



प्राविधिक शिक्षा तथा व्यावसायिक तालीम परिषद्
पदपूर्ति समिति
सानोठिमी, भक्तपुर ।

प्राविधिक तथा प्रशिक्षण सेवा, इन्जिनियरिङ्ग प्राविधिक प्रशिक्षण समूह, सर्भे उपसमूह
सहायकस्तर प्रथम श्रेणी जियोमेटिक्स सहायक प्रशिक्षक पदको
खुला प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

द्वितीय पत्र : सेवा सम्बन्धी विषय

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1. Surveying and Mapping

1.1 Introduction

- 1.1.1 Principles of Surveying,
- 1.1.2 Definition of terms used in Surveying,
- 1.1.3 Units and measurement,
- 1.1.4 Types and constructions of Scale,
- 1.1.5 Linear and angular measurements,
- 1.1.6 Area and volume,
- 1.1.7 Bearing and convergence,
- 1.1.8 Types of errors and correction,
- 1.1.9 Solution of Triangles,
- 1.1.10 Chain Survey,
- 1.1.11 Tacheometric Survey,
- 1.1.12 Levelling,
- 1.1.13 Traversing,
- 1.1.14 Triangulation,
- 1.1.15 Trilateration,
- 1.1.16 Plane Table Survey,
- 1.1.17 GNSS (GPS) Survey,
- 1.1.18 Grid and Graticules,
- 1.1.19 Universal Transverse Mercator Projection,
- 1.1.20 Sheet design and numbering for Topographical Base Maps,
- 1.1.21 Map Scale and Symbols,
- 1.1.22 Contouring and hill shading,
- 1.1.23 Generalisation of details,
- 1.1.24 Name Collection and Accuracy of Maps.

1.2 Equipment and their uses

- 1.2.1 Magnetic Compass
- 1.2.2 Chain, Tapes,
- 1.2.3 Plane Table,
- 1.2.4 Theodolite,
- 1.2.5 Level,
- 1.2.6 Distance Meter,

- 1.2.7 Steroscope,
- 1.2.8 Telescopic Alidade,
- 1.2.9 Tacheometer,
- 1.2.10 Drawing and Scribing tools and Materials,
- 1.2.11 Vacuum Contact Printer,
- 1.2.12 Light Source Process Camera,
- 1.2.13 Offset Press.
- 1.3 Survey Computations
 - 1.3.1 Techniques of field book checking,
 - 1.3.2 Computation of elevations from levelling field books,
 - 1.3.3 Computation of Co-ordinates by traversing and triangulation Survey for third and fourth order ground control points,
 - 1.3.4 Preparation of control chart and bench mark chart.
2. **Techniques of Map making and their use**
 - 2.1 Map making procedure of small scale maps
 - 2.2 Topographical base maps and large scale maps
 - 2.3 Method of reconnaissance
 - 2.4 Monumentation
 - 2.5 Observation for Third and Fourth order control points
 - 2.6 Spirit levelling methods and their procedure for establishment of third and fourth order bench marks
3. **Cadastral Survey and records**
 - 3.1 Sheet design and Sheet numbering for cadastral map.
 - 3.2 Control point plotting.
 - 3.3 Plot (Parcel) numbering land plot survey and field book preparation.
 - 3.4 Area measurements.
 - 3.5 Notification and methods of land registration procedure.
 - 3.6 Classification of Land
 - 3.7 Preparation of land records and land ownership Certificate.
 - 3.8 Departmental Circular related to the registration of land ownership.
 - 3.9 Care and maintenance of field books and cadastral plans.
 - 3.10 Delineation of field plot boundary.
 - 3.11 Up-dating of cadastral maps and field books.
4. **Engineering Survey**
 - 4.1 Irrigation
 - 4.1.1 Surveying and mapping for intake and command area and proposed canal,
 - 4.1.2 Alignment Survey for Canal,
 - 4.1.3 X-Section and L-Section or Canal alignment.
 - 4.2 Roads

- 4.2.1 Alignment Survey,
- 4.2.2 Setting out Curves,
- 4.2.3 X-Section and L-Section of road alignment,
- 4.2.4 Establishment of bridge abutments.
- 4.3 Hydro electric power
 - 4.3.1 Surveying for intake and power house site,
 - 4.3.2 Alignment Survey for transmission line.
- 4.4 Surveying for Building Construction
 - 4.4.1 Large scale mapping for building design,
 - 4.4.2 Selection of building site,
 - 4.4.3 Demarcation of building site,
 - 4.4.4 Urban Survey.
- 4.5 Mining and Geological Survey
 - 4.5.1 Instrument used for the mining and Geological Survey,
 - 4.5.2 Idea of Geological land mineral maps, Geological and Geomorphological Symbols,
 - 4.5.3 Land use map,
 - 4.5.4 Tunnel Survey.
- 5. कानून सम्बन्धी सामान्य ज्ञान
 - 5.1 नेपालको संविधान (भाग १, २, ३, ४, ५ १७ र १८ तथा अनुसूचीहरू)
 - 5.2 स्थानीय सरकार सञ्चालन ऐन, २०७४ मा जग्गाजमीन सम्बन्धी व्यवस्था
 - 5.3 जग्गा (नापजाँच) ऐन, २०१९
 - 5.4 जग्गा (नापजाँच) नियमावली, २०३२
 - 5.5 मालपोत ऐन, २०३४ (जग्गादर्ता, नापनक्सा सम्बन्धी व्यवस्था)
 - 5.6 मालपोत नियमावली, २०५५ (जग्गादर्ता, नापनक्सा सम्बन्धी व्यवस्था)
 - 5.7 मोही सम्बन्धी व्यवस्था
 - 5.8 फिल्ड सर्जमिन मुचुल्का तयार गर्ने विधि

॥समाप्त ॥