

Nepal Airlines Corporation

Syllabus for Senior Ground Equipment Operator, Grade V Aircraft Maintenance Services (Ground Equipment Group- Operator sub group) Open Competition

Stages and Procedure of Examination System

First Stage: Written Examination - Full Marks 200

Weightage Allocation and Marks Distribution

S.No.	Paper	Subject	Time	Full Mark	Section	Marks
1	I	General Knowledge, Institutional Awareness and Office Management	3 Hrs.	100	Section "A" General Knowledge	MCQs 25x2=50
					Section "B" Institutional Awareness and Office Management	Short Questions 10x5=50
2	II	Service Related	45 Min.	100	Multiple Choice Questions	50x2=100

Second Stage - Interview

Individual Interview

Full Marks - 30

द्रष्टव्य :

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी वा दुवै हुनेछ ।
- प्रथम, द्वितीय र तृतीयपत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
- लिखित परीक्षामा यथासम्भव पाठ्यक्रमका सबै एकाइबाट 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 उत्तर पुस्तिकाहरू हुनेछन् । परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोही खण्डका उत्तर पुस्तिकामा लेख्नुपर्नेछ ।
- यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम तथा नीतिहरू परीक्षाको मितिभन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाइएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।
- यस भन्दा अगाडि लागू भएका माथि उल्लिखित सेवा/समूहको पाठ्यक्रम खारेज गरिएको छ ।
- पाठ्यक्रम लागू मिति :- २०७९।०५।०४

Paper I

Subject: General Knowledge, Institutional Awareness and Office Management

Full Marks: 100

Time: 3hrs.

खण्ड (क) सामान्य ज्ञान- (वस्तुगत बहुवैकल्पिक प्रश्न २५x२=५० अङ्क)

१. सामान्य ज्ञान

- १.१ विश्वको भूगोल - महादेश, महासागर, ध्रुव, अक्षांश, देशान्तर, समय, दुरी, पर्वतश्रृंखला, भुकम्प, ज्वालामुखी, नदी, हिमनदी, ताल, जलवायु
- १.२ नेपालको भूगोल - धरातलिय स्वरूप, किसिम, विशेषता, जलवायु, हावापानी, जनजीवन
- १.३ नेपालको प्राकृतिक स्रोत र साधनहरु सम्बन्धी जानकारी
- १.४ नेपालको ईतिहास - नेपालको ईतिहासका महत्वपूर्ण घटनाहरु
- १.५ नेपाली समाजका परम्परा, सामाजिक मूल्य र मान्यता, कला, संस्कृति, रितिरिवाज, धर्म, जातजाति र भाषा भाषी, जनसंख्या
- १.६ नेपालको राजनैतिक विभाजन, संघ प्रदेश र स्थानीय तह सम्बन्धी सामान्य जानकारी
- १.७ नेपालको संविधान (भाग १ र ३) तथा अनुसूची १ देखि ९ सम्म
- १.८ मानव जीवनमा प्रत्यक्ष प्रभाव पार्ने विज्ञानका प्रमुख आविष्कार
- १.९ राष्ट्रिय तथा अन्तर्राष्ट्रिय महत्वपूर्ण समसामयिक घटनाहरु
- १.१० विभिन्न आधारभूत वैज्ञानिक परिमाण र तिनको मापन (Measurement) CGS, MKS, FPS, SI System) सम्बन्धी ज्ञान
- १.११ दूरसञ्चार सेवा तथा सूचना प्रविधिसँग सम्बन्धित नवीनतम् प्रविधि, उपकरण तथा आविष्कार

खण्ड (ख) - संस्थागत ज्ञान र कार्यालय व्यवस्थापन (विषयगत १० प्रश्न X ५=५० अङ्क)

२. संस्थागत ज्ञान (३० अङ्क)

- २.१ नेपालमा हवाई यातायातको विकासक्रम, नेपाल वायुसेवा निगमको परिचय, उद्देश्य र कार्यक्षेत्र
- २.२ नेपाल वायुसेवा निगमको कर्मचारीहरुको सेवा, शर्त सम्बन्धी विनियमावलीको विदा, आचरण तथा अनुशासन तथा विभागीय कारबाही सम्बन्धी सामान्य जानकारी
- २.३ भ्रष्टाचार निवारण ऐन, २०५९ को भ्रष्टाचार कसूर र सजाय सम्बन्धी परिच्छेद
- २.४ संस्कृति, पर्यटन तथा नागरिक उड्डयन मन्त्रालयको काम, कर्तव्य र अधिकार
- २.५ नेपाल नागरिक उड्डयन प्राधिकरणको काम, कर्तव्य र अधिकार

३. कार्यालय व्यवस्थापन सम्बन्धी (२० अङ्क)

- ३.१ कार्यालय व्यवस्थापनको अवधारणा र यसका पक्षहरु
- ३.२ कार्यालयमा प्रयोग हुने अत्यावश्यक सामग्रीहरु र तिनको प्रयोग

- ३.३ दर्ता, चलानी, फाइलिङ्ग, टिप्पणी र पत्र व्यवहार सम्बन्धी जानकारी
- ३.४ प्रतिवेदनका प्रकार र प्रतिवेदन लेखन
- ३.५ कार्यालयमा प्राप्त हुने गुनासाहरु र सोको सुनुवाइ
- ३.६ बजारीकरणका विधि र प्रविधिहरु (Marketing Tools & Techniques, Sales Promotion Strategy, Customer Attraction, Satisfaction and Retention)
- ३.७ सार्वजनिक सम्बन्ध र सञ्चार सीप (Public Relation and Communication Skills)
- ३.८ जिन्सी व्यवस्थापन (Inventory Management)
- ३.९ कार्यक्षेत्रमा समूह कार्य (Group/Team Work) र सकारात्मक धारणा (Positive Attitude)

Paper II

Service Related

Full Mark: 100 (Multiple Choice Questions 50x2)

Time: 45 minutes

1. Ground Support Equipment (GSE) Basics (7x2=14 Marks)

- 1.1 Definitions and specific aviation Ground Handling terms. Such as GSP, CAAN, IATA, ISAGO, ICAO, SMS, DGR, ULD, Pushback, PAX, etc.
- 1.2 Role of GSEO in the Ground Handling Services
- 1.3 Introduction of GSE and its application
- 1.4 Introduction of GSE Operator
- 1.5 Difference between GSE and other Automotive Vehicles
- 1.6 GSE Types and applications
- 1.7 Basic aircraft parts, NLG, MLG wings, Fuselage, Tail, service ports, Pivot, Tow pin, aircraft servicing points, etc.
- 1.8 Introduction to Airport Components: Apron, Ramp, Boarding Gate, Aircraft Parking Bay, Taxiway, Runway, Airside, Landside, Terminal Building, Hangar, Immigration, Custom, Security channel, etc.

2. Operating Principles of GSE (5x2=10 Marks)

- 2.1 GSE Basic operation principles (power source and power conversion efficiency)
- 2.2 Prime movers of the GSE Fleets
- 2.3 Basics of Pneumatics and Hydraulics in the GSE
- 2.4 Components, parts and assemblies of the GSE
- 2.5 Basics of Manual/Automatic / Hydrostatic Transmission in the GSE and Vehicles.
- 2.6 Conventional and Towbarless Pushback/Towing of aircraft

3. Road/Ramp Driving Safety: (10x2=20 Marks)

- 3.1 Hand Signals used during the road and ramp driving/operation.
- 3.2 Accident Prevention and Safety Precautions.
- 3.3 Basic GSE recovery and Evacuation during emergency
- 3.4 Radio Telephonic communications/Standard Wordings
- 3.5 Safety devices: Fire bottle, ear muff/ ear plug/ Fluorescent jacket, safety boots, hand gloves, eye goggles, etc.
- 3.6 Fire Fighting; Class of fires, Fire Triangle, Fire principles, Fire Fighting methods Fire Hazards and principles of accident prevention, Suppression of fire and firefighting equipment.
- 3.7 Speed Limits in the Air Side and Land side
- 3.8 Awareness of different situations and possible incursions

- 3.9 FOD: Foreign Object Debris/ Foreign Object Damage (Concept)
- 3.10 Airside Signs and Signals/Markings
- 3.11 Walk Around Inspection (Introduction and application)
- 3.12 DGR: DGR identification labels (General concept)
- 3.13 Severe Weather precautions during driving/operation
- 3.14 Spillage and Leakage from GSE
- 3.15 Prop wash, Jet Blast of the aircraft engines (general concept)
- 3.16 Aircraft Inlet and exhaust hazard Areas (General idea)

4. GSE Operating Rules/Regulations (4x2=8 Marks)

- 4.1 Aircraft Staging Area (General idea for movement)
- 4.2 Aircraft servicing procedures
- 4.3 Equipment specific procedures
- 4.4 Fault/ Occurrence reporting of GSE and events
- 4.5 Equipment capabilities and service limits (general idea)
- 4.6 Vehicular Traffic regulations (Basic idea)
- 4.7 Airside Tarmac discipline- Do's and Don'ts

5. GSE Operations Management and Category Ratings(4x2=8 Marks)

- 5.1 Turnaround Time of aircraft (basic concept)
- 5.2 Equipment Category/Classification/Authorization System (general knowledge)
- 5.3 CAAN Airside Driving Rules and Regulations
- 5.4 Human Factors- Perception and Application in GSE Operations/GSE maintenance
- 5.5 Aviation Security: Introduction and basic requirements
- 5.6 Concept of Sensitivity of operation and Associated Risks in the GSE operation
- 5.7 Road driving license and ramp GSE operating authorization

6. GSE Operation Procedures (5x2=10 Marks)

- 6.1 General Precautions and Safety Measures
- 6.2 Daily Inspection Check Points of GSEs
- 6.3 Incident, Accident and Irregularities (IAI)
- 6.4 IAI Reporting (concept and necessity)
- 6.5 Pre Operational Procedures for GSE in the airport
- 6.6 Pre Docking procedures for GSE on the aircraft
- 6.7 Docking procedures for GSE (General idea/concept)
- 6.8 Aircraft movement procedures and precautions (Concept and idea)

7. Management System (SMS) (3x2=6 Marks)

7.1 Its Concept, application and advantages in respect to GSE Operations

8. Security Management System (SeMS) (3x2=6 Marks)

8.1 Its Concept, application and advantages in respect to GSE Operations

9. Quality Management System (QMS) (3x2=6 Marks)

9.1 Its Concept, application and advantages in respect to GSE Operations

10. GSE Maintenance Management System Safety (6x2=12 Marks)

10.1 Its Concept, application and advantages in respect to GSE Maintenance

10.2 Automotive systems: Diesel/Petrol engines, basic components, braking system, fuel system, suspension system, cooling system, lubrication system, steering system, exhaust system, electrical system, fuel injection system, ignition system, transmission system, safety features and safety system, etc.

10.3 Basic knowledge of heavy equipment: Loader, Bulldozer, Grader, Excavator, Roller, Crane, Forklift, etc. and maintenance concept.

10.4 Estimating and costing during maintenance: profitability concept, break-even point, return on investment, liability, assets, fixed cost, variable cost, direct cost, indirect cost, fixed capital, working capital, depreciation,

10.5 Workshop Practices: basic hand tools, machine tools and types, metal joining processes (soldering, welding, brazing), fabrication.