

Syllabus for Integrated Ph.D Programme in Geography (2020 onwards)

Paper-I: Methodology

Time: 3 Hours

Max. Marks: 100

Unit- I

- 1.1 Research, Scientific Research-Concept & Characteristics, Approach to research
- 1.2 Identification of the Problem, Assessing the status of the Problem
- 1.3 Formulating the objectives, preparing the design, experimental or otherwise
- 1.4 Literature Review and Research Gap

Unit- II

- 2.1 Concept of hypothesis
- 2.2 Hypothesis formulation
- 2.3 Types of hypothesis and Hypothesis Testing
- 2.4 Sampling: Methods and its types

Unit- III

- 3.1 Types of Data: Primary, Secondary & Experimental data
- 3.2 Generation of primary data & its methods- Sampling
- 3.3 Designing of structured questionnaire, Validation of questionnaire, Processing & Analysis of Data.
- 3.4 Report writing- Format, Citations, Design of Chapters, Inferences, Findings and Conclusion, Bibliography & Webliography

Unit- IV

- 4.1 Philosophy and Methodology in Geography, Recent research approaches in Geography
- 4.2 Scientific explanation in geographical research and types of explanations; Scientific misconducts: Falsification, Fabrication and Plagiarism (FFP)
- 4.3 Research Ethics: Nature and Concept
- 4.4 Concept, meaning & Framework of Models

References:

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- Kothari, C. R. (1985) Research Methodology, Methods and Techniques, New Age International Publishers.
- R.B. Singh (1996) Research in Geography, Disasters and Environment, APH Publishers, New Delhi.
- Mayer P.L., Introductory Probability and Statistical Application
- Shashi Shelihar & Sanjay Chawla, Spatial Databases: A tour, Prentice Hall.
- Andres, A.C. (1987) : The Analogy Theme in Geography; Journal of Geography 86 (55) : 194-197 2.
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- Gomez, B and J Jones III J.P. eds. (2010) : Research Methods in Geography: A critical Introduction; West Sussex : Wiley-Blackwell 4
- Hay, I. ed. (2000) : Qualitative Research Methods in Human Geography; Oxford : Oxford University Press
- Livingstone, D.N., and Withers, C.W. (2005) : Geography and Revolution; Chicago : The University of Chicago Press
- Valentine, G. and Chifford, N. eds. (2010) : Key Methods in Geography; New Delhi: Sage Publications Pvt. Ltd.

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Paper-II: Recent Advances in the Subject

Time: 3 Hours Max. Marks: 100

Unit I

- 1.1. Climate change and its consequences; A Geographical perspective
- 1.2. Natural hazards and Disasters, Framework & Policies - International / National /Regional
- 1.3. Land degradation and Land use planning; A Geographical perspective
- 1.4. Food security; National scenario
- 1.5. Geopolitical issues; Emerging boundary issues – National & Local, Energy Security

Unit II

- 2.1. Globalization; Problems & Prospects
- 2.2. Carrying Capacity of Physical and Social System; Wetlands and Tourist Nodes
- 2.3. Framework for Environmental Impact Assessment & Environmental Management Plan
- 2.4. Ecological Economics Concept
- 2.5. Smart Cities Concept

Unit III

- 3.1. Global Positioning System (GPS) & its applications
- 3.2. Current trends in GIS: Big data integration
- 3.3. Hyperspectral Remote Sensing
- 3.4. Microwave Remote Sensing
- 3.5. Remote Sensing, GIS & GPS interface & integration

Unit IV

- 4.1. Climatic Modeling - GCM
- 4.2. Land use Modeling - Markov
- 4.3. Watershed Modeling, Distributed Models - SWAT
- 4.5. Health Model - Epidemiological Transition Model

References:

- Andrew Skidmore, 2008, Environmental Modelling with GIS and Remote Sensing, Taylor & Francis.
- Barthwal R.R. 2002. Environmental Impact Assessment. New Age International Publisher, 354 p.
- Betty Bowers Marriott, 1997, Environmental Impact Assessment: A Practical Guide, McGraw Hill.
- Lillesand, T.M & Kiefer, R.W, 1987. Remote Sensing and Image Interpretation, John Wiley and Sons Ltd.
- Open Geospatial Consortium (OGC): <http://www.opengeospatial.org/>.
- Michael f. Goodchild, 2005, Geographical Information Systems, principles, techniques, management and applications, John Wiley & Sons Inc., 404 p.
- Paul A. Longley, 2010, Geographic Information Systems and Sciences, John Wiley and Sons Ltd, 536 p.
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