

Department of Geography
Savitribai Phule Pune University
Syllabus for Online Entrance Examination 2021 for M.A./M.Sc. Geography

Section A – General knowledge / aptitude / logic

Unit 1: Mathematical Reasoning and Aptitude:

- Number series
- Letter series
- Elementary statistics
- Time Speed and Distance
- Proportion and Percentage
- Profit and Loss
- Interest and Discounting
- Time and Work
- Ratio and proportion

Unit 2: Logical and Analytical Reasoning Syllabus:

- Arrangement – Seating/ Circular
- Directions
- Calendars
- Clocks
- Blood Relationship
- Number Series
- Coding-Decoding
- Assumption
- Syllogisms

Unit 3: General Awareness of Geography and Environment:

- Human and environment interaction
- Environmental issues
- Natural and energy resources
- Natural hazards and disasters

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Section B – Subject specific

Unit 1: Geomorphology:

1. Definition, nature and scope
2. The earth – its interior, composition and structure
3. Origin of continents and ocean basin
 - i. Wegener's Continental Drift Theory
 - ii. Theory of Plate Tectonics
4. Rocks
 - i. Rock- Definition and origin.
 - ii. Type of Rocks- Igneous, Sedimentary and Metamorphic rocks
5. Endogenetic and Exogenetic forces
6. Weathering
7. Agents of erosion and deposition – Rivers, Sea-waves, Wind, Glacier
8. Mass movement
9. Slopes
 - i. Meaning & Definition of slopes
 - ii. Types and slope segments: Concave, Convex, Terraced, Rectilinear
10. Applications of Geomorphology - Watershed Management

Unit 2: Climatology:

1. Introduction to Climatology and Atmosphere
 - i. Definition, nature and scope
 - ii. Importance of Climatology in modern times.
 - iii. Weather and climate, elements of weather and climate
 - iv. Composition and structure of the atmosphere
2. Insolation
 - i. Heat budget of the Earth
 - ii. Factors affecting horizontal distribution of temperature.
 - iii. Inversion of temperature, lapse rate and its types.
3. Atmospheric Pressure and Wind System
 - i. Vertical and horizontal distribution of pressure
 - ii. Formation of pressure belts and their relation with winds
 - iii. Concept of pressure gradient
 - iv. Type of winds- planetary winds, periodic winds (Monsoon winds), local winds – land and sea breezes, mountain and valley winds
4. Atmospheric Moisture and Precipitation
 - i. Sources of moisture, methods to express humidity of the air- absolute and relative humidity
 - ii. Forms of precipitation- rain, snow, dew, hail and fog
 - iii. Types of clouds- high, medium and low clouds
5. Cyclones and anticyclones

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Unit 3: Oceanography:

1. Definition, nature and scope
2. Submarine relief
 - i. General idea of ocean relief
 - ii. Relief of Atlantic, Pacific and Indian oceans
3. Properties of ocean water – temperature, density and salinity
4. Movements of ocean water
 - i. Waves- Characteristics of sea waves, tsunamis
 - ii. Ocean currents- meaning, causes, types
 - iii. Ocean currents of Atlantic, Pacific and Indian Oceans
 - iv. Effects of ocean currents.
 - v. Tides- meaning, causes, types
 - vi. Equilibrium theory of tides

Unit 4: Population and Settlement Geography:

1. Population Geography – Definition, nature and scope
2. Sources of Population data - Census, National Sample Survey, Sample Registration Survey, NFHS, DLHS Data, Demographic Surveys and other Sources
3. Spatial Pattern of Distribution
 - i. Determinates of Distribution and Density of Population
 - ii. Distribution of Population – World & Indian Scenario
 - iii. Population Growth- Global & Indian Trend
4. Composition of Population – Age and Sex, Rural – urban and economic
5. Demographic Attributes
 - i. Migration-Classification, Determinants and Consequences of Migration
 - ii. Measures – Fertility, Morbidity and Mortality, Marital Status
 - iii. Human Development Index
6. Theories of Population growth – Demographic Transition Model and Malthus Population theory
7. Settlement Geography – Definition, nature and scope
8. Site, Situation, Type, Size, Spacing and Patterns of settlements
9. Concepts of Settlement and Urbanization – Urbanization, Centrality, City Region, Urban Fringe, Rank-size Rule, Smart City Concept, Smart Village, C.B.D., Hierarchy of Settlement

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Unit 5: Economic Geography:

1. Economic Geography – Definition, nature and scope
2. Economic activities
 - i. Sectors of Economy – Primary, Secondary and Tertiary
 - ii. Concept of More Developed, Developing and Less Developed countries
3. Industries - Factors affecting on Industrial Location, Losch' and Weber's Theory of Industrial Location
4. Major Industries - Iron and Steel, Cotton Textile, Automobile, Ship Building
5. Agriculture
 - i. Factors influencing agriculture- physical, economic, social, cultural
 - ii. Spatial Distribution of major food and cash crops- Wheat, Rice, Maize, Rubber
 - iii. Agricultural Classification - Subsistence Agriculture, Commercial Grain Farming, Plantation Agriculture and Market Oriented Farming
6. Tourism – Factors affecting tourism, types of tourism and tourism development in India

Unit 6: Social and Cultural Geography:

1. Meaning and Bases of Human Races
2. World languages and their distribution, Distribution of languages in India
3. World's major religions and their distribution, Distribution of religions in India
4. Regional Distribution of Tribes in India

Unit 7: Geography of India:

1. Location, Extent and Geopolitical significance
2. Major physiographic regions
3. Drainage system of India
4. Characteristics of Indian Climate: Origin of Monsoons
5. Soils and natural vegetation
6. Agriculture
 - i. Green Revolution
 - ii. White Revolution
 - iii. Blue Revolution
 - iv. Livestock Resources
 - v. Tissue Culture & Horticulture
 - vi. Poly House and Agriculture
7. Regional Planning and Development
 - i. Concept, Objectives, Need and Nature of Regional Planning
 - ii. Experience of Regional Planning in India

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Unit 8: Techniques in Spatial Analysis:

1. Maps and Map Scale: Definition
2. Projection: Definition and Classification
3. Graphs and Diagrams: Simple Line Graph, Polygraph, simple Bar Diagram, Compound Bar Diagram, Pie Chart, Choropleth Mapping
4. Toposheets: Marginal Information, Grid reference, Conventional signs and symbols, Indexing
5. Methods of Relief Representation
6. Aerial Photographs and Satellite Images: Introduction
7. Introduction to GIS

Unit 9: Surveying:

1. Directions – Various methods of deciding North direction: True, Magnetic and Grid North
2. Types of Surveying: Plane Table Survey, Prismatic Compass Survey, Dumpy Level Survey
3. GPS Survey and Plotting

Unit 10: Geography of Environment and Resources:

1. Ecosystem : Concepts, Structure and Functions : Trophic levels, Energy flow
2. Geo-chemical cycles: carbon, nitrogen and oxygen; Food chain, Food web and Ecological Pyramid
3. Resources: Meaning, Non-Renewable and Renewable Resources
4. Distribution of Water, Mineral, Energy and Forest Resources
5. Environmental Disasters: Hazard and Disaster, Basic concepts and structure of Disaster management
6. Climatic disasters, Geological and Geomorphic disasters, Anthropogenic Disasters, Environment conservation and management: sustainable development
7. Global issues – Global warming, Ozone Depletion, Acid Rain