

सशस्त्र प्रहरी बल नेपाल
प्राविधिक सशस्त्र प्रहरी निरीक्षक (इन्जिनियर - आर्किटेक (Architect Engineer)) पदको खुला
प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम
एवं परीक्षा योजना

पाठ्यक्रमको रूपरेखा :- यस पाठ्यक्रमको आधारमा निम्नानुसार चरणमा परीक्षा लिइने छ :

प्रथम चरण :- लिखित परीक्षा पूर्णाङ्क :- २००
द्वितीय चरण :- अन्तर्वार्ता पूर्णाङ्क :- ३०

१. प्रथम चरण : - लिखित परीक्षा						पूर्णाङ्क :- २००	
पत्र	विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली		प्रश्नसंख्या X अङ्क	समय
प्रथम	Technical Subject and General Awareness	१००	४०	वस्तुगत	बहुवैकल्पिक प्रश्न (MCQs)	१०० प्रश्न X १ अङ्क	१ घण्टा १५ मिनेट
द्वितीय		१००	४०	विषयगत	छोटो उत्तर लामो उत्तर समस्या समाधान	६ प्रश्न X ५ अङ्क ४ प्रश्न X १० अङ्क २ प्रश्न X १५ अङ्क	३ घण्टा
२. द्वितीय चरण : - अन्तर्वार्ता							
विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली			समय	
अन्तर्वार्ता	३०	-	मौखिक				

द्रष्टव्य :

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ ।
- प्रथम र द्वितीय पत्रको पत्रको विषयवस्तु एउटै हुनेछ ।
- प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
- लिखित परीक्षामा यथासम्भव पाठ्यक्रमका सबै एकाईबाट प्रश्नहरू सोधिनेछ ।
- वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरूको गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अङ्क कट्टा गरिनेछ । तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन ।
- विषयगत प्रश्नमा प्रत्येक पत्र/विषयका प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन् । परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोही खण्डका उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
- यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।

९. पाठ्यक्रम लागू मिति :- २०७५/०४/१९ जति

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प्रथम तथा द्वितीय पत्र :- Technical Subject and General Awareness

Part I : Technical Subject

Section - (A)

1. Basic Design

- 1.1 Primary elements of a design
- 1.2 Design standards
- 1.3 Basic principles of composition in design (Axis, Datum, Balance, Harmony, Rhythm, Scale, Unity, Focal Point, Hierarchy and Proportion)
- 1.4 Architectural rendering development skill in different mediums

2. Introduction to Architecture

- 2.1 Brief survey from beginning of architecture to present times
- 2.2 Profession of architecture of Nepal-its practice both public and private along with career opportunities
- 2.3 Architecture, built environment and the society
- 2.4 Socio-culture and religious context of architecture
- 2.5 Technology and material context of architecture
- 2.6 Site, city and ecological context of architecture
- 2.7 Standards to be followed while designing buildings in Nepal
- 2.8 Interactive relationship with allied professionals such as planners, engineers, landscape architects, interior designers, etc.

3. History of Architecture

- 3.1 Egyptian architecture, Greek architecture, Roman architecture, Gothic architecture and European Renaissance
- 3.2 Indian Hindu (Vedic to 15th century) and Indian Buddhist (Mauryan to 9th century AD)
- 3.3 Muslim architecture emphasis on Mogul period
- 3.4 Chronology study of different stages of development of Nepalese architecture and their influencing factors
- 3.5 Development of brick and brick work
- 3.6 Development of wood work and carving
- 3.7 Vernacular architecture of Terai, Hill and Mountain regions of Nepal
- 3.8 Romanticism in architecture and Expressionism in architecture
- 3.9 Architectural theories of BAUHAUS movement and International Style, Chicago of architecture, ART-NOVEAU Movement, DE STIJL, Amsterdam school
- 3.10 Russian constructivism
- 3.11 Modern and post-modern architecture
- 3.12 Futuristic architecture

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- 3.13 Ideas, theories of architecture and the critical appraisal of concept and practices of great architects of modern period and their works (Walter Gropius, Frank Lloyd Wright, Mies Van der Rohe, Le Corbusier, Zaha Hadid)
- 3.14 Critical appraisal of concepts and practices of contemporary architects of Nepal and their works

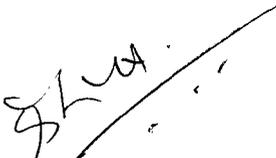
Section - (B)

4. Building Materials

- 4.1 Building materials available in Nepal
- 4.2 Properties of building materials: physical, chemical, constituents, thermal, etc.
- 4.3 Stone and stone masonry along with selection and uses of stones for architectural and engineering works
- 4.4 Brick and brick masonry
- 4.5 Cement and cement mortar, types and uses along with storage of cement
- 4.6 Concrete (PCC/RCC) and concrete admixtures and water proofing
- 4.7 Metals: Steel; types and properties; Alloys
- 4.8 Timber, seasoning of timber, decay and preservation of timber, use of timber in construction works
- 4.9 Paints and Varnishes
- 4.10 Insulators (Thermo and sound)
- 4.11 Plasters : Wall and Floor Finishing
- 4.12 Soil properties and its parameters

5. Building Construction

- 5.1 Site works and setting out
- 5.2 Foundations and their types
- 5.3 Damp Protection
- 5.4 Floor structures
- 5.5 Masonry Wall
- 5.6 Temporary works
- 5.7 Doors and windows
- 5.8 Timber stairs and timber roofs along with traditional timber construction
- 5.9 Concrete stairs and concrete floors
- 5.10 Joints in concrete
- 5.11 Framed buildings
- 5.12 Claddings
- 5.13 False ceiling
- 5.14 Walls and partitions
- 5.15 Fire places and chimneys
- 5.16 Insulation: sound and thermal
- 5.17 Fire Prevention in Construction
- 5.18 Sustainable Construction Techniques



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6. Urban and Settlement Planning

- 6.1 Urban/city planning along with planning concepts
- 6.2 Introduction to theoretical models of planning contribution to planning thoughts
- 6.3 Development plans (scope, content, planning process and planning guidelines)
- 6.4 Planning practice in Nepal
- 6.5 Urban and rural planning along with its essential features and urban rural relations

7. Estimating and Costing with Specifications

- 7.1 Units of measurement and payments for various items of building
- 7.2 Types of estimate
- 7.3 Purpose, principles and methods of valuation/ Analysis of rates
- 7.4 Detailed estimate
- 7.5 Types of specifications and its purpose
- 7.6 Detailed specifications writing for various items of works, i.e., site works, structural works, finishing works, equipment, electrical and mechanical works
- 7.7 Standard estimate formats of Government of Nepal

8. Structure

- 8.1 Fundamental characteristics of structure
- 8.2 Geometrical properties of section, axial stress and strain, shear, flexure, torsion, transverse bending, columns and struts
- 8.3 Structural elements, energy principles, influence line diagrams, three hinged systems, analysis of indeterminate structures
- 8.4 Structural materials, timber structures, masonry structures, structural steel, structural concrete
- 8.5 Lateral load resisting systems
- 8.6 Earthquake Resistant Design of Buildings
- 8.7 Approximate analysis and design of building structures

Section - (C)

9. Construction Management

- 9.1 Construction scheduling and planning: network techniques (CPM and PERT)
- 9.2 Contractual procedure and management: types of contract, tender and tender notice, preparation of bidding (tender) document, contractors pre-qualification, evaluation of tenders and selection of contractor, contract acceptance, condition of contract; quotation and direct order, classifications of contractors; dispute resolution; muster roll
- 9.3 Material management: procurement procedures and materials handling



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10. Architectural Conservation

- 10.1 Philosophy of conservation, authenticity- materials, form, structure
- 10.2 Principle of conservation
- 10.3 Cultural property
- 10.4 Methodologies of conservation, materials and techniques
- 10.5 Historic Buildings (rehabilitation, adaptive use)
- 10.6 Design and planning control

11. Building Services

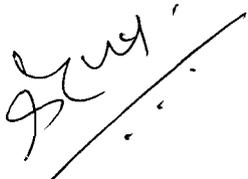
- 11.1 Water supply system (distribution system and house water plumbing)
- 11.2 Estimation method of water quality, assessment of water quality
- 11.3 Sanitary system, sewage collection and treatment, solid waste management
- 11.4 Concepts of electric system, safety and protection in electric system, electrical installation
- 11.5 General principles of lighting; illumination requirements and standards; artificial Lighting system

12. Surveying

- 12.1 Introduction and basic principles
- 12.2 Linear measurements: techniques; chain, tape, ranging rods and arrows; representation of measurement and common scales; sources of errors
- 12.3 Compass and plane table surveying: bearings; types of compass; problems and sources of errors of compass survey; principles and methods of plane tabling
- 12.4 Leveling and contouring: principle of leveling; temporary and permanent adjustment of level; bench marks; booking methods and their reductions; longitudinal and cross sectioning; reciprocal leveling; trigonometric leveling; contour interval and characteristics of contours; methods of contouring
- 12.5 Theodolite traversing
- 12.6 Total Station and its uses

13. Building Science

- 13.1 Climatology
- 13.2 Thermal aspects
- 13.3 Different shelters for different climates
- 13.4 Shelters for different conditions
- 13.5 Architectural lighting
- 13.6 Architectural acoustics
- 13.7 Energy-renewable and non-renewable



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Section - (D)

14. Design Theory

- 14.1 Theories of Architecture -thematic, normative and procedural
- 14.2 L'Art Nouveau and language of form, functionalism
- 14.3 Norberg-Schulz's theory of architecture
- 14.4 Design Thinking
- 14.5 Concept of Territory
- 14.6 Space and Place
- 14.7 Legal rights of space, ownership and Tenure, Zoning ordinances and building regulations, Public good
- 14.8 Measurable and Non measurable aspects
- 14.9 Site analysis and its relations with ecology and surrounding environment

15. Professional Practice

- 15.1 Professional ethics
- 15.2 Role of architects
- 15.3 Hiring A/E consultants
- 15.4 Contracts and agreements
- 15.5 Regulatory controls

16. Auto CAD

- 16.1 Introduction to CAD concepts, drawing tools, display tools (pan and zoom), scale, limits, units snap, patterns, text, line weight, grid, color, and layer
- 16.2 Duplication (single and arrays), polygon reshaping, complex polygon generation, object accuracy (join, trim, chamfer, fillet), object transformations, groups, object layers
- 16.3 CAD rendering techniques using computer graphics application, plotting and printing files, introduction to rendering algorithms

Part II: General Awareness

Section - (E)

1. सामान्य ज्ञान

- 1.1 नेपालको भौगोलिक, ऐतिहासिक, आर्थिक, सामाजिक, सांस्कृतिक र राजनैतिक अवस्था सम्बन्धी सामान्य जानकारी
- 1.2 राष्ट्रिय र अन्तर्राष्ट्रिय महत्वका समसामयिक घटनाहरु : राजनैतिक, आर्थिक, वैज्ञानिक, खेलकूद, सूचना प्रविधि, पुरस्कार
- 1.3 विद्यमान नेपालको संविधानको सामान्य जानकारी
- 1.4 सशस्त्र प्रहरी बल र सुरक्षा निकाय सम्बन्धी सामान्य जानकारी
- 1.5 सशस्त्र प्रहरी ऐन, २०५८ र सशस्त्र प्रहरी नियमावली, २०७२

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2. विविध

- 2.1 व्यवस्थापनको अवधारणा र प्रकार
- 2.2 निर्देशन
- 2.3 नेतृत्व
- 2.4 उत्प्रेरण
- 2.5 निर्णय प्रक्रिया
- 2.6 द्वन्द व्यवस्थापन
- 2.7 समावेशीकरण

प्रथम तथा द्वितीय पत्रमा यथासम्भव निम्नानुसार प्रश्नहरू सोधिनेछ ।

प्रथम पत्र				
Part	Section	अङ्कभार	प्रश्न संख्या	
			वस्तुगत	विषयगत
I	A	१५	१५ प्रश्न x १ अङ्क = १५	-
	B	२५	२५ प्रश्न x १ अङ्क = २५	-
	C	२५	२५ प्रश्न x १ अङ्क = २५	-
	D	१५	१५ प्रश्न x १ अङ्क = १५	-
II	E	२०	२० प्रश्न x १ अङ्क = २०	-
द्वितीय पत्र				
Part	Section	अङ्कभार	प्रश्न संख्या	
			विषयगत	समस्या समाधान
I	A	२०	४ प्रश्न x ५ अङ्क = २० ४ प्रश्न x १० अङ्क = ४०	२ प्रश्न x १५ अङ्क = ३०
	B	३०		
	C	३०		
	D	२०		
II	E	१०	२ प्रश्न x ५ अङ्क = १०	-

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