

**M.A. Geography – GEO2 Semester-II**  
**Session 2016-17 onwards**  
**OPEN ELECTIVE: 16GEO01 - BASICS OF GEOINFORMATICS**

Credit: 03 (3+0+0)  
End Semester Exam: 80 marks  
Internal Assessment: 20 marks  
Total: 100 marks  
Time: 3hrs

**Course Outcomes:**

**Students would be able to:**

- CO1:** Learn the use of latest geospatial technology.
- CO2:** Understand the spatial phenomena in a better manner with availability of real time and accurate information.
- CO3:** Apply the geospatial technology in various fields of life.

**Unit – I**

**Aerial Photography**

Aerial photography: history and development, advantages and limitations; Classifications of aerial photographs; Geometry of an aerial photograph; Scale of an aerial photograph; Availability and procurement of aerial photographs in India; Aerial photograph vs map.

**Unit – II**

**Remote Sensing.**

Introduction to Remote Sensing; electromagnetic radiation; stages of remote sensing; energy interactions in atmosphere; energy interactions with earth surface features and spectral signatures. Remote Sensing applications in land use/land cover, urban, environment, forest and disaster studies.

**Unit – III**

**Remote Sensing**

Remote Sensing platforms: airborne and space borne; satellite orbits: geostationary and near polar; Image data characteristics: resolutions- spatial, spectral, radiometric and temporal; Sensors and their types; Satellite missions of ISRO .

**Unit – IV**

**GIS and GPS**

Geographic Information System (GIS): definition and applications; GIS and remote sensing integration; components and elements of GIS; representation of earth surface features in GIS; introduction to Global Positioning System; GPS satellites constellations; GPS segments; Applications of GPS.

**Note (i):** Open Elective to be chosen from the basket of Open Electives (OEs) provided by the University.

**(ii)** The question paper will have five units. First four units of question paper will contain two questions from each unit. Candidate(s) are required to attempt one question from each unit. Unit-V shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

**Recommended Readings:**

1. [Paul Wolf](#), [Bon DeWitt](#), and [Benjamin Wilkinson](#). Elements of Photogrammetry with Application in GIS. USA: Mc-Graw Hill Education.2014.
2. Avery, T.E., and G.L. Berlin. Fundamentals of Remote Sensing and Airphoto Interpretation, Macmillan, New York.1992.
3. Campbell, J.B. Introduction to Remote Sensing, Guilford, New York.1996.
4. Curran, Paul J. Principles of Remote Sensing, Longman, London & New York. 1985.
5. Joseph, G. Fundamentals of Remote Sensing, Universities Press Hyderabad. 2005.
6. Lillisand, T.M. and P. W. Kiefer. Remote Sensing and Image Interpretation, New York. John Wiley & Sons.1986.
7. Burrough, P.A. and McDonnell, R.A. Principles of Geographic Information System. Oxford: Oxford University Press. 1998.
8. Chang, Kang-tsung. Introduction to Geographic Information Systems. New Delhi: Tata McGraw-Hill.2006.
9. Doberstein, Dan. Fundamentals of GPS Receivers: A Hardware Approach. New York: Springer

**Ma Geography - GEO2 Semester-II**  
**Session 2016-17 Onwards**  
**OPEN ELECTIVE: 16GEOO2 -**  
**GEOGRAPHY OF INDIA: SYSTEMATIC AND REGIONAL**

Credit: 03 (3+0+0)  
End Semester Exam: 80 marks  
Internal Assessment: 20 marks  
Total: 100 marks  
Time: 3 hrs

**Course Outcomes:**

**Students would be able to:**

**CO1:** Familiarise with the geographic dimensions of India.

**CO2:** Know about regional vitality; and formation of regions of Indian continent.

**CO3:** Have an insight into regional unity, stability and progress.

**Unit-I**

India: a historical-geographical expression; Size, location, and boundaries; Physical environment; Historical setting.

**Unit-II**

Unity in diversity of India: Unifying mechanism and divisive streaks; Evolution of the administrative map of India since Independence.

**Unit-III**

Regional vitality of India; multiculturalism in India; the Indian diaspora; India's cultural landscape.

**Unit -IV**

Regionalisation schemes of India: Physiographic (S.P. Chatterjee); Climatic (Koeppen and Trewartha); Agricultural (Jasbir Singh and C.B. Mamoria); and Industrial (B.N. Sinha).

**Note (i):** Open Elective to be chosen from the basket of Open Electives (OEs) provided by the University.

(ii) The question paper will have five units. First four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

### **Recommended Readings:**

1. Ahmad, Aijazuddin. 1999. *Social Geography*. Rawat Publication, New Delhi.
2. Chandna, R.C. 2002. *Geography of Population*. 5th edn. Kalyani Publishers, Delhi.
3. Deshpande, C.D. 1992. *India: A Regional Interpretation*, ICSSR and Northern Book Center, New Delhi.
4. Hussain, M. 2014. *Geography of India*. 5<sup>th</sup> edn. McGraw Hill Education, New Delhi. Singh, Jagdish. 2003. *India: A Comprehensive Systematic Geography*. Gyanodya Prakashan, Gorakhpur.
5. Spate O.H.K. & A.T.A. Learmonth. 1967. *Geography of India and Pakistan*, Methuen, London.
6. Sukhwal, B. L. 1971. *India: A Political Geography*. Allied Publishers, New Delhi.
7. Tirtha, Ranjit. 2000. *Emerging India*. Rawat Publications, Jaipur.
8. Tiwari, R.C. 1999. *Geography of India*. Prayag Publishers, Allahabad.
9. Wadia, D. N. 1953. *Geology of India*. Macmillan & Co., London.

**M.A. Geography – GEO2 Semester-III**  
**Session 2017-18 onwards**  
**OPEN ELECTIVE: 17GEO01 - INTRODUCTION TO GEOGRAPHY**

Credit: 03 (2+1+0)

End Semester Exam: 80 marks

Internal Assessment: 20 marks

Total: 100 marks

Time: 3 hrs.

**Course Outcomes:**

**Students would be able to:**

**CO1:** Understand the basic concepts in geography.

**CO2:** Have an exposure of geographical concepts to students other than formal students of geography.

**CO3:** Understand the geographical concepts which are relevant in day to day life.

**Unit-I**

Solar system, solar and lunar eclipse; Earth- shape, movements, formation of day/nights and seasons; location-latitude-longitude, longitude and time zones.

**Unit-II**

Interior of earth; vulcanism and earthquakes; plate tectonics; weathering and erosion; brief introduction to major landforms.

**Unit-III**

Weather and climate: factors affecting and distribution; composition and structure of atmosphere; atmospheric pressure and global winds; introduction to Monsoon.

**Unit-IV**

Relief of oceans; oceanic salinity; circulation of oceanic water; currents of Atlantic, Pacific and Indian Oceans.

**Note (i):** Open Elective to be chosen from the basket of Open Electives (OEs) provided by the University.

(ii) The question paper will have five units. First four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

**Recommended Readings:**

1. Leong, Goh Cheng., 2015, *Certificate Physical and Human Geography*, Oxford University Press, New Delhi.
2. Getis [Arthur and Bjelland Mark and Getis Victoria.](#), 2014, *Introduction to Geography*, McGraw Hill Education.
3. Singh, Savinder., 2006, *Physical Geography*, Pravalika Publications, Allahabad.
4. Strahler Alan and Strahler Aurther., 2005, *Introducing Physical Geography*, John Wiley & Sons, Inc.

**M.A. Geography - GEO2 Semester-III**  
**Session 2017-18 onwards**  
**OPEN ELECTIVE: 17GEO02 - SOURCES OF GEOGRAPHICAL DATA**

Credit: 03(2+1+0)  
End Semester Exam: 80 marks  
Internal Assessment: 20 marks  
Total: 100 marks  
Time: 3 hrs.

**Course Outcomes:**

**Students would be able to:**

- CO1: Have a basic knowledge about the characteristics of geographical data.
- CO2: Know about the significance and different types of sources of geographical data.
- CO3: Understand the importance of geographical data which are relevant in day to day life.

**Unit - I**

Nature and Main Sources of Geographical Data: Place Names, Census of India, Field Studies.

**Unit - II**

**Place Names** (Based on Physical and Cultural Environments).

**Census of India: Primary Census Abstract:** (Number of Households, Population, Sex, 0-6 Years Population, Scheduled Castes and Scheduled Tribes Population, Literate, Workers, Main Workers, Marginal Workers (Cultivators, Agricultural Labourers, HHI, Other Workers and Non -Workers and Non- Workers in respect of Total, Rural and Urban Population).

**Unit-III**

**Census of India: Household Data:** Condition of Household, Availing Banking Services, Availability of various Assets, Pre- dominant materials of Roof, Wall and Floor, Sources of Drinking Water and Location, Lighting, Availability of Latrine Facility, Types of fuel for Cooking.

**Unit-IV**

**Census of India: Village Directory** ( Area. Population, Availability of Educational, Medical, Postal, Drinking Water, Communication Facilities, Land Use Pattern.

**Note (i):** Open Elective to be chosen from the basket of Open Electives (OEs) provided by the University.

(ii) The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

**Recommended Readings:**

1. Census of India (2011): Instruction Manual for House Listing and Housing Census, Ministry of Home Affairs, Government of India, New Delhi.
2. Census of India (2011): Primary Census Abstract, India, CD, New Delhi.
3. Census of India (2011): Village Directory, District Census, CD, New Delhi.