

द्वितीय पत्र – सेवा सम्बन्धी

खण्ड (क) – ५० अङ्क

- 1. Chemistry of Fire**
 - 1.1 Introduction
 - 1.2 Classes
 - 1.3 Chemistry of combustion
 - 1.4 Methods of extinguishment
 - 1.5 Characteristics of solid, liquid and gas fires
 - 1.6 Heat and temperature
 - 1.7 Fire behavior

- 2. Rescue and Fire Fighting Service (RFFS)**
 - 2.1 Fire station administration
 - 2.2 Fire station activities
 - 2.3 Design and siting of airport fire station
 - 2.4 Task resource analysis of ARFF personnel
 - 2.5 Watch Tower Operation
 - 2.6 RFFS SOP and manual
 - 2.7 Firefighting tools and equipment

- 3. Airport Emergency Planning (AEP)**
 - 3.1 Introduction
 - 3.2 Responsibility and role of each agency for each type of emergency
 - 3.3 Emergency operations centre, mobile command post and on-scene commander
 - 3.4 Airport emergency exercises
 - 3.5 Grid map
 - 3.6 Review and documentation

- 4. Level of Protection to be Provided**
 - 4.1 Airport category
 - 4.2 Amounts of extinguishing agents
 - 4.3 Critical area for calculating quantities of water
 - 4.4 Discharge rates
 - 4.5 Response time
 - 4.6 Number of vehicles and equipment

- 5. Aircraft Firefighting and Rescue Procedure**
 - 5.1 Fighting aircraft fires
 - 5.2 Helicopter fire fighting
 - 5.3 Rescue tactics and associated equipment requirements
 - 5.4 Accidents involving dangerous goods
 - 5.5 Post-accident procedures
 - 5.6 Post-incident operations
 - 5.7 Compartment fire & tactical ventilation
 - 5.8 Salvage and overhaul

- 6. Communication and Alarm Requirements**
 - 6.1 Logging System
 - 6.2 Alerting System

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- 6.3 Fire station communications
 - 6.4 Message Receiving and dissemination procedure
 - 6.5 Aircraft fire and rescue communication
 - 6.6 System and facilities
- 7. Ambulance and Medical Services**
- 7.1 Importance
 - 7.2 Triage and medical care
 - 7.3 Care of ambulatory survivors
 - 7.4 Care of fatalities
- 8. Fire Prevention**
- 8.1 Causes of fire
 - 8.2 Inspection, fire risk and preventive measures
 - 8.3 Fire alarm and detection system
 - 8.4 Test and inspection of extinguishers
 - 8.5 Fire prevention activities
 - 8.6 Fire prevention during refueling operations
- 9. Fire ground Hydraulics & Water supply**
- 9.1 Airport water supply, Hydrants
 - 9.2 Capacity of hose
 - 9.3 Loss of pressure due to friction
 - 9.4 Jet reaction, water hammer
 - 9.5 Factors that govern hydraulics
 - 9.6 Characteristics of suction lift
- खण्ड (ख) - ५० अङ्क**
- 10. Extinguishing Agents**
- 10.1 Types
 - 10.2 Extinguishing agent and characteristics
 - 10.3 Types of complementary extinguishing agents and its uses
- 11. Leadership in the Fire Service**
- 11.1 Introduction
 - 11.2 Nature of leadership
 - 11.3 Leadership style
 - 11.4 Qualities of leadership
- 12. Liquefied Petroleum Gas (LPG), Fire Fighting Tactics & Techniques**
- 12.1 Properties & characteristics
 - 12.2 Hazards
 - 12.3 Boiling Liquid Expanding Vapor Explosion (BLEVE)
 - 12.4 Safe areas/evacuation zone
- 13. Hazardous Materials**
- 13.1 Properties and effects
 - 13.2 Recognizing and identifying the hazards
 - 13.3 Implementing a response
 - 13.4 Protective equipment

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- 13.5 Response priorities and actions
- 13.6 Decontamination techniques

14. Airport Facilities Affecting Rescue and Firefighting Services

- 14.1 Airport water supply
- 14.2 Emergency access roads
- 14.3 Aerodrome construction activities and layout

15. Aerodrome Safety

- 15.1 Regulatory functions and requirements under Civil Aviation Authority of Nepal
- 15.2 Concept of State Safety Program (SSP)
- 15.3 Safety policy, Safety risk management, Safety assurance & Safety promotion
- 15.4 Hazard identification, Safety Risk Assessment, Risk mitigation, gap-analysis, Acceptable Level of Safety, Safety Action Group, Safety Review Board, Current status of SMS implementation

16. Wildlife Hazard Management

- 16.1 Introduction
- 16.2 Aerodrome wildlife safety risk assessment
- 16.3 Habitat management
- 16.4 Management of hazardous wildlife
- 16.5 Operational notifications
- 16.6 Wildlife hazard management programme

17. Removal of Disabled Aircraft (RODA) Manual

- 17.1 Concept
- 17.2 Role and responsibilities of ARFFS
- 17.3 Site survey
- 17.4 Preparation

18. Airport Certification Regulation

- 18.1 Airport certificate
- 18.2 Aerodrome manual
- 18.3 Obligation of the airport operator
- 18.4 Exemptions
- 18.5 ICAO Requirement on Aerodrome Certification
- 18.6 Aerodrome Certification Requirements in Nepal

द्वितीय पत्रबाट निम्नानुसार प्रश्न सोधिनेछ :

द्वितीय पत्र (विषयगत)				
विषय	खण्ड	अङ्कभार	तर्कयुक्त विश्लेषणात्मक प्रश्न	समस्या समाधानमूलक प्रश्न
सेवा सम्बन्धी	(क)	५०	३ प्रश्न X १० अङ्क = ३०	१ प्रश्न X २० अङ्क = २०
	(ख)	५०	३ प्रश्न X १० अङ्क = ३०	१ प्रश्न X २० अङ्क = २०
जम्मा		१००	६ प्रश्न X १० अङ्क = ६०	२ प्रश्न X २० अङ्क = ४०