

**PG Entrance Examination for 2024**  
**M.Sc - Geographical Information System (GIS),**  
**CENTRE FOR GEOINFORMATICS TECHNOLOGY,**  
**DOS in Geography, Manasagangothri Campus, University of Mysore, Mysuru**

1. **Earth System Dynamics:** Formation of Earth, Layers of Earth, Layers of Atmosphere, components of Biosphere, Hydrosphere and its forms, Carbon Cycle, Nitrogen Cycle, Oxygen Cycle. Hydrogen Cycles, Ocean currents, Greenhouse effects, Ozone depletions, El-Nina, La-Nina, Weather forecasting, Climate change and its impacts on ecosystem.
2. **Physical Geography:** Field, Scope and importance; Distribution of land and water, Wagner's theory of continental drift, Plate tectonics, Movements of the earth's crust-Diastrophism; Folds and faults; volcanoes and Earth Quakes; Rocks; Soils; Mountains-Plateau, Plains.
3. **Cartography, Surveying and Mapping:** Definition, Scope and importance of Cartography; Color theory; Types of Maps; Coordinate Systems, Latitude/Longitudes and Projections. Surveying Techniques includes Plane table surveying; Radiation and Intersection; Prismatic compass surveying; Radiation and intersection; Chain surveying.
4. **Environmental Studies:** Definition, principles and scope of environmental science, Interaction of Environment and Ecology; Biodiversity conservation; Forests and Biomass in India, Habitat Diversity; Lakes Ecosystem; Energy Sources, Types of Pollution; Waste Management; Sanitation Problems, Legislations of Environment in India, Polices of Swachh Bharath Mission and Clean India.
5. **Computer Applications:** Basics of Computer; Generations; Types of Computer systems; Software and Hardware; CPU; Memory and Its types; Data and Information; MS Office; Database Management; Internet, Intranet; Types of Networks- LAN,MAN, WAN; Wireless Communications; Artificial Intelligence.
6. **Mathematics and Statistics:** Basic calculations, Number theory; Algebra; Geometry, Axioms and Postulates; Measurement units and unit conversions; Graph Theory and quadrants; Statistics- meaning, importance and limitations; data: primary and secondary; Sampling and its types; Standard Deviations; Distribution of Data; Regressions and Data Analysis.
7. **Geographical Information Systems:** Concepts, History of GI Science, Components and Importance of GIS, Spatial Data-Point, Line and Polygon; Non-Spatial Data and Attribute Management; Data Integration; Commercial and open source software's;
8. **Remote Sensing:** History, Definition, Concepts of Remote Sensing; Regions in electromagnetic spectrum, wavelength, frequency; Satellites and Orbits; Satellite Sensors; Types of Satellite; Aircraft and Unmanned Aerial Vehicles; Various satellites- KALPANA, INSAT and OCEANSAT.

- 9. Indian Constitutions:** Meaning and Preamble of Constitutions; Assembly; Salient features of Indian constitutions; Fundamental Rights and Duties, Directive Principles of State Policy; Governor: Role and Position, CM and Council of ministers.
- 10. General Aptitude and Reasoning:** critical reasoning, Inferences, strengthens or weakens the argument, Numerical computation, numerical estimation, numerical reasoning and data interpretation.

## **ELIGIBILITY CRITERIA**

### **M.Sc. Geographical Information System (GIS)**

Any degree or equivalent from a recognized College/ University/ Tertiary Educational Institution or any Degree Branch of Science (B.Sc.) or a Degree in Social Science (B.A.)/ Commerce or Management (B.Com/B.B.A/B.B.M) with Statistics or Mathematics at Junior College Level or a degree in Engineering (B.E. / B.Tech.) or a degree in Architecture/ Planning/ Environmental/ Biological or Agricultural Sciences with at least 45% marks (40% for SC/ ST/Cat-I candidates) is eligible.