

Syllabus for Ph.D. Entrance Test

Subject : Geography

Maximum Marks-00

Part A- 50 (Research Methodology)

Part B- 50 (Subject Wise)

PART-A

Research Methodology and Statistics

- UNIT 1: Meaning of Research
Aims, nature and scope of research
Prerequisites of research
- UNIT 2: Research Problem
Meaning of research problem Sources of research problem Characteristics of a good research problem
Hypothesis: Meaning and types of hypothesis. Research proposal or synopsis.
- UNIT 3: Types and Methods of Research
Classification of Research
Pure and Applied Research
Exploring or Formulative Research
Descriptive Research
Diagnostic Research/Study
Evaluation Research/Studies
Action Research
Experimental Research
Historical Research
Surveys
Case Study
Field Studies
- Unit 4: Review of Related Literature
Purpose of the review. Identification of the related literature. Organizing the related literature.
- UNIT 5: Data Collection (Sampling) Sampling and Population Techniques of sampling
Selection Characteristics of a good sample Types of data.
- UNIT 6: Tools of Data Collection
Observation, Interview, Questionnaire, Rating scales, Attitude scales, Schedules, Characteristics of good research tools.
- UNIT 7: Statistics
Concept of statistics, relevance in education, parametric and non-parametric data; graphical representation of data: histogram, frequency polygon, ogive and pie chart; Measures of Central Tendency: concept, computation and interpretation; measures of variability: concept, computation and

interpretation; normal probability curve: concept, application and interpretation.

Correlation: concept, computation and interpretation- Product Moment, Rank Order, Biserial, Point Biserial, Phi, Contingency, Tetrachoric; significance of mean: concept, computation and interpretation of significance of t-test (correlated and uncorrelated, matched, paired-unpaired, matching- paired); ANOVA (One way) :concept, computation and interpretation, regression and prediction; chi square: concept, computation and interpretation (equal and normal probability).

UNIT 8: Research Report

Format of the research report
Style of writing the report
References and bibliography

Reference books:

1. Best John W. and James Kahn, V., 1989, Research in Education, Sixth Edition, Prentice-Hall of India Pvt.Ltd, New Delhi.
2. Sharma R.A., 1992, Fundamentals of Educational Research, Loyal Book Depot, Meerut, UP, India.
3. Kulbir Singh Sidhu, 1990, Methodology of Research in Education, Sterling Publishers Pvt. Ltd., New Delhi.
4. Lokesh Koul, 1997 Methodology of educational Research, third edition, Vikas Publishing House Pvt. Ltd. , New Delhi.
5. Kothari C.R., 1990, Research Methodology Methods and Techniques, Wiley Eastern Limited, New Delhi.
6. Borg Walter R., Gall Meridith D., 1983, Educational Research an Introduction, Fourth Edition, Longaman, New York & London.
7. Nitko Anthony J., 1983, Educational Tests and Measurement an Introduction, Harcourt Brace Jovanovich, Inc., New York.
8. Aggarwal Y.P., 1988, Statistical Methods Sterling Publishers Pvt. Ltd., New Delhi.
9. Garret Hnery E., 1985 Statistics in Psychology and Education, Viakils, Feffer and Simon, Bombay.
10. Guilford, J.P., and Benjamin Fruchter, 1982 Fundamentals of statistics in Psychology and Education, Fifth edition, Mc Graw-Hill Book Company, New York.
11. Gupta S.C. and Kapoor V.K., 1999, Fundamentals of Mathematical Statistics, Sultan Chand & Sons Educational Publishers, New Delhi.
12. Grewal P.S., Methods of Statistics Analysis, Sterling Publishers Pvt. Ltd., New Delhi.
13. Bruce W. Tuckman, Statistics in Psychology and Education.

Part-B

Geography

- *Equal weight age will be given to research methodology and conceptual knowledge of the subject.*

1. **Geomorphology** : Fundamental concepts; End genetic and Exogenesis forces; Denudation and weathering; Geosynclines, continental drift and plate tectonics; Concept of geomorphic cycle; Landforms associated with fluvial, glacial, arid, coastal and karst cycles.

2. **Climatology** : Composition and structure of the atmosphere; Heat budget of the earth; Distribution of temperature; Atmospheric pressure and general circulation of winds; Monsoon and jet stream; Tropical and temperate cyclones; Classification of world climates; Koppen's and Thornthwaite's schemes.

3. **Oceanography** : Ocean deposits; Coral reefs; Temperature and salinity of the oceans; Density of sea water; Tides and ocean currents.

Bio-Geography : World distribution of plants and animals; Forms and functions of ecosystem; conservation and management of ecosystems; Problems of pollution.

4. **Geographic Thought** : General character of Geographic knowledge during the ancient and medieval period; Foundations of Modern Geography, Determinism and possibilism; Neo-determinism, Areal differentiation and spatial organization.

5. **Population Geography** : Patterns of world distribution; Growth and density of population; Patterns and processes of migration; Demographic transition.

Settlement Geography : Site, situation, types, size, spacing and internal morphology of rural and urban settlements; City-region; Primate city; Rank-size rule, Settlement hierarchy, Christaller's Central Place theory; August Losch's theory of market centres.

6. **Economic Geography** : Sectors of economy : primary, secondary, tertiary and quaternary; Quinary; Natural resources; renewable and non-renewable.

Measurement of agricultural productivity and efficiency; Crop combination and diversification; Von Thunen's Model.

Classification of industries : Weber's and Losch's approaches; Resource based and footloose industries.

7. Political Geography : Heartland and Rimland theories; Boundaries and frontiers; Nature of administrative areas and Geography of public policy and finance.

Social Geography : Ethnicity; tribe; dialect; language, caste and religion; Concept of social well-being.

Cultural Geography : Cultural areas and cultural regions; Human races; Habitat; Economy and Society of tribal groups.

8. Regional Planning : Regional concept in Geography; Concept of planning regions; Types of regions; Methods of regional delineation; Regional planning in India; Indicators of development; Regional imbalances; Evolution, nature and scope of town planning with special reference to India, and Fundamentals of Town and Country planning.

9. Geography of India : Physiographic divisions' Climate : Its regional variations; Vegetation types and vegetation regions; Major soil types; Irrigation and agriculture; Population distribution and growth; Settlement patterns; Mineral and power resources; major industries and industrial regions.

10. Cartography : Types of maps : Techniques for the study of spatial patterns of distribution; Choropleth; Isopleth and Chorochromatic maps and pie diagrams; Mapping of location-specific data; Accessibility and flow maps.

Statistical Methods : Data sources and types of data; Frequency distribution and cumulative frequency : Measures of central tendency; Selection of class intervals for mapping; Measures of dispersion and concentration; Standard deviation; Lorenz Curve; Methods of measuring associations among different attributes; Simple and Multiple correlation; Regression.

Nearest-neighbour analysis; Scaling techniques; Rank score; Weighted score; Sampling techniques for Geographical analysis.

Definition, scope and process of research, Types and design of research, Role and significance of research bodies and funding agencies to assist research work. Problems of geographic research, formulation of research schemes and research projects, hypothesis.