any method on above
- mentioned themes.

• **Select Readings:**

- 1. Bhatta , B. (2008) Remote Sensing and GIS, Oxford University Press, New Delhi.
- 2. Campbell J. B., 2007: *Introduction to Remote Sensing*, Guildford Press
- 3. Chauniyal, D. (2010) Sudur Samvedana Avam Bhaugolik Suchna Pranali, Sharda Pustak Bhawan, Allahabad.
- 4. Jensen, J. R. (2005) *Introductory Digital Image Processing: A Remote Sensing Perspective*, Pearson Prentice-Hall.
- 5. Joseph, G. 2005: *Fundamentals of Remote Sensing*, United Press India.
- 6. Lillesand T. M., Kiefer R. W. and Chipman J. W., 2004: *Remote Sensing and Image Interpretation*, Wiley. (Wiley Student Edition).
- 7. Li, Z., Chen, J. and Batsavias, E. (2008) *Advances in Photogrammetry, Remote Sensing and Spatial Information Sciences* CRC Press, Taylor and Francis, London
- 8. Mukherjee, S. (2004) *Textbook of Environmental Remote Sensing*, Macmillan, Delhi.
- 9. Nag P. and Kudra, M., 1998: *Digital Remote Sensing*, Concept, New Delhi.
- 10. Singh R. B. and Murai S., 1998: *Space-informatics for Sustainable Development*, Oxford and IBH
- Pub.



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Semester III

Skill Enhancement Course (SEC-1)

Paper SE-1.2 : Advanced Spatial Statistical Techniques

UNIT 1	<ul style="list-style-type: none"> Statistics and Statistical Data: Spatial and non-spatial; indices of inequality and disparity.
UNIT 2	<ul style="list-style-type: none"> Probability theory, probability density functions with respect to Normal, Binomial and Poisson distributions and their geographical applications.
UNIT 3	<ul style="list-style-type: none"> Sampling: Sampling plans for spatial and non-spatial data, sampling distributions; sampling estimates for large and small samples tests involving means and proportions.
UNIT 4	<ul style="list-style-type: none"> Correlation and Regression Analysis: Rank order correlation and product moment correlation; linear regression, residuals from regression, and simple curvilinear regression; Introduction to multi-variate analysis.
UNIT 5	<ul style="list-style-type: none"> Time Series Analysis: Time Series processes; Smoothing time series; Time series components.

Note: Any Statistical Software Package (SPSS, MS Excel, R, etc.) may be used for practice.

● Select Readings:

- 1. Bart James E and Gerld M.Barber, 1996: Elementary Statistics for Geographers, The Guieford Press, London.
- 2. Eldon, D., 1983: Statistics in Geography: A Practical Approach, Blackwell, London.
- 3. Cressie, N.A.C., 1991: Statistics for Spatial Analysis, Wiley, New York.
- 4. Gregory, S., 1978: Statistical Methods and the Geographer (4th Edition), Longman, London.
- 5. Haining, R.P., 1990: Spatial Data Analysis in the Social and Environmental Science, Cambridge University Press, Cambridge.
- 6. Mc Grew, Jr. and Cahrles, B. M., 1993: An Introduction to Statistical Problem Solving in Geography, W.C. Brocan Publishers, New Jersey.
- 7. Mathews, J.A., 1987: Quantitative and Statistical Approaches to Geography: A Practical Manual Pergamon, Oxford.
- 8. S.K., 1998: Statistics for Geoscientists : Techniques and Applications, Concept Publishing Company, New Delhi.
- 9. Wei, W.S.,1990: Time Series Analysis: Variate and Multivariate Methods , Addison Wesley Publishing.
- 10. Yeates, Mauris, 1974: An Introduction to Quantitative Analysis in Human Geography, Mc Grawhill, New York.



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B.A. (Honours) Geography

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Semester III

General Elective

(GE-3)

GE-3.1 Climate Change: Vulnerability and Adaptation

UNIT 1	<ul style="list-style-type: none"> • Science of Climate Change: Understanding Climate Change; Green House Gases and Global Warming; Global Climatic Assessment- IPCC
UNIT 2	<ul style="list-style-type: none"> • Climate Change and Vulnerability: Physical Vulnerability; Economic Vulnerability; Social Vulnerability
UNIT 3	<ul style="list-style-type: none"> • Impact of Climate Change: Agriculture and Water; Flora and Fauna; Human Health
UNIT 4	<ul style="list-style-type: none"> • Adaptation and Mitigation: Global Initiatives with Particular Reference to South Asia.
UNIT 5	<ul style="list-style-type: none"> • National Action Plan on Climate Change; Local Institutions (Urban Local Bodies, Panchayats)

• Select Readings:

- 1. IPCC. (2007) *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.*
- 2. IPCC (2014) *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- 3. IPCC (2014) *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- 4. Palutikof, J. P., van der Linden, P. J. and Hanson, C. E. (eds.), Cambridge University Press, Cambridge, UK.
- 5. OECD. (2008) *Climate Change Mitigation: What Do we Do? Organisation and Economic Cooperation and Development.*
- 6. UNEP. (2007) *Global Environment Outlook: GEO4: Environment for Development*, United Nations Environment Programme.
- 7. Singh, M., Singh, R.B. and Hassan, M.I. (Eds.) (2014) *Climate change and biodiversity: Proceedings of IGU Rohtak Conference, Volume 1. Advances in Geographical and Environmental Studies*, Springer
- 8. Sen Roy, S. and Singh, R.B. (2002) *Climate Variability, Extreme Events and Agricultural Productivity in Mountain Regions*, Oxford & IBH Pub., New Delhi.



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Semester III

General Elective

(GE-3)

GE-3.2 Rural Development

UNIT 1	<ul style="list-style-type: none"> Defining Development: Inter-Dependence of Urban and Rural Sectors of the Economy; Need for Rural Development, Gandhian Approach of Rural Development
UNIT 2	<ul style="list-style-type: none"> Rural Economic Base: Panchayatiraj System, Agriculture and Allied Sectors, Seasonality and Need for Expanding Non-Farm Activities, Co-operatives, PURA.
UNIT 3	<ul style="list-style-type: none"> Area Based Approach to Rural Development: Drought Prone Area Programmes, PMGSY
UNIT 4	<ul style="list-style-type: none"> Target Group Approach to Rural Development: SJSY, MNREGA, Jan Dhan Yojana and Rural Connectivity..
UNIT 5	<ul style="list-style-type: none"> Provision of Services – Physical and Socio-Economic Access to Elementary Education and Primary Health Care and Micro credit

• Select Readings:

- 1. Gilg A. W., 1985: *An Introduction to Rural Geography*, Edwin Arnold, London.
- 2. Krishnamurthy, J. 2000: *Rural Development - Problems and Prospects*, Rawat Publs., Jaipur
- 3. Lee D. A. and Chaudhri D. P. (eds.), 1983: *Rural Development and State*, Methuen, London.
- 4. Misra R. P. and Sundaram, K. V. (eds.), 1979: *Rural Area Development: Perspectives and Approaches*, Sterling, New Delhi.
- 5. Misra, R. P. (ed.), 1985: *Rural Development: Capitalist and Socialist Paths*, Vol. 1, Concept, New Delhi.
- 6. Palione M., 1984: *Rural Geography*, Harper and Row, London.
- 7. Ramachandran H. and Guimaraes J.P.C., 1991: *Integrated Rural Development in Asia – Learning from Recent Experience*, Concept Publishing, New Delhi.
- 8. Robb P. (ed.), 1983: *Rural South Asia: Linkages, Change and Development*, Curzon Press.
- 9. UNAPDI 1986: *Local Level Planning and Rural Development: Alternative Strategies*. (United Nations Asian & Pacific Development Institute, Bangkok), Concept Publs. Co., New Delhi.
- 10. Wanmali S., 1992: *Rural Infrastructure Settlement Systems and Development of the Regional Economy in South India*, International Food Policy Research Institute, Washington, D.C.
- 11. Yugandhar, B. N. and Mukherjee, Neela (eds.) 1991: *Studies in Village India: Issues in Rural Development*, Concept Publs. Co., New Delhi.



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भूगोल Geography

Semester IV

Paper 401 : Economic Geography (CD 8)

UNIT 1	<ul style="list-style-type: none">• Introduction: Concept and classification of economic activity
UNIT 2	<ul style="list-style-type: none">• Factors Affecting location of Economic Activity with special reference to Agriculture (Von Thunen theory), Industry (Weber's theory)..
UNIT 3	<ul style="list-style-type: none">• Primary Activities: Subsistence and Commercial agriculture, forestry, fishing and mining.
UNIT 4	<ul style="list-style-type: none">• Secondary Activities: Manufacturing (Cotton Textile, Iron and Steel), Concept of Manufacturing Regions, Special Economic Zones and Technology Parks.
UNIT 5	<ul style="list-style-type: none">• Tertiary Activities: Transport, Trade and Services.

• Select Readings:

- 1. Alexander J. W., 1963: *Economic Geography*, Prentice-Hall Inc., Englewood Cliffs, New Jersey.
- 2. Coe N. M., Kelly P. F. and Yeung H. W., 2007: *Economic Geography: A Contemporary Introduction*, Wiley-Blackwell.
- 3. Hodder B. W. and Lee Roger, 1974: *Economic Geography*, Taylor and Francis.
- 4. Combes P., Mayer T. and Thisse J. F., 2008: *Economic Geography: The Integration of Regions and Nations*, Princeton University Press.
- 5. Wheeler J. O., 1998: *Economic Geography*, Wiley..
- 6. Durand L., 1961: *Economic Geography*, Crowell.
- 7. Bagchi-Sen S. and Smith H. L., 2006: *Economic Geography: Past, Present and Future*, Taylor and Francis.
- 8. Willington D. E., 2008: *Economic Geography*, Husband Press.
- 9. Clark, Gordon L.; Feldman, M.P. and Gertler, M.S., eds. 2000: *The Oxford*



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Semester IV

Paper 402 : Environmental Geography (CD 9)

UNIT 1	<ul style="list-style-type: none">• Environmental Geography – Concept and Scope
UNIT 2	<ul style="list-style-type: none">• Human-Environment Relationships – Historical Progression, Adaptation in different Biomes..
UNIT 3	<ul style="list-style-type: none">• Ecosystem – Concept, Structure and Functions
UNIT 4	<ul style="list-style-type: none">• Environmental Problems in Tropical, Temperate and Polar Ecosystems
UNIT 5	<ul style="list-style-type: none">• Environmental Programmes and Policies – Global, National and Local levels

• Select Readings:

- 1. Chandna R. C., 2002: *Environmental Geography*, Kalyani, Ludhiana.
- 2. Cunningham W. P. and Cunningham M. A., 2004: *Principals of Environmental Science: Inquiry and Applications*, Tata Macgraw Hill, New Delhi.
- 3. Goudie A., 2001: *The Nature of the Environment*, Blackwell, Oxford.
- 4. Singh, R.B. (Eds.) (2009) *Biogeography and Biodiversity*. Rawat Publication, Jaipur
- 5. Miller G. T., 2004: *Environmental Science: Working with the Earth*, Thomson BrooksCole, Singapore.
- 6. MoEF, 2006: *National Environmental Policy-2006*, Ministry of Environment and Forests, Government of India.
- 7. Singh, R.B. and Hietala, R. (Eds.) (2014) *Livelihood security in Northwestern Himalaya: Case studies from changing socio-economic environments in Himachal Pradesh, India. Advances in Geographical and Environmental Studies*, Springer
- 8. Odum, E. P. et al, 2005: *Fundamentals of Ecology*, Ceneage Learning India.
- 9. Singh S., 1997: *Environmental Geography*, Prayag Pustak Bhawan. Allahabad.
- 10. UNEP, 2007: *Global Environment Outlook: GEO4: Environment For Development*, United Nations Environment Programme.
- 11. Singh, M., Singh, R.B. and Hassan, M.I. (Eds.) (2014) *Climate change and biodiversity: Proceedings of IGU Rohtak Conference, Volume 1. Advances in Geographical and Environmental Studies*, Springer
- 12. Singh, R.B. (1998) *Ecological Techniques and Approaches to Vulnerable Environment*, New Delhi, Oxford & IBH Pub..
- 13. Singh, Savindra 2001. *Paryavaran Bhugol*, Prayag Pustak Bhawan, Allahabad. (in Hindi)



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Semester IV

Paper 403 : Field Work and Research Methodology

(Practical) (CD 10)

UNIT 1	<ul style="list-style-type: none"> Field Work In Geographical Studies – Role, Value, Data and Ethics of Field-Work
UNIT 2	<ul style="list-style-type: none"> Defining the Field and Identifying the Case Study – Rural / Urban / Physical / Human / Environmental.
UNIT 3	<ul style="list-style-type: none"> Field Techniques – Merits, Demerits and Selection of the Appropriate Technique; Observation (Participant / Non Participant), Questionnaires (Open/ Closed / Structured / Non-Structured); Interview with Special Focus on Focused Group Discussions; Space Survey (Transects and Quadrants, Constructing a Sketch)
UNIT 4	<ul style="list-style-type: none"> Use of Field Tools – Collection of Material for Physical and Socio-Economic Surveys.
UNIT 5	<ul style="list-style-type: none"> Designing the Field Report – Aims and Objectives, Methodology, Analysis, Interpretation and Writing the Report.

Practical Record

1. Each student will prepare an individual report based on primary and secondary data collected during field work.
2. The duration of the field work should not exceed 10 days.
3. The word count of the report should be about **8000 to 12,000** excluding figures, tables, photographs, maps, references and appendices.
4. One copy of the report on A 4 size paper should be submitted in soft binding.

• Select Readings:

• Reading List

- 1. Creswell J., 1994: *Research Design: Qualitative and Quantitative Approaches* Sage Publications.
- 2. Dikshit, R. D. 2003. *The Art and Science of Geography: Integrated Readings*. Prentice-Hall of India, New Delhi.
- 3. Evans M., 1988: "Participant Observation: The Researcher as Research Tool" in *Qualitative Methods in Human Geography*, eds. J. Eyles and D. Smith, Polity.
- 4. Mukherjee, Neela 1993. *Participatory Rural Appraisal: Methodology and Application*. Concept Publs. Co., New Delhi.
- 5. Mukherjee, Neela 2002. *Participatory Learning and Action: with 100 Field Methods*. Concept Publs. Co., New Delhi
- 6. Robinson A., 1998: "Thinking Straight and Writing That Way", in *Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioural Sciences*, eds. by F. Pryczak and R. Bruce Pryczak, Publishing: Los Angeles.
- 7. Special Issue on "Doing Fieldwork" *The Geographical Review* 91:1-2 (2001).



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Semester IV

Skill Enhancement Course (SEC-2)

**Paper SE-2.1 : Geographical Information System
(Practical)**

UNIT 1	<ul style="list-style-type: none"> Geographical Information System (GIS): Definition and Components.
UNIT 2	<ul style="list-style-type: none"> Global Positioning System (GPS) – Principles and Uses; DGPS.
UNIT 3	<ul style="list-style-type: none"> GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data Structure.
UNIT 4	<ul style="list-style-type: none"> GIS Data Analysis: Input; Geo-Referencing; Editing, Output and Query; Overlays.
UNIT 5	<ul style="list-style-type: none"> Application of GIS: Land Use Mapping; Urban Sprawl Analysis; Forests Monitoring.

- **Practical Record:** A project file consisting of 5 exercises on using any GIS Software on above mentioned themes.

- **Select Readings:**

1. Bhatta, B. (2010) Analysis of Urban Growth and Sprawl from Remote Sensing, Springer, Berlin Heidelberg.41
2. Burrough, P.A., and McDonnell, R.A. (2000) Principles of Geographical Information System-Spatial Information System and Geo-statistics. Oxford University Press
3. Chauniyal, D.D. (2010) Sudur Samvedan evam Bhogolik Suchana Pranali, Sharda Pustak Bhawan, Allahabad
4. Heywoods, I., Cornelius, S and Carver, S. (2006) An Introduction to Geographical Infromation system. Prentice Hall.
5. Jha, M.M. and Singh, R.B. (2008) Land Use: Reflection on Spatial Informatics Agriculture and Development, New Delhi: Concept.
6. Nag, P. (2008) Introduction to GIS, Concept India, New Delhi.
7. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi
8. Singh, R.B. and Murai, S. (1998) Space Informatics for Sustainable Development, Oxford and IBH, New Delhi.



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Semester IV

Skill Enhancement Course (SEC-2)

Paper SE-2.2 : Research Methods (Practical)

UNIT 1	<ul style="list-style-type: none"> Geographic Enquiry: Definition and Ethics; Framing Research Questions, Objectives and Hypothesis; Literature Review; Preparing Sample Questionnaire
UNIT 2	<ul style="list-style-type: none"> Data Collection: Type and Sources of Data; Methods of Collection; Input and Editing
UNIT 3	<ul style="list-style-type: none"> Data Analysis: Qualitative Data Analysis; Quantitative Data Analysis; Data Representation Techniques
UNIT 4	<ul style="list-style-type: none"> Structure of a Research Report: Preliminaries; Text; References, Bibliography and Citations; Abstract
UNIT 5	<ul style="list-style-type: none"> Preparation of Research Report

• **Select Readings:**

- 1. Creswell J., 1994: *Research Design: Qualitative and Quantitative Approaches* Sage Publications.
- 2. Dikshit, R. D. 2003. *The Art and Science of Geography: Integrated Readings*. Prentice-Hall of India, New Delhi.
- 3. Evans M., 1988: "Participant Observation: The Researcher as Research Tool" in *Qualitative Methods in Human Geography*, eds. J. Eyles and D. Smith, Polity.
- 4. Misra, R.P. (2002) *Research Methodology*, Concept Publications, New Delhi.
- 5. Mukherjee, Neela 1993. *Participatory Rural Appraisal: Methodology and Application*. Concept Pubs. Co., New Delhi.
- 6. Mukherjee, Neela 2002. *Participatory Learning and Action: with 100 Field Methods*. Concept Pubs. Co., New Delhi
- 7. Robinson A., 1998: "Thinking Straight and Writing That Way", in *Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioural Sciences*, eds. by F. Pryczak and R. Bruce Pryczak, Publishing: Los Angeles.
- 8. Special Issue on "Doing Fieldwork" *The Geographical Review* 91:1-2 (2001).
- 9. Stoddard R. H., 1982: *Field Techniques and Research Methods in Geography*, Kendall/Hunt.
- 11. Wolcott, H. 1995. *The Art of Fieldwork*. Alta Mira Press, Walnut Creek, CA.
- 12. Yadav, H. (2013) *Shodh Pravidhi Evam Matratamak Bhugol*, Raja Publications, Delhi.



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भूगोल Geography

Semester IV

General Elective

(GE-4)

GE-4.1 Industrial Geography

UNIT 1	<ul style="list-style-type: none"> Nature and Scope of Industrial Geography
UNIT 2	<ul style="list-style-type: none"> Types, Geographical Characteristics and Location of Industries (Weber's Theory): Small and Medium Industries, Heavy Industries: Coal and Iron based industries, Rural based Industries, Footloose Industry.
UNIT 3	<ul style="list-style-type: none"> Mega Industrial Complexes: National Capital Region, Mumbai-Pune Industrial Region, Bengaluru-Chennai Industrial Region and Chota Nagpur Industrial Region
UNIT 4	<ul style="list-style-type: none"> Impact of Industrialisation in India: Environmental; Social and Economic
UNIT 5	<ul style="list-style-type: none"> Industrial Policy of India

• Select Readings:

- 1. Alexander J.W. (1979). Economic Geography, Printice Hall of India Pvt. Ltd., New Delhi.
- 2. Goh Cheng Leong (1997). "Human and economic geography", Oxford University Press, New York.
- 3. Thoman, R.S., Conkling E.C. and Yeates, M.H. (1968). Geography of Economic Activity, McGraw Hill Book Company, 1968.
- 4. Miller, E. (1962) Geography of Manufacturing Printice Hall - Englewood Cliff, New Jersey
- 5. Gunnar Alexandersson (1967). "Geography of Manufacturing, Prentice Hall, New Jersey
- 6. Truman, A. Harishorn, John W. Alexander (2000) " Economic Geography", Prentice Hall of India Ltd., New Delhi.
- 7. Singh, Jagdish 2003: *India - A Comprehensive & Systematic Geography*, Gyanodaya Prakashan, Gorakhpur.
- 8. Tirtha, Ranjit 2002: *Geography of India*, Rawat Pubs., Jaipur & New Delhi.
- 9. Pathak, C. R. 2003: *Spatial Structure and Processes of Development in India*. Regional Science Assoc., Kolkata.
- 10. Tiwari, R.C. (2007) Geography of India. Prayag Pustak Bhawan, Allahabad
- 11. Sharma, T.C. (2013) Economic Geography of India. Rawat Publication, Jaipur



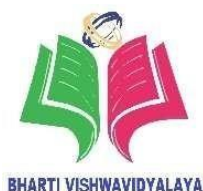
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Semester IV
 General Elective
 (GE-4)

GE-4.2 Sustainable Development

UNIT 1	<ul style="list-style-type: none"> Sustainable Development: Definition, Components, Limitations and Historical Background.
UNIT 2	<ul style="list-style-type: none"> The Millennium Development Goals: National Strategies and International Experiences
UNIT 3	<ul style="list-style-type: none"> Sustainable Regional Development: Need and examples from different Ecosystems.
UNIT 4	<ul style="list-style-type: none"> Inclusive Development: Education, Health; Climate Change: The role of higher education in sustainable development; The human right to health; Poverty and disease; The Challenges of Universal Health Coverage; Policies and Global Cooperation for Climate Change
UNIT 5	<ul style="list-style-type: none"> Sustainable Development Policies and Programmes: The proposal for SDGs at Rio+20; Illustrative SDGs; Goal-Based Development; Financing for Sustainable Development; Principles of Good Governance; National Environmental Policy, CDM.

● **Select Readings:**

- 1. Agyeman, Julian, Robert D. Bullard and Bob Evans (Eds.) (2003) Just Sustainabilities: Development in an Unequal World. London: Earthscan. (Introduction and conclusion.)
- 2. Ayers, Jessica and David Dodman (2010) "Climate change adaptation and development I: the state of the debate". Progress in Development Studies 10 (2): 161-168.
- 3. Baker, Susan (2006) Sustainable Development. Milton Park, Abingdon, Oxon; New York, N.Y.: Routledge. (Chapter 2, "The concept of sustainable development").
- 4. Brosius, Peter (1997) "Endangered forest, endangered people: Environmentalist representations of
- 5. Lohman, Larry (2003) "Re-imagining the population debate". Corner House Briefing 28.
- 6. Martínez-Alier, Joan et al (2010) "Sustainable de-growth: Mapping the context, criticisms and future prospects of an emergent paradigm" Ecological Economics 69: 1741-1747.
- 7. Merchant, Carolyn (Ed.) (1994) Ecology. Atlantic Highlands, N.J: Humanities Press. (Introduction, pp 1-25.)
- 8. Environment, Development and Sustainability 7: 501-518.
- 9. Robbins, Paul (2004) Political Ecology: A Critical Introduction. Blackwell Publishing.
- 10. Singh, R.B. (Eds.) (2001) Urban Sustainability in the Context of Global Change, Science Pub., Inc., Enfield (NH), USA and Oxford & IBH Pub., New Delhi.



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B.A. (Honours) Geography

भूगोल Geography

Semester VTH

Paper 501 - Regional Planning and Development

(CD 11)

UNIT 1	<ul style="list-style-type: none"> • Definition of Region, Evolution and Types of Regional planning: Formal, Functional, and Planning Regions and Regional Planning; Need for Regional Planning; Types of regional Planning.
UNIT 2	<ul style="list-style-type: none"> • Choice of a Region for Planning: Characteristics of an Ideal Planning Region; Delineation of Planning Region; Regionalization of India for Planning (Agro Ecological Zones)
UNIT 3	<ul style="list-style-type: none"> • Theories and Models for Regional Planning: Growth Pole Model of Perroux; Growth Centre Model in Indian Context; Myrdal, Hirschman, Rostow and Friedmann; Village Cluster
UNIT 4	<ul style="list-style-type: none"> • Changing Concept of Development, Concept of underdevelopment; Efficiency-Equity Debate
UNIT 5	<ul style="list-style-type: none"> • Measuring development: Indicators (Economic, Social and Environmental); Human development.

• Select Readings:

- 1. Blij H. J. De, 1971: *Geography: Regions and Concepts*, John Wiley and Sons.
- 2. Claval P.I, 1998: *An Introduction to Regional Geography*, Blackwell Publishers, Oxford and Massachusetts.
- 3. Friedmann J. and Alonso W. (1975): *Regional Policy - Readings in Theory and Applications*, MIT Press, Massachusetts.
- 4. Gore C. G., 1984: *Regions in Question: Space, Development Theory and Regional Policy*, Methuen, London.
- 5. Gore C. G., Köhler G., Reich U-P. and Ziesemer T., 1996: *Questioning Development; Essays on the Theory, Policies and Practice of Development Intervention*, Metropolis- Verlag, Marburg.
- 6. Haynes J., 2008: *Development Studies*, Polity Short Introduction Series.
- 7. Johnson E. A. J., 1970: *The Organization of Space in Developing Countries*, MIT Press, Massachusetts.
- 8. Peet R., 1999: *Theories of Development*, The Guilford Press, New York.
- 9. UNDP 2001-04: *Human Development Report*, Oxford University Press.
- 10. World Bank 2001-05: *World Development Report*, Oxford University Press, New



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Semester VTH

Paper 502 : Remote Sensing and GIS

(Practical) (CD 12)

UNIT 1	<ul style="list-style-type: none"> Remote Sensing and GIS: Definition and Components, Development, Platforms and Types,
UNIT 2	<ul style="list-style-type: none"> Aerial Photography and Satellite Remote Sensing: Principles, Types and Geometry of Aerial Photograph; Principles of Remote Sensing, EMR Interaction with Atmosphere and Earth Surface; Satellites (Landsat and IRS) and Sensors.
UNIT 3	<ul style="list-style-type: none"> GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data Structure
UNIT 4	<ul style="list-style-type: none"> Image Processing (Digital and Manual) and Data Analysis: Pre - processing (Radiometric and Geometric Correction), Enhancement (Filtering); Classification (Supervised and Un-supervised), Geo-Referencing; Editing and Output; Overlays
UNIT 5	<ul style="list-style-type: none"> Interpretation and Application of Remote Sensing and GIS: Land use/ Land Cover, Urban Sprawl Analysis; Forests Monitoring

Practical Record: A project file consisting of two exercises will be done from aerial photos and satellite images (scale, orientation and interpretation) and 3 exercises on using any GIS Software on above mentioned themes.

● **Select Readings:**

- 1. Campbell J. B., 2007: *Introduction to Remote Sensing*, Guildford Press.
- 2. Jensen J. R., 2004: *Introductory Digital Image Processing: A Remote Sensing Perspective*, Prentice Hall.
- 3. Joseph, G. 2005: *Fundamentals of Remote Sensing*, United Press India.
- 4. Lillesand T. M., Kiefer R. W. and Chipman J. W., 2004: *Remote Sensing and Image Interpretation*, Wiley. (Wiley Student Edition).
- 5. Nag P. and Kudra, M., 1998: *Digital Remote Sensing*, Concept, New Delhi.
- 6. Rees W. G., 2001: *Physical Principles of Remote Sensing*, Cambridge University Press.
- 7. Singh R. B. and Murai S., 1998: *Space-informatics for Sustainable Development*, Oxford and IBH Pub.
- 8. Wolf P. R. and Dewitt B. A., 2000: *Elements of Photogrammetry: With Applications in GIS*, McGraw-Hill.
- 9. Sarkar, A. (2015) *Practical geography: A systematic approach*. Orient Black Swan Private Ltd., New Delhi
- 10. Chauniyal, D.D. (2010) *Sudur Samvedan evam Bhogolik Suchana Pranali*, Sharda Pustak Bhawan, Allahabad



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Semester VTH

Elective Discipline Specific- 1

Paper DSE- 1.1 : Population Geography

UNIT 1	<ul style="list-style-type: none">Defining the Field – Nature and Scope; Sources of Data with special reference to India (Census, Vital Statistics and NSS).
UNIT 2	<ul style="list-style-type: none">Population Size, Distribution and Growth – Determinants and Patterns; Theories of Growth – Malthusian Theory and Demographic Transition Theory.
UNIT 3	<ul style="list-style-type: none">Population Dynamics: Fertility, Mortality and Migration – Measures, Determinants and Implications.
UNIT 4	<ul style="list-style-type: none">Population Composition and Characteristics – Age-Sex Composition; Rural and Urban Composition; Literacy.
UNIT 5	<ul style="list-style-type: none">Contemporary Issues – Ageing of Population; Declining Sex Ratio; HIV/AIDS.

• Select Readings:

1. Barrett H. R., 1995: *Population Geography*, Oliver and Boyd.
2. Bhende A. and Kanitkar T., 2000: *Principles of Population Studies*, Himalaya Publishing House.
3. Chandna R. C. and Sidhu M. S., 1980: *An Introduction to Population Geography*, Kalyani Publishers.
4. Clarke J. I., 1965: *Population Geography*, Pergamon Press, Oxford.
5. Jones, H. R., 2000: *Population Geography*, 3rd ed. Paul Chapman, London.
6. Lutz W., Warren C. S. and Scherbov S., 2004: *The End of the World Population Growth in the 21st Century*, Earthscan
7. Newbold K. B., 2009: *Population Geography: Tools and Issues*, Rowman and Littlefield Publishers.
8. Pacione M., 1986: *Population Geography: Progress and Prospect*, Taylor and Francis.
9. Wilson M. G. A., 1968: *Population Geography*, Nelson.
10. Panda B P (1988): *Janasankya Bhugol*, M P Hindi Granth Academy, Bhopal
11. Maurya S D (2009) *Jansankya Bhugol*, Sharda Putak Bhawan, Allahabad
12. Chandna, R C (2006), *Jansankhya Bhugol*, Kalyani Publishers, Delhi



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Semester VTH

Elective Discipline Specific-1

Paper DSE- 1.2 : Resource Geography

UNIT 1	<ul style="list-style-type: none"> Natural Resource: Concept, Classification and Techniques
UNIT 2	<ul style="list-style-type: none"> Distribution, Utilisation, Problems and Management of Land Resources and Water Resources
UNIT 3	<ul style="list-style-type: none"> Distribution, Utilisation, Problems and Management of Forests and Energy Resources
UNIT 4	<ul style="list-style-type: none"> Appraisal and Conservation of Natural Resources
UNIT 5	<ul style="list-style-type: none"> Sustainable Resource Development

• **Select Readings:**

- 1. Cutter S. N., Renwich H. L. and Renwick W., 1991: *Exploitation, Conservation, Preservation: A Geographical Perspective on Natural Resources Use*, John Wiley and Sons, New York.
- 2. Gadgil M. and Guha R., 2005: *The Use and Abuse of Nature: Incorporating This Fissured Land: An Ecological History of India and Ecology and Equity*, Oxford University Press. USA.
- 3. Holechek J. L. C., Richard A., Fisher J. T. and Valdez R., 2003: *Natural Resources: Ecology, Economics and Policy*, Prentice Hall, New Jersey.
- 4. Jones G. and Hollier G., 1997: *Resources, Society and Environmental Management*, Paul Chapman, London.
- 5. Klee G., 1991: *Conservation of Natural Resources*, Prentice Hall, Englewood.
- 6. Mather A. S. and Chapman K., 1995: *Environmental Resources*, John Wiley and Sons, New York.
- 7. Mitchell B., 1997: *Resource and Environmental Management*, Longman Harlow, England.
- 8. Owen S. and Owen P. L., 1991: *Environment, Resources and Conservation*, Cambridge University Press, New York.
- 9. Rees J., 1990: *Natural Resources: Allocation, Economics and Policy*, Routledge. London.



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Semester VTH
Elective Discipline Specific-2
Paper DSE- 2.1 : Urban Geography

UNIT 1	<ul style="list-style-type: none"> • Urban geography: Introduction, nature and scope
UNIT 2	<ul style="list-style-type: none"> • Patterns of Urbanisation in developed and developing countries
UNIT 3	<ul style="list-style-type: none"> • Functional classification of cities: Quantitative and Qualitative Methods
UNIT 4	<ul style="list-style-type: none"> • Urban Issues: problems of housing, slums, civic amenities (water and transport)
UNIT 5	<ul style="list-style-type: none"> • Case studies of Delhi, Mumbai, Kolkata, Chennai and Chandigarh with reference to Land use and Urban Issues

• **Select Readings:**

- 1. Fyfe N. R. and Kenny J. T., 2005: *The Urban Geography Reader*, Routledge.
- 2. Graham S. and Marvin S., 2001: *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*, Routledge.
- 3. Hall T., 2006: *Urban Geography*, Taylor and Francis.
- 4. Kaplan D. H., Wheeler J. O. and Holloway S. R., 2008: *Urban Geography*, John Wiley.
- 5. Knox P. L. and McCarthy L., 2005: *Urbanization: An Introduction to Urban Geography*, Pearson Prentice Hall New York.
- 6. Knox P. L. and Pinch S., 2006: *Urban Social Geography: An Introduction*, Prentice-Hall.
- 7. Pacione M., 2009: *Urban Geography: A Global Perspective*, Taylor and Francis.
- 8. Sassen S., 2001: *The Global City: New York, London and Tokyo*, Princeton University Press.
- 9. Ramachandran R (1989): *Urbanisation and Urban Systems of India*, Oxford University Press, New Delhi
- 10. Ramachandran, R., 1992: *The Study of Urbanisation*, Oxford University Press, Delhi
- 11. Singh, R.B. (Eds.) (2001) *Urban Sustainability in the Context of Global Change*, Science Pub., Inc., Enfield (NH), USA and Oxford & IBH Pub., New Delhi.
- 12. Singh, R.B. (Ed.) (2015) *Urban development, challenges, risks and resilience in Asian megacities*. Advances in Geographical and Environmental Studies, Springer



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Elective Discipline Specific-2

Paper DSE- 2.2 : Agricultural Geography

UNIT 1	<ul style="list-style-type: none"> Defining the Field: Introduction, nature and scope; Land use/land cover definition and classification.
UNIT 2	<ul style="list-style-type: none"> Determinants of Agriculture: Physical, Technological and Institutional
UNIT 3	<ul style="list-style-type: none"> Agricultural Regions of India: Agro-climatic, Agro-ecological & Crop Combination Regions.
UNIT 4	<ul style="list-style-type: none"> Agricultural Systems of the World (Whittlesey's classification) and Agricultural Land use model (Von Thuenen, modification and relevance).
UNIT 5	<ul style="list-style-type: none"> Agricultural Revolutions in India: Green, White, Blue, Pink

• Select Readings:

- 1. Basu, D.N., and Guha, G.S., 1996: *Agro-Climatic Regional Planning in India*, Vol.I & II, Concept Publication, New Delhi.
- 2. Bryant, C.R., Johnston, T.R., 1992: *Agriculture in the City Countryside*, Belhaven Press, London.
- 3. Burger, A., 1994: *Agriculture of the World*, Aldershot, Avebury.
- 4. Grigg, D.B., 1984: *Introduction to Agricultural Geography*, Hutchinson, London.
- 5. Ilbery B. W., 1985: *Agricultural Geography: A Social and Economic Analysis*, Oxford University Press.
- 6. Mohammad, N., 1992: *New Dimension in Agriculture Geography*, Vol. I to VIII, Concept Pub., New Delhi.
- 7. Roling, N.G., and Wageruters, M.A.E.,(ed.) 1998: *Facilitating Sustainable Agriculture*, Cambridge University Press, Cambridge.
- 8. Shafi, M., 2006: *Agricultural Geography*, Doring Kindersley India Pvt. Ltd., New Delhi
- 9. Singh, J., and Dhillon, S.S., 1984: *Agricultural Geography*, Tata McGraw Hill, New Delhi.
- 10. Tarrant J. R., 1973: *Agricultural Geography*, David and Charles, Devon.



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Paper 601 : Evolution of Geographical Thought

(CD 12)

UNIT 1	<ul style="list-style-type: none">• Paradigms in Geography
UNIT 2	<ul style="list-style-type: none">• Pre-Modern – Early Origins of Geographical Thinking with reference to the Classical and Medieval Philosophies.
UNIT 3	<ul style="list-style-type: none">• Modern – Evolution of Geographical Thinking and Disciplinary Trends in Germany, France, Britain, United States of America.
UNIT 4	<ul style="list-style-type: none">• Debates – Environmental Determinism and Possibilism, Systematic and Regional, Ideographic and Nomeothetic.
UNIT 5	<ul style="list-style-type: none">• Trends – Quantitative Revolution and its Impact, Behaviouralism, Systems Approach, Radicalism, Feminism; Towards Post Modernism – Changing Concept of Space in Geography, Future of Geography.

• Select Readings:

- 1. Arentsen M., Stam R. and Thuijjs R., 2000: *Post-modern Approaches to Space*, ebook.
- 2. Bhat, L.S. (2009) *Geography in India (Selected Themes)*. Pearson
- 3. Bonnett A., 2008: *What is Geography?* Sage.
- 4. Dikshit R. D., 1997: *Geographical Thought: A Contextual History of Ideas*, Prentice– Hall India.
- 5. Hartshone R., 1959: *Perspectives of Nature of Geography*, Rand MacNally and Co.
- 6. Holt-Jensen A., 2011: *Geography: History and Its Concepts: A Students Guide*, SAGE.
- 7. Johnston R. J., (Ed.): *Dictionary of Human Geography*, Routledge.
- 8. Johnston R. J., 1997: *Geography and Geographers, Anglo-American Human Geography since 1945*, Arnold, London.
- 9. Kapur A., 2001: *Indian Geography Voice of Concern*, Concept Publications.
- 10. Martin Geoffrey J., 2005: *All Possible Worlds: A History of Geographical Ideas*, Oxford.
- 11. Soja, Edward 1989. *Post-modern Geographies*, Verso, London. Reprinted 1997: Rawat Publ., Jaipur and New Delhi.



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Semester VI

Paper 601: Evolution of Geographical Thought (CD 13)

UNIT 1	<ul style="list-style-type: none"> • Paradigms in Geography
UNIT 2	<ul style="list-style-type: none"> • Pre-Modern – Early Origins of Geographical Thinking with reference to the Classical and Medieval Philosophies
UNIT 3	<ul style="list-style-type: none"> • Modern – Evolution of Geographical Thinking and Disciplinary Trends in Germany, France, Britain, United States of America.
UNIT 4	<ul style="list-style-type: none"> • Debates – Environmental Determinism and Possibilism, Systematic and Regional, Ideographic and Nomenclature
UNIT 5	<ul style="list-style-type: none"> • Trends – Quantitative Revolution and its Impact, Behaviouralism, Systems Approach, Radicalism, Feminism; Towards Post Modernism – Changing Concept of Space in Geography, Future of Geography.

• **Select Readings:**

- 1. Arentsen M., Stam R. and Thuijjs R., 2000: *Post-modern Approaches to Space*, ebook.
- 2. Bhat, L.S. (2009) *Geography in India (Selected Themes)*. Pearson
- 3. Bonnett A., 2008: *What is Geography?* Sage.
- 4. Dikshit R. D., 1997: *Geographical Thought: A Contextual History of Ideas*, Prentice– Hall India.
- 5. Hartshorn R., 1959: *Perspectives of Nature of Geography*, Rand MacNally and Co.
- 6. Holt-Jensen A., 2011: *Geography: History and Its Concepts: A Students Guide*, SAGE.
- 7. Johnston R. J., (Ed.): *Dictionary of Human Geography*, Routledge.
- 8. Johnston R. J., 1997: *Geography and Geographers, Anglo-American Human Geography since 1945*, Arnold, London.
- 9. Kapur A., 2001: *Indian Geography Voice of Concern*, Concept Publications.
- 10. Martin Geoffrey J., 2005: *All Possible Worlds: A History of Geographical Ideas*, Oxford.
- 11. Soja, Edward 1989. *Post-modern Geographies*, Verso, London. Reprinted 1997: Rawat Publ., Jaipur and New Delhi.



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Paper 602 : Disaster Management based Project Work

(Practical) (CD 14)

<p>The Project Report based on any two field based case studies among following disasters and one disaster preparedness plan of respective college or locality:</p>	<ol style="list-style-type: none">1. Flood2. Drought3. Cyclone and Hailstorms4. Earthquake5. Landslides6. Human Induced Disasters: Fire Hazards, Chemical, Industrial accidents <ul style="list-style-type: none">•
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• **Select Readings:**

- 1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials &
- Technology Promotion Council, Ministry of Urban Development, Government of India.
- 2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
- 3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
- 4. Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3
- 5. Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
- 6. Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
- 7. Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.
- 8. Singh Jagbir (2007) “Disaster Management Future Challenges and Opportunities”, 2007. Publisher-
- I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India
- (www.ikbooks.com).



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Semester VI

Elective Discipline Specific-3

Paper DSE- 3.1 : Geography of Health and Wellbeing

UNIT 1	<ul style="list-style-type: none"> Perspectives on Health: Definition; linkages with environment, development and health; driving forces in health and environmental trends - population dynamics, urbanization, poverty and inequality
UNIT 2	<ul style="list-style-type: none"> Pressure on Environmental Quality and Health: Human activities and environmental pressure land use and agricultural development; industrialisation; transport and energy.
UNIT 3	<ul style="list-style-type: none"> Exposure and Health Risks: Air pollution; household wastes; water; housing; workplace.
UNIT 4	<ul style="list-style-type: none"> Health and Disease Pattern in Environmental Context with special reference to India, Types of Diseases and their regional pattern (Communicable and Lifestyle related diseases).
UNIT 5	<ul style="list-style-type: none"> Climate Change and Human Health: Changes in climate system – heat and cold; Biological disease agents; food production and nutrition.

• Select Readings:

- 1. Akhtar Rais (Ed.), 1990 : Environment and Health Themes in Medical Geography, Ashish Publishing House, New Delhi.
- 2. Avon Joan L. and Jonathan A Patzed.2001 : Ecosystem Changes and Public Health,Baltimin, John Hopling Unit Press(ed).
- 3. Bradley,D.,1977: Water, Wastes and Health in Hot Climates, John Wiley Chichesten.
- 4. Christaler George and Hristopoles Dionissios, 1998: Spatio Temporal Environment Health Modelling , Boston Kluwer Academic Press.
- 5. Cliff, A.D. and Peter,H., 1988 : Atlas of Disease Distributions, Blackwell Publishers, Oxford.
- 6. Gatrell, A.,and Loytonen, 1998 : GIS and Health, Taylor and Francis Ltd, London.
- 7. Hardham T. and Tannav M.,(eds): Urban Health in Developing Countries; Progress, Projects, Earthgoan, London.
- 8. Murray C. and A. Lopez, 1996 : The Global Burden of Disease, Harvard University Press.
- 9. Moeller Dade wed., 1993: Environmental Health, Cambridge, Harward Univ. Press.
- 10. Phillips, D.and Verhasselt, Y., 1994: Health and Development, Routledge, London.
- 11. Tromp, S., 1980: Biometeorology: The Impact of Weather and Climate on Humans and their Environment, Heydon and Son.



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Semester VI

Elective Discipline Specific-3

Paper DSE- 3.2 : Political Geography

UNIT 1	<ul style="list-style-type: none"> • Introduction: Concepts, Nature and Scope.
UNIT 2	<ul style="list-style-type: none"> • State, Nation and Nation State – Concept of Nation and State, Attributes of State – Frontiers, Boundaries, Shape, Size, Territory and Sovereignty, Concept of Nation State; Geopolitics; Theories (Heartland and Rimland)
UNIT 3	<ul style="list-style-type: none"> • Electoral Geography – Geography of Voting, Geographic Influences on Voting pattern, Geography of Representation, Gerrymandering.
UNIT 4	<ul style="list-style-type: none"> • Political Geography of Resource Conflicts – Water Sharing Disputes, Disputes and Conflicts Related to Forest Rights and Minerals
UNIT 5	<ul style="list-style-type: none"> • Politics of Displacement: Issues of relief, compensation and rehabilitation: with reference to Dams and Special Economic Zones

• Select Readings:

- 1. Agnew J., 2002: *Making Political Geography*, Arnold.
- 2. Agnew J., Mitchell K. and Toal G., 2003: *A Companion to Political Geography*, Blackwell.
- 3. Cox K. R., Low M. and Robinson J., 2008: *The Sage Handbook of Political Geography*, Sage Publications.
- 4. Cox K., 2002: *Political Geography: Territory, State and Society*, Wiley-Blackwell
- 5. Gallaher C., et al, 2009: *Key Concepts in Political Geography*, Sage Publications.
- 6. Glassner M., 1993: *Political Geography*, Wiley.
- 7. Jones M., 2004: *An Introduction to Political Geography: Space, Place and Politics*, Routledge .
- 8. Mathur H M and M M Cernea (eds.) *Development, Displacement and Resettlement – Focus on Asian Experience*, Vikas, Delhi
- 9. Painter J. and Jeffrey A., 2009: *Political Geography*, Sage Publications.
- 10. Taylor P. and Flint C., 2000: *Political Geography*, Pearson Education.
- 11. Verma M K (2004): *Development, Displacement and Resettlement*, Rawat Publications, Delhi
- 12. Hodder Dick, Sarah J Llyod and Keith S McLachlan (1998), *Land Locked States of Africa and Asia* (vo.2), Frank Cass



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Elective Discipline Specific-4

Paper DSE- 4.1 : Hydrology and Oceanography

UNIT 1	<ul style="list-style-type: none"> Hydrological Cycle: Systems approach in hydrology, human impact on the hydrological cycle; Precipitation, interception, evaporation, evapo-transpiration, infiltration, ground-water, run off and over land flow; Hydrological input and output
UNIT 2	<ul style="list-style-type: none"> River Basin and Problems of Regional Hydrology: Characteristics of river basins, basin surface run-off, measurement of river discharge; floods and droughts.
UNIT 3	<ul style="list-style-type: none"> Ocean Floor Topography and Oceanic Movements – Waves, Currents and Tides.
UNIT 4	<ul style="list-style-type: none"> Ocean Salinity and Temperature – Distribution and Determinants.
UNIT 5	<ul style="list-style-type: none"> Coral Reefs and Marine Deposits and Ocean Resources: Types and Theories of Origin; Biotic, Mineral.

• Select Readings:

- 1. Andrew. D. ward and Stanley, Trimble (2004): Environmental Hydrology, 2nd edition, Lewis Publishers, CRC Press.
- 2. Karanth, K.R., 1988 : Ground Water: Exploration, Assessment and Development, Tata-McGraw Hill, New Delhi.
- 3. Ramaswamy, C. (1985): Review of floods in India during the past 75 years: A Perspective. Indian National Science Academy, New Delhi.
- 4. Rao, K.L., 1982 : India's Water Wealth 2nd edition, Orient Longman, Delhi,.
- 5. Singh, Vijay P. (1995): Environmental Hydrology. Kluwar Academic Publications, The Netherlands.
- 6. Anikouchine W. A. and Sternberg R. W., 1973: *The World Oceans: An Introduction to Oceanography*, Prentice-Hall.
- 7. Garrison T., 1998: *Oceanography*, Wordsworth Company, Belmont.
- 8. Kershaw S., 2000: *Oceanography: An Earth Science Perspective*, Stanley Thornes, UK.
- 9. Pinet P. R., 2008: *Invitation to Oceanography* (Fifth Edition), Jones and Barlett Publishers, USA, UK and Canada.
- 10. Sharma R. C. and Vatal M., 1980: *Oceanography for Geographers*, Chaitanya Publishing House, Allahabad.
- 11. Sverdrup K. A. and Armbrust, E. V., 2008: *An Introduction to the World Ocean*, McGraw Hill, Boston.
- 12. Singh, M., Singh, R.B. and Hassan, M.I. (Eds.) (2014) Landscape ecology and water management. Proceedings of IGU Rohtak Conference, Volume 2. Advances in Geographical and Environmental Studies, Springer



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Semester VI
Elective Discipline Specific-4
Paper DSE- 4.2 : Social Geography

UNIT 1	<ul style="list-style-type: none"> • Social Geography: Concept, Origin, Nature and Scope.
UNIT 2	<ul style="list-style-type: none"> • Peopling Process of India: Technology and Occupational Change; Migration.
UNIT 3	<ul style="list-style-type: none"> • Social Categories: Caste, Class, Religion, Race and Gender and their Spatial distribution
UNIT 4	<ul style="list-style-type: none"> • Geographies of Welfare and Well being: Concept and Components – Healthcare, Housing and Education.
UNIT 5	<ul style="list-style-type: none"> • Social Geographies of Inclusion and Exclusion, Slums, Gated Communities, Communal Conflicts and Crime.

• **Select Readings:**

- 1. Ahmed A., 1999: *Social Geography*, Rawat Publications.
- 2. Casino V. J. D., Jr., 2009) *Social Geography: A Critical Introduction*, Wiley Blackwell.
- 3. Cater J. and Jones T., 2000: *Social Geography: An Introduction to Contemporary Issues*, Hodder Arnold.
- 4. Holt L., 2011: *Geographies of Children, Youth and Families: An International Perspective*, Taylor & Francis.
- 5. Panelli R., 2004: *Social Geographies: From Difference to Action*, Sage.
- 6. Rachel P., Burke M., Fuller D., Gough J., Macfarlane R. and Mowl G., 2001: *Introducing Social Geographies*, Oxford University Press.
- 7. Smith D. M., 1977: *Human geography: A Welfare Approach*, Edward Arnold, London.
- 8. Smith D. M., 1994: *Geography and Social Justice*, Blackwell, Oxford.
- 9. Smith S. J., Pain R., Marston S. A., Jones J. P., 2009: *The SAGE Handbook of Social Geographies*, Sage Publications.
- 10. Sopher, David (1980): *An Exploration of India*, Cornell University Press, Ithasa
- 11. Valentine G., 2001: *Social Geographies: Space and Society*, Prentice Hall.