

नेपाली सेना
प्रा.सु. सर्भे पदको पाठ्यक्रम

समय:- ३ घण्टा

पूर्णाङ्क :- १००

उत्तीर्णाङ्क:- ४०

उद्देश्यहरू

यो पाठ्यक्रम नेपाली सेनाको प्रा.सु. सर्भे पदका उम्मेदवार छनौट परीक्षाको लागि निर्धारण गरिएको हो । प्रा.सु. सर्भे पदका उम्मेदवार छनौटको लिखित परीक्षामा सरिक हुने उम्मेदवारहरूको पेशा सम्बन्धी विषयलाई आधार मानि प्रश्नहरू सोधिने छ ।

- (क) लिखित परीक्षाको माध्यम नेपाली/अंग्रेजी भाषा हुनेछ ।
(ख) निम्न पत्रहरूको पाठ्यक्रमको रूपरेखा अनुसार विषयवस्तु हुनेछ ।
(ग) लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र अर्को चरणको परीक्षामा सम्मिलित गराईनेछ ।
(घ) प्रश्न पत्र निर्माण गर्दा सम्भव भएसम्म पाठ्यक्रममा समावेश भएका सबै विषयहरूलाई समेटनु पर्नेछ ।
(ङ) नेपाली सेनाको तत्कालिन आवश्यकता तथा विविध परिस्थितिमा नेपाली सेना अनुकूल हुने गरी उल्लेखित विवरणहरूमा हेरफेर हुन सक्नेछ ।
(च) पाठ्यक्रम लागु मिति : २०६७ गते देखि

प्रश्नको किसिम	प्रश्नको संख्या र अंक	कैफियत
लामो उत्तर दिनु पर्ने प्रश्न	५×१०=५०	
छोटो उत्तर दिनु पर्ने प्रश्न	५×५=२५	
बस्तुगत	२५×१=२५	

सर्भेयर प्रा.सु.को सेवा सम्बन्धि लिखित परीक्षाको पाठ्यक्रम

(1) Elements of Surveying and Mapping

i Introduction

- Principles of Surveying
- Definition of terms used in Surveying.
- Units and measurement
- Types and constructions of Scale
- Linear and angular measurements
- Area and volume
- Bearing and convergence
- Types of errors and correction
- Solution of Triangles
- Chain Survey
- Tacheometric Survey
- Leveling
- Traversing
- Triangulation
- Trilateration
- Plane Table Survey
- Aerial Photographs
- Types of aerial photographs
- Photo Scale
- Parallax and its measurement
- Stereoscopic Vision
- Overlaps
- Photo Interpretation
- Spheroid
- Grid and Graticules
- Universal Transverse Mercator Projection
- Sheet design and numbering for Topographical Base Maps
- Map Scale
- Map Symbols
- Contouring and hill shading
- Generalization of details
- Name Collection and Accuracy of Maps

ii Equipment and their uses

- Magnetic Compass
- Chain
- Tapes
- Plane Table
- Theodolite
- Level
- Distance Meter
- Stereoscope
- Telescopic Alidade
- Tacheometer
- Drawing and Scribing tools and Materials
- Vacuum Contact Printer
- Light Sources Process Camera
- Offset Press

iii Survey Computations

- Techniques of field book checking
- Computation of elevations from leveling field books
- Computation of Co-ordinates by traversing and triangulation Survey for third and fourth order ground control points
- Preparation of control chart and bench mark chart

(2) Techniques of Map making and their use

- Map making procedure of small scale maps
- Topographical base maps and large scale maps
- Method of reconnaissance
- Monumentation.
- Observation for Third and Fourth order control points
- Spirit leveling methods and their procedure for establishment of third and fourth order bench marks

(3) Cadastral Survey and records

- Sheet design and Sheet numbering for cadastral map
- Control point plotting
- Plot (Parcel) numbering, land plot survey and field book preparation
- Area measurements
- Notification and methods of land registration procedure
- Classification of Land
- Preparation of land records and land ownership Certificate
- Land Survey Act and rules
- Departmental Circular related to the registration of land ownership
- Care and maintenance of field books and cadastral plans
- Delineation of field plot boundary
- Up-dating of cadastral maps land field books

(4) Engineering Survey

- Irrigation
 - Surveying and mapping for intake and command area and proposed canal
 - Alignment Survey for Canal
 - X-Section and L-Section or Canal alignment
- Roads
 - Alignment Survey
 - Setting out Curves
 - X-Section and L-Section of road alignment
 - Establishment of bridge abutments
- Hydro electric power
 - Surveying for intake and power house site
 - Alignment Survey for transmission line
- Surveying for Building Construction
 - Large scale mapping for building design
 - Selection of building site
 - Demarcation of building site
 - Urban Survey
- Mining and Geological Survey
 - Instrument used for the mining and Geological Survey
 - Idea of Geological land mineral maps, Geological and Geomorphologic Symbols
 - Land use map
 - Tunnel Survey