

3115
B.A. Third Year
Subject: Geography
Practical: Projections and Surveying

UNIT – I

- a) Graticule, Meridians and parallels - definition and characteristics
- b) Map Projections – definition, basic concepts, classification, characteristics and choice of projections
- c) Graphical construction of Conical projections-one standard parallel, two standard parallels, Bonne's and Polyconic

04 exercises

UNIT – II

- a) Graphical construction of Cylindrical projections – Natural Cylindrical, Equi-distant, Equal Area, Gall's Stereographic, Mercator's. Great circle and Loxodrome
- b) Graphical construction of Zenithal projections (polar case only) - Gnomonic, Stereographic, Orthographic
- c) Introduction to conventional projections

08 exercises

UNIT – III

- a) Surveying – Objectives, primary division and classification, principles of surveying
- b) Prismatic Compass Survey – types and conversion of bearings
Radiation and Intersection methods; open and closed traverse (with minimum of five stations) *04 exercises*
Calculation of included angles, correction of bearings, closing of the error
- c) Plane Table survey – Radiation and Intersection methods; open and closed traverse (with minimum of five stations) *04 exercises*
Resectioning - three point problem (mechanical method) *01 exercise*

Notes

1. Exercises on projections should be drawn on 1/4th of a full drawing sheet.
2. Survey exercises should be drawn on full drawing sheets.
3. Ex-students will have to complete the prescribed practical work under the guidance of the Head of the Department of the respective college and to produce a certificate to that effect before the commencement of the examination.

4. The test paper will be of two hours duration. Candidates will be required to answer three questions out of six attempting at least one question from each unit.
5. Field work will be of two hours duration including preparation of final sheet.

Scheme of examination

Candidates will be examined by External Examiner in consultation with Internal Examiner.

The distribution of marks will be as follows:

a)	Test Paper	30 marks
b)	Field Work (Survey Instruments)	10 marks
c)	Record work	10 marks
d)	Viva Voce	10 marks
Total		60 marks

Suggested Readings:

- Ahmed, K. S., Simple Map Projection, Friends Book House, Aligarh.
- Kanetkar, T. P., Surveying and Levelling, Vol. I, A. V. GrihaPrakashan, Bombay, 1985.
- Mishra, R. P. and A. Ramesh, Fundamentals of Cartography, Concept Publishers, New Delhi.
- Raize, E., General Cartography, McGraw Hill Book Co., London.
- Robinson, A. R., Elements of Cartography, Chapman & Hall.
- Singh, R. L. and P. K. Dutt, Elements of Practical Geography, Student Friends, Allahabad
- Singh, R. L., Elements of Practical Geography, Kalyani Publishers.
- Singh, R. N. and L. R. S. Kanaujia, Map Work & Practical Geography, Central Book Depot, Allahabad.
- शर्मा, जे. पी. : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ
- खुल्लर, डी. आर., प्रयोगात्मक भूगोल, कल्याणी पब्लिशर्स, नईदिल्ली
- मिश्रा, आर. एन. एवं शर्मा, पी. के. : प्रायोगिक भूगोल, रावत पब्लिकेशन्स, जयपुर
- जैन, शेषमल : प्रयोगात्मक भूगोल, साहित्य भवन, आगरा
- भल्ला, आर. एल. : प्रायोगात्मक भूगोल, के. डी प्रकाशन, अजमेर
- मामोरिया, चतुर्भुज : मानचित्र विज्ञान एवं प्रायोगात्मक भूगोल, साहित्य भवन, आगरा
- वर्मा, एल. एन. व लोढ़ा, आर. एम. : प्रायोगात्मक भूगोल, राज. हिन्दी ग्रंथ अकादमी, जयपुर
- सिंह, एल. आर. : मानचित्र एवं प्रायोगात्मक भूगोल, सेन्द्रल बुक डिपो, इलाहाबाद
- सिंह एवं कन्नोजिया : प्रायोगात्मक भूगोल की रूपरेखा, सेन्द्रल बुक डिपो, इलाहाबाद