

लोक सेवा आयोग

नेपाल इन्जिनियरिङ्ग सेवा, सिभिल एभिएशन अपरेशन एण्ड इन्जिनियरिङ्ग समूह, सिभिल एभिएशन अपरेशन उपसमूह, राजपत्राङ्कित तृतीय श्रेणीको पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

यस पाठ्यक्रम योजनालाई दुई चरणमा विभाजन गरिएको छ :

प्रथम चरण :-	लिखित परीक्षा (Written Examination)	पूर्णाङ्क :- २००
द्वितीय चरण :-	(क) सामूहिक परीक्षण (Group Test)	पूर्णाङ्क :- १०
	(ख) अन्तर्वार्ता (Interview)	पूर्णाङ्क :- ३०

परीक्षा योजना (Examination Scheme)

प्रथम चरण : लिखित परीक्षा (Written Examination)

पूर्णाङ्क :- २००

पत्र	विषय	खण्ड	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली		प्रश्नसंख्या × अङ्क	समय
प्रथम	General Subject	Part I: General Awareness & General Ability Test	१००	४०	वस्तुगत (Objective)	बहुवैकल्पिक प्रश्न (MCQs)	५० प्रश्न × १ अङ्क	१ घण्टा ३० मिनेट
		Part II: General Technical Subject					५० प्रश्न × १ अङ्क	
द्वितीय	Technical Subject		१००	४०	विषयगत (Subjective)	छोटो उत्तर लामो उत्तर	४ प्रश्न × ५ अङ्क ८ प्रश्न × १० अङ्क	३ घण्टा

द्वितीय चरण : सामूहिक परीक्षण (Group Test) र अन्तर्वार्ता (Interview)

पूर्णाङ्क :- ४०

पत्र / विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	समय
सामूहिक परीक्षण (Group Test)	१०		सामूहिक छलफल (Group Discussion)	३० मिनेट
अन्तर्वार्ता (Interview)	३०		बोर्ड अन्तर्वार्ता (Board Interview)	-

द्रष्टव्य :

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ।
- प्रथमपत्र र द्वितीयपत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ।
- 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।
- बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै प्रकारको क्याल्कुलेटर (Calculator) प्रयोग गर्न पाइने छैन।
- विषयगत प्रश्नहरूको हकमा तोकिएको अंकको एउटा लामो प्रश्न वा एउटै प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिने छ।
- द्वितीय पत्रमा (विषयगत प्रश्न हुनेका हकमा) प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन्। परिक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोही खण्डको 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।
- यस भन्दा अगाडि लागू भएका माथि उल्लेखित सेवा, समूहको पाठ्यक्रम खारेज गरिएको छ।
- पाठ्यक्रम लागू मिति : - २०७६/०७/२५

प्रथम पत्र (Paper I): General Subject

Part (I) : - General Awareness & General Ability Test (50 Marks)

1. **General Awareness and Contemporary Issues (25 ×1 Mark = 25 Marks)**
 - 1.1 Physical, socio-cultural and economic geography and demography of Nepal
 - 1.2 Major natural resources of Nepal
 - 1.3 Geographical diversity, climatic conditions, and livelihood & lifestyle of people
 - 1.4 Notable events and personalities, social, cultural and economic conditions in modern history of Nepal
 - 1.5 Current periodical plan of Nepal
 - 1.6 Information on sustainable development, environment, pollution, climate change, biodiversity, science and technology
 - 1.7 Nepal's international affairs and general information on the UNO, SAARC & BIMSTEC
 - 1.8 The Constitution of Nepal (From Part 1 to 5 and Schedules)
 - 1.9 Governance system and Government (Federal, Provincial and Local)
 - 1.10 Provisions of civil service act and regulation relating to constitution of civil service, organisational structure, posts of service, fulfillment of vacancy and code of conduct
 - 1.11 Functional scope of public services
 - 1.12 Public Service Charter
 - 1.13 Concept, objective and importance of public policy
 - 1.14 Fundamentals of management : planning, organizing, directing, controlling, coordinating, decision making, motivation and leadership
 - 1.15 Government planning, budgeting and accounting system
 - 1.16 Major events and current affairs of national and international importance
2. **General Ability Test (25 ×1 Mark = 25 Marks)**
 - 2.1 **Verbal Ability Test (8×1 Mark = 8 Marks)**
Jumble words, Series, Analogy, Classification, Coding-Decoding, Matrix, Ranking Order Test, Direction and Distance Sense Test, Common Sense Test, Logical Reasoning, Assertion and Reason, Statement and Conclusions
 - 2.2 **Numerical Ability Test (9×1 Mark = 9Marks)**
Series, Analogy, Classification, Coding, Arithmetical reasoning/operation, Percentage, Ratio, Average, Loss & Profit, Time & Work, Data interpretation & Data verification
 - 2.3 **Non-verbal/Abstract Ability Test (8×1 Mark = 8 Marks)**
Figure Series, Figure Analogy, Figure Classification, Figure Matrix, Pattern Completion/Finding, Analytical Reasoning Test, Figure Formation and Analysis, Rule Detection, Water images, Mirror images, Cubes and Dice & Venn-diagram

Part (II) : - General Technical Subject (50 Marks)

1. **Rules of the Air** (10%)
 - 1.1 General Rules
 - 1.2 Applicability of the Rules of the Air
 - 1.3 Visual flight Rules
 - 1.4 Instrument Flight Rules
 - 1.5 Interception of Civil Aircraft.
 - 1.6 Signals, Distress and Urgency Signals of aerodrome traffic
 - 1.7 Table of Cruising Levels.

2. **Air Traffic Service** (10%)
 - 2.1 General
 - 2.1 Objectives of Air Traffic Services
 - 2.3 Divisions of Air Traffic Services
 - 2.4 Determination of the need of Air Traffic Service (ATS)
 - 2.5 Classification of Airspace.
 - 2.6 Flight Information Services and Alerting Services
 - 2.7 Airspace planning & its utilization
 - 2.8 Airspace classification & its jurisdiction
 - 2.9 Use of Jeppesen chart for international air navigation

3. **Aerodrome Control Service** (10%)
 - 3.1 Classification of Aerodrome – (Controlled/uncontrolled)
 - 3.2 Functions of Aerodrome Control Tower
 - 3.3 Traffic and Taxi Circuits
 - 3.4 Aeronautical Ground Lights
 - 3.5 Control of Aerodrome Traffic

4. **Approach Control Service and Area Control Service** (10%)
 - 4.1 Separation Standard
 - 4.2 Air Traffic Control Clearances
 - 4.3 Coordination Procedures
 - 4.4 Emergency and Communication Failure Procedures

5. **Aircraft Accident /Incident Investigation and Prevention** (10%)
 - 5.1 General
 - 5.2 Applicability
 - 5.3 Counseling
 - 5.4 Investigation
 - 5.6 Reporting
 - 5.7 Objective of Notification
 - 5.8 Accident Prevention

6. **Search, Rescue & Fire Fighting** (4%)
 - 6.1 Organization
 - 6.2 Cooperation
 - 6.3 Preparatory Measures

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- 6.4 Operating Procedures
- 6.5 Notification
- 6.6 Fire Fighting Service

- 7. **Aviation Security** (6%)
 - 7.1 Basic concept of airport & aircraft security
 - 7.2 Contingency Plan
 - 7.3 Crisis Management
 - 7.4 Quality Control
 - 7.5 Implementation of Security measures
 - 7.6 Risk analysis and management in civil aviation

- 8. **Air Navigation** (4%)
 - 8.1 Methods of Navigation
 - 8.2 The Earth, distance and direction
 - 8.3 Charts/Map projection
 - 8.4 Problems related to Time, Distance, Speed, Wind Vector and Density

- 9. **Aviation Weather** (4%)
 - 9.1 Atmospheric Pressure
 - 9.2 Atmospheric Wind
 - 9.3 Clouds and Precipitation
 - 9.4 Meteorological Services for Aviation

- 10. **Aeronautical Information Services (AIS)** (4%)
 - 10.1 Importance of AIS
 - 10.2 Responsibility and function
 - 10.3 Exchange of Aeronautical Information
 - 10.4 Pre-flight and post-flight Information
 - 10.5 NOTAM (Notice to airmen), SNOWTAM (Notice to airmen relating to snow etc), Aeronautical information circular (AIC)
 - 10.6 Aeronautical information publication Nepal (AIP Nepal)

- 11. **Basic Radio Theory** (6%)
 - 11.1 Frequency Band & Management
 - 11.2 Communication & Radio Aid means, Uses & Types
 - 11.3 Radio Wave Propagation
 - 11.4 Interference
 - 11.5 Aviation radio band and its uses and importance

- 12. **Aeronautical Telecommunication Procedures** (4%)
 - 12.1 Definitions / Concepts
 - 12.2 Administrative provisions relating to the International Aeronautical Telecommunication Service.
 - 12.3 General Procedures for the Telecommunication Service
 - 12.4 Radio Telephony
 - 12.5 Aeronautical Telecommunication Network (ATN)

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13. **Altimetry** (6%)
 - 13.1 Introduction
 - 13.2 Pressure Height and Density height
 - 13.4 Definition of Expressions of Vertical Distance Height, Altitude, Elevation and Flight Levels.
 - 13.5 Transition Altitude, Transition Level and Transition Layer

14. **Theory of Flight** (6%)
 - 14.1 Basic Aerodynamics
 - 14.2 Angle of attack, incidence & stall
 - 14.3 Types of aircraft and classification
 - 14.4 Bernoulli's Principles and their application to flight
 - 14.5 Four action of Air foil (Lift, weight Thrust and Drag)
 - 14.6 Aircraft performance (effect of temperature and pressure)
 - 14.7 Flying and Navigation Instruments – Basic principles.
 - 14.8 Aircraft pressurization

15. **Radio Navigation Aids and Aerodromes and Ground Aids** (6%)
 - 15.1 Radio aids and Navigation
 - 15.2 Radio Aids – VOR/DVOR (Very high frequency omni-radial range) /Doppler), DME (Distance measuring equipment), ILS/MLS (Instrument landing system/microwave landing system), FAN Marker, NDB (Non-Directional Beacon), Locator, RADAR (Radio direction and ranging)
 - 15.3 Visuals Aids – TVASIS (T shaped visual approach slope indicator system, PAPI (Precision approach Path Indicator)
 - 15.4 Number and Orientation of Runways, Clearways Stop-ways and Taxiways
 - 15.5 Runway and Taxiway Markings.
 - 15.6 New CNS/ATM (Communication navigation surveillance /Air traffic management) System