

## नेपाली सेना

प्रा.उ.से. मिलिटरी सिभिल इन्जिनियर (खुला) पदको पेशा सम्बन्धी विषयको

### लिखित परीक्षा योजना र पाठ्यक्रम

समय : २ घण्टा ३० मिनेट

पूर्णाङ्क : १००

उत्तीर्णाङ्क : ४०

यो पाठ्यक्रम नेपाली सेनाको विभिन्न ईकाईहरूमा रिक्त रहेको प्रा.उ.से. मिलिटरी सिभिल इन्जिनियर पदका उम्मेदवार छनौट परीक्षाको लागि निर्धारण गरिएको हो । लिखित परीक्षामा सरिक हुने उम्मेदवारहरूको पेशा सम्बन्धि विषयलाई आधारमानी प्रश्नहरू सोधिने छ ।

(क) लिखित परीक्षाको माध्यम नेपाली/अंग्रेजी वा दुवै भाषा हुनेछ ।

(ख) लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र अर्को चरणको परीक्षामा सम्मिलित गराईने छ ।

(ग) प्रश्नहरू पत्र निर्माण गर्दा पाठ्यक्रममा समावेश भएका सबै विषयहरूलाई समेटिनेछ ।

(घ) नेपाली सेनाको आवश्यकता तथा विविध परिस्थितमा नेपाली सेना अनुकूल हुने गरी उल्लेखित विवरणहरूमा हेरफेर हुन सक्नेछ ।

(ङ) पाठ्यक्रमको रूपरेखा देहायमा उल्लेख गरे अनुसार हुनेछ ।

(च) पाठ्यक्रम लागु मिति २०७५/०३/२७ गतेदेखि ।

## प्रा.उ.से. मिलिटरी सिभिल इन्जिनियर (खुला) पदको पेशा सम्बन्धी विषयको लिखित परीक्षा

### योजना र पाठ्याक्रम

विषय	पूर्णा	उत्तीर्णाङ्क	परीक्षा प्रणाली		प्रश्न संख्या X अङ्क	समय
पेशा सम्बन्धी	१००	४०	वस्तुगत (Objective)	बहुवैकल्पिक प्रश्न (MCQs)	४० प्रश्न X १ अङ्क = ४०	२ घण्टा ३० मिनेट
			विषयगत (Subjective)	छोटो उत्तर	६ प्रश्न X ५ अङ्क = ३०	
				लामो उत्तर	३ प्रश्न X १० अङ्क = ३०	

## प्रा.उ.से. मिलिटरी सिभिल इन्जिनियर (खुला) पदको पेशा सम्बन्धी विषयको पाठ्यक्रम

### **1. Military Road Construction**

#### 1.1 Military road introduction

General introduction of military road, Types of Military road (hasty and deliberate), tactical and technical requirements of military road, Role of engineer during operation and peace time, need of Military road in operation

#### 1.2 Geometric design of Military road

Basic design control and criteria, design speed, design vehicle, traffic volume and its composition, topography, etc. elements of road cross section, curves; tangents, types of curves, transition curves, circular curves, super elevation, stopping sight distance, vertical curves, recommendation for alignment design coordination of horizontal and vertical alignment.

### **2. Engineering Unit Tactics**

#### 2.1 Basic tactics of Engineer unit: composition and tasks of the engineer unit, combat principles of the engineer unit characteristic of engineer unit, combat command, action support

#### 2.2 Unit motorized marching and encamping

### **3. Military Bridge and its Operation**

#### 3.1 Elementary Knowledge on Military Bridge; classification

#### 3.2 Military bridge Camouflage operation

#### 3.3 Engineering reconnaissance of bridge area

#### 3.4 Utilize of existing bridge during operation

#### 3.5 Heavy mechanized bridge operation

#### 3.6 Prefabricated steel bridge operation

#### **4. Military management**

- 4.1 General introduction of Military management
- 4.2 Spectrum management
- 4.3 Level of command and control
- 4.4 Prevention of interference
- 4.5 Combined and joined operation

#### **5. Construction Materials**

- 5.1 Properties of building materials, physical chemical, constituents, thermal
- 5.2 Stones characteristics and requirements of stone as building materials
- 5.3 Ceramic materials: ceramic tiles, Mosaic tile, brick type and testing
- 5.4 Cementing materials: types and properties of lime and cement; cement mortar tests
- 5.5 Timbers and woods

#### **6. Concrete Technology**

- 6.1 Constituents and properties of concrete (physical and chemical)
- 6.2 Water cement ratio
- 6.3 Grade and strength of concrete, concrete mix design, testing of concrete
- 6.4 Mixing, transportation, pouring and curing of concrete
- 6.5 Admixtures

#### **7. Engineering survey**

- 7.1 Introduction and basic principles
- 7.2 Linear measurements; chain, tape, ranging rod, and arrows, representation of measurements and common scales; source of error; effect of slope and slope correction for chain and tape measurements; abney level and clinometers
- 7.3 Compass and plane table surveying: bearing; types of compass; problem and source of error of compass survey; principles and method of plane tabling
- 7.4 Levelling and contouring: Principle of levelling; temporary and permanent adjustment of level; bench marks; booking method and their reduction; longitudinal and cross sectioning; reciprocal leveling; trigonometric leveling; contour interval and characteristics of contours; method of contouring
- 7.5 Theodolite traversing: need of traverse and its significance; computation of coordinates; adjustment of closed traverse; closing errors
- 7.6 Uses of total station and electronic distance measuring instruments

#### **8. Professional practices**

- 8.1 Ethics and professionalism: code of conduct and guidelines for professional engineering practices
- 8.2 NEC Act, 2055 and regulation, 2056
- 8.3 Relation with clients, contractor and fellow professionals
- 8.4 Public procurements practices for works, good and services and its importance

यस पेशा सम्बन्धी विषयको पाठ्यक्रमका एकाईहरूबाट सोधिने प्रश्नहरूको संख्या निम्नानुसार हुनेछ ।

एकाइन. (Unit No.)	अङ्कभार (Weightage)	बहु वैकल्पिक प्रश्न (MCQs) को संख्या	छोटो उत्तर प्रश्नको संख्या	लामो उत्तर प्रश्नको संख्या
१	२५	४० प्रश्न x १अङ्क	६ प्रश्न X ५अङ्क	३ प्रश्न X १०अङ्क
२	१०			
३	१०			
४	१०			
५	१५			
६	१५			
७	१०			
८	५			
जम्मा	१००	४० प्रश्न x १अङ्क = ४० अङ्क	६ प्रश्न X ५अङ्क = ३० अङ्क	३ प्रश्न X १० अङ्क = ३० अङ्क

प्रा.उ.से. मिलिटरी सिभिल इन्जिनियर (खुला) पदको पेशागत विषयको  
प्रयोगात्मक परीक्षा

समय : २ घण्टा

पूर्णाङ्क : ५०

उत्तीर्णाङ्क : २५

क्र.सं.	विषयवस्तु शीर्षक	अंक भार	समय
१	Building layout as per drawing	२५	१ घण्टा
२	Setting out simple circular curve	२५	१ घण्टा