

Progressive Education Society's
Modern College of Arts, Science and Commerce (Autonomous), Shivajinagar, Pune 05
T.Y.B.Sc. Geography (Minor)
(2024 Course under NEP 2020)
Course Code: 24ScGeoU5302

Title of the Course: Lab Course on Map Reading

Credits: 02

Exam scheme: CIE-20 Marks

Total Practicals: 15

ESE-30 Marks

Course Objectives:

1. To Introduce the Students with SOI Toposheets and to acquire the Knowledge of Toposheet Reading/Interpretation.
2. To familiarize the students with the weather instruments and their applications in Geographical phenomena.
3. To acquaint the students with IMD weather maps and to gain the knowledge of weather Map Reading / interpretation.
4. To train the students in elementary statistics as an essential part of geography.
5. To awareness about GIS among the students.

	Semester – V	No. of Practicals
Unit 1	Toposheets	02
	A. Introduction to Survey of India (SOI) toposheets, Marginal Information, Grid reference, Conventional signs and symbols B. Types of toposheet/Indexing of toposheets i. 1:1000000/Million sheet ii. 1:250000/Degree sheet/Quarter inch sheet iii. 1:100000/Half inch sheet iv. 1:50000/One inch sheet v. 1:25000 vi. 1: 5000	
Unit 2	Methods of Relief Representation	05
	A. Methods of Relief Representation i. Qualitative :- Hachures, Hill shading, Layer Tint ii. Quantitative:- Contours, Form lines, Bench Marks, Spot Heights, Triangulation Mark, Relative Height (r) B. Representation of Relief features by Contours i. Concave Slope, Convex Slope, Steep Slope, Gentle Slope, Terraced / Uniform ii. Conical Hill, Spur, Plateau, Ridge, Saddle, Pass, Cliff & Waterfall C. Profile :Cross Profile and Longitudinal Profile	
Unit 3	Toposheet Reading and Interpretation	08
	A. Reading of SOI Toposheet i. Plain region ii. Plateau region iii. Mountainous/hilly region	

Course Outcomes:

Students will be able to:

1. Understand the structure, indexing, and classification of Survey of India (SOI) toposheets.
2. Identify and interpret marginal information, grid references, and conventional signs on toposheets.
3. Utilize different methods of relief representation, including qualitative (hachures, hill shading, and layer tinting) and quantitative (contours, benchmarks, and spot heights).
4. Construct and interpret contour-based landforms such as slopes, plateaus, ridges, saddles, cliffs, and waterfalls.
5. Read and analyze SOI toposheets for different regions, including plains, plateaus, and mountainous terrains.
6. Interpret weather maps, recognize meteorological symbols, and analyze isobaric patterns like cyclones, anticyclones, and troughs.
7. Apply theoretical knowledge through a one-day field excursion, identifying geographical features and preparing a detailed report.

References:

1. Aher, A. B., Chodhari, A. P. & Bharambe, S. N. (2015). *Techniques of Spatial Analysis*. Prashant Publication, Jalgaon.
2. Aronoff, S. (1989). *Geographic information systems: a management perspective*. DDL Publication, Ottawa.
3. Burrough, P. A. (1986). *Principles of geographical Information systems for land resource assessment*. Oxford University Press, New York.
4. Choudhar, A. P., Jadhav, S. & Choudhari, A. (2013). *Pratyakshik Bhugol (Practical Geography)*. Prashant Publication. (Marathi Edition).
5. Cole, J. P., & King, C. A. M. (1968). *Quantitative geography: Techniques and theories in geography* (No. 91: 51 COL), John Wiley, London.
6. Maguire, D. J., Goodchild, M. F. & Rhind, DW (eds.). (1991). *Geographical Information Systems: Principles and Applications*. Taylor & Francis, Washington.
7. Misra, R. P., & Ramesh, A. (1989). *Fundamentals of cartography*. Concept Publishing Company, New Delhi.
8. Monmonier, M. S. (1982). *Computer-assisted Cartography*. Prentice-Hall, Englewood Cliff, New Jersey.
9. Peuquet, D. J. and Marble, D. F. (1990). *Introductory Reading in Geographic Information Systems*. Taylor & Francis, Washington.
10. Robinson, A. H., Morrison, J. L., Muehrcke, P. C., Kimerling, A. J., & Guphill, S. C. (1995). *Elements of cartography*. John Wiley & sons. Inc., New York, USA.
11. Sarkar, A. (1997). *Practical Geography: A systematic approach*. Oriental Longman, Calcutta.
12. Singh, R. L. & Dutt, P. B. (1979). *Elements of Practical Geography*. Kalyani Publishers, New Delhi.
13. Star, J., & Estes, J. (1990). *Geographic information systems: An introduction*. Prentice- Hall, Englewood Cliff, New Jersey.
14. Taylor, D. F. (1991). *Geographic information system*. Pergamon Press, Oxford.
15. Unwin, D. J. (1981). *Introductory spatial analysis* (Vol. 748). Taylor & Francis.