नेपाल विविध सेवा, राजपत्राङ्कित तृतीय श्रेणी, कम्प्युटर अधिकृत पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

|    |      | Part (II): - General Technical Subject (50 Marks)   |
|----|------|---|
| 1. | Com  | puter Fundamentals (10%)  |
|    | 1.1  | Computers, Kinds of Computers in respect of size and function   |
|    | 1.2  | Generation of Computers   |
|    | 1.3  | Components and Architecture of Computers, Connecting the Components,  |
|    | 1.4  | Getting started: Orientation to personal computers, system unit, Starting the   |
|    | 1.5  | computers   |
|    | 1.5  | Input Devices: keyboard, mouse, other input devices   |
|    | 1.6  | Processing: CPU, Memory   |
|    | 1.7  | Storages devices: Overview of Storage Devices, Floppy Disk Drive, Hard Drive, Universal Serial Bus(USB) Devices and Other Storage Devices |
|    | 1.8  | Output devices: Monitors, Printers, Modems, Soundboards   |
|    | 1.9  | <b>Dos survival guide:</b> Using Command Prompt, Creating and using AUTOEXEC.BAT and CONFIG.SYS   |
|    | 1.10 | Windows survival guide: Windows Desktop, Program Manager, Organizing the Desktop, File Manager  |
|    | 1.11 | Application software: Using Application Software  |
|    | 1.12 | Windows Explorer, E-mails, Internet, Intranet, Extranets, Ethernet, HTTP  |
|    | 1.13 | Computer Viruses, Antivirus   |
| 2. | Data | Structure and Algorithms (8%)   |
|    | 2.1  | Fundamental of Data Structures, Abstract Data types   |
|    | 2.2  | Lists, Linked Lists, Stacks   |
|    | 2.3  | Queues, Priority Queue  |
|    | 2.4  | Trees: Traversal, Implementations, Binary Trees, Binary Search Trees, Balanced Search Trees, AVL Trees                                    |
|    | 2.5  | Indexing Methods. Hashing Trees, Suffix Trees   |
|    | 2.6  | Worst-Case and Expected time Complexity   |
|    | 2.7  | Analysis of Simple Recursive and Nonrecursive Algorithms  |
|    | 2.8  | Searching, Merging and Sorting  |
|    | 2.9  | Introductory Notions of algorithm design: Divide-and-Conquer, Dynamic   |
|    |      | Programming, Greedy Methods, Backtracking   |
|    | 2.10 | Graph algorithms: Depth-first Search and Breadth-first Search, Shortest Path  |
|    |      | Problems, Minimum Spanning Trees, Directed Acyclic Graphs   |
| 3. |      | m Analysis and Design (10%)   |
|    | 3.1  | Definition of the System, System Owner, System User, System Designers and   |
|    |      | system Builders, System Analysts, Variations on the System Analyst title.   |

System life Cycle Joint Application Development (JAD): JAD definition, JAD purpose, JAD 3.2 Philosophy, JAD Scope

Involved in a JAD: Sponsor, Business Users, System Analyst 3.3

Roles of JAD Group Member: Project Leader, Record Keeper, Time Keeper. 3.4

The System Design Environment: Development Process, Management 3.5 Process, System Structure, Basic Component of Computer based Information System, Personal/ Centralized/Distribution System

# नेपाल विविध सेवा, राजपत्राङ्कित तृतीय श्रेणी, कम्प्युटर अधिकृत पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

- 3.6 Concept formations: Introduction, Finding the Problem, Evaluating the Proposal, Technical Feasibility, Operational Feasibility, Economic Feasibility.
- 3.7 **Requirements analysis:** Representing System Analysis Model, Requirement Model, Design Model
- 3.8 **Development Process:** Design Method
- 3.9 Entity Relationship Diagram (E-R Diagram): Notations, Entities: Strong Entities, Weak Entities, Attributes: Simple and Composite, Single Valued and Multiple Valued, Null and Derived Attribute
- 3.10 **Relationship Sets:** Degree of Relationship and Cardinality Relationship, Specialization, Generalization, Aggregation
- 3.11 **Data Flow Diagrams (DFDs):** Introductions, Data flow Diagram, Symbol, Files or data store, External entities, Data flows,
- 3.12 **Describing System by Data Flow Diagram:** Context diagram, Top level DFD, Expansion Level DFD, Conversions of Data.
- 3.13 **Object Modeling:** Object -Oriented Concept, Object Structure, Object Feature, Class and Object
- 3.14 Representation: Association, Composition, Inheritance, Multiple Inheritances
- 3.15 Modeling: Use Case Diagram, State Diagram, Event Flow Diagram.
- 3.16 **Documentation:** Automatic and Manual System

#### 4. Operating Systems

(10%)

- 4.1 Definittion, Development and Functions of Operating Systems
- 4.2 Basic components of the Operating Systems, Information Storage and Management Systems
- 4.3 Disk Allocation and Scheduling Methods, Basic Memory Management strategies, Virtual Memory Management Techniques, Define a Process and features of the Process Management System
- 4.4 Features of Process Scheduling; List the features of Inter-Process Communication and Deadlocks
- 4.5 Concepts of Parallel and Distributed Processing, Identify Security Threats to Operating Systems
- 4.6 Overview of the MS-DOS Operating System
- 4.7 Introduction to the Windows Family of Products, Unix Family of Products, Linux Family of Products
- 4.8 Introduction to Windows Networking
- 4.9 Windows Architecture, Linux Architecture
- 4.10 Troubleshooting Windows & Linux
- 4.11 Managing Network Printing
- 4.12 Managing Hard Disks and Partitions
- 4.13 Monitoring and Troubleshooting Windows
- 4.14 Users, Groups and Permission Linux and Windows

#### 5. Database Management System and Design

(14%)

- 5.1 Introduction, A Database Model, Relational Database Model, Integrity, RDBMS
- 5.2 SQL and Embedded SQL
- 5.3 Writing Basic SQL SELECT Statements
- 5.4 Restricting and Sorting data
- 5.5 Single Row Functions
- 5.6 Displaying Data from Multiple Tables

### नेपाल विविध सेवा, राजपत्राङ्कित तृतीय श्रेणी, कम्प्युटर अधिकृत पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

Aggregation Data Using Group Functions 5.7

Sub Queries, Manipulating Data and Creating & Managing Tables 5.8

Creating Views and Controlling User Access 5.9

5.10 Using Set Operators, Datetime Function

Database Design: Logical Design, Conceptual Design, Mapping Conceptual to 5.11 Logical, Pragmatic issues, Physical Design, Integrity and Correctness, Relational Algebra, Relational Calculus

Normalization: 1NF, 2NF, 3NF, BCNF, 4NF,5NF, DKNF 5.12

- Architecture of DBMS: Client-server, Open Architectures, Transaction 5.13 Processing, Multi-User & Concurrency, and Backup & Recovery Database
- Basic Concept of major RDBMS products: Oracle, Sybase, DB2, SQL Server 5.14 and other Databases

6. **Programming Language** 

(8%)

Overview of Programming Language: History, Programming Paradigms, The role of Language translates in the Programming Process.

Fundamental Issues in Language Design. 6.2

Virtual Machines, Code Generation, Loop Optimization. 6.3

Concept of Procedural Programming, Structural Programming, Object-Oriented 6.4 Programming. 6.5

Concept of C programming, C++ Programming,

Java Programming for Declaration, Modularity and Storage Management 6.6 Software Development

7. Networking

(10%)

- Basic Network Theory: Network Definition, Network Models, Connectivity, 7.1 Network Addressing.
- Network Connectivity: Data Package, Establishing a Connection, Reliable 7.2 Delivery, Network Connectivity, Noise Control, Building Codes, Connection
- 7.3 Advanced Network Theory: OSI model, Ethernet, Network Resources, Token ring, FDDI, Wireless Networking 7.4
- Common Network Protocols: Families of Protocols, NetBEUI, Bridge and Switches, TCP/IP Protocol, Building TCP/IP Network, TCP/IP Suite 7.5

TCP/IP Services: Dynamic Host Configuration Protocol, DNS Name Resolution, NetBIOS support, SNMP, TCP/IP Utilities, FTP

7.6 Network LAN Infrastructure: LAN Protocols on a Network, IP Routing, IP Routing Tables, Router Discovery Protocols, Data Movement in a Routed Network, Virtual LANs(VLANS)

7.7 Network WAN Infrastructure: WAN Environment, Wan Transmission Technologies, Wan Connectivity Devices, Voice Over Data Services

7.8 Remote Networking: Remote Networking, Remote Access protocols, VPN **Technologies** 7.9

Computer Security: Computer Virus, Worm, Trojan Horse

Network Security: Introduction, Virus Protection, Local Security, Network 7.10 Access, Internet Security

Disaster Recovery: Need for Disaster Recovery, Disaster Recovery plan, Data 7.11 backup, Fault Tolerance

# नेपाल विविध सेवा, राजपत्राङ्गित तृतीय श्रेणी, कम्प्युटर अधिकृत पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

- 7.12 Advanced Data Storage Techniques: Enterprise Data Storage, Clustering, Network Attached Storage, Storage Area Networks
- 7.13 **Network Troubleshooting:** Using Systematic Approach to Troubleshooting.
- 7.14 **Network Support Tools:** Utilities, Network Baseline
- 7.15 Network Access Points, Common Network Component, Common Peripheral Ports

#### 8. Computer Architecture & Organization

(4%)

- 8.1 Evaluation of Computers, Design Methodology, Set Architecture, MIPS ISA, ALU Design
- 8.2 **Datapath Design**: Single and Multiple Cycle Implementations, Pipelining, Memory Hierarchy, Input/Output System: Bus & Role of Operating System

#### 9. Complier Design

(2%)

- 9.1 Introduction to Compiling
- 9.2 Logical Analysis, Syntax Analysis, Semantic Analysis
- 9.3 Run Time environment
- 9.4 Intermediate Code Generation, Code Optimization
- 9.5 Compiler Generation Tools

#### 10. E-Commerce Technology

(4%)

- 10.1 Introduction to E-Commerce
- 10.2 Electronic Commerce Strategies
- 10.3 Electronic Commerce Security Issues
- 10.4 Success Models of E-Governance
- 10.5 **E-Business:** b2b, b2c, b2e, c2c, g2g, g2c
- 10.6 Principles of Electronic Payment, Strategies & Systems
- 10.7 E-marketing, Reverse Engineering
- 10.8 E-Banking, EDI Methods, SWIFT
- 10.9 Encryption and Decryption Methods, XML, Layout Managers, Event Model

#### 11. MIS and Web Engineering

(10%)

- 11.1 Information Systems, Client-Server Computing
- 11.2 Information Systems and Decision Making.
- 11.3 Database Design issues, Data Mining, Data Warehousing
- 11.4 Knowledge Management, The strategic use of Information Technology.
- 11.5 Work Process Redesign (Reengineering) with Information Technology, Enterprise Resources Planning Systems, Information Systems Security, Information Privacy, and Global Information Technology issues
- 11.6 Software Supported Demonstrations including advanced Spreadsheet topics Software Component Based Systems (CBSE)
- 11.7 Multimedia
- 11.8 Object-Oriented Programming with COMS &DECOMS
- 11.9 Group Decision Support Systems
- 11.10 Basics of Website Design

#### 12. IT in Nepal

(10%)

- 12.1 History of IT in Nepal
- 12.2 IT Policy of Nepal

# लोक सेवा आयोग नेपाल विविध सेवा, राजपत्राङ्कित तृतीय श्रेणी, कम्प्युटर अधिकृत पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

12.3 Electronic Transaction Act

12.4 Copyright Act

12.5 Uses of Computers and Software Development
12.6 Nepali Unicode, Nepali Fonts

12.3 Licensing Issues

### लोक सेवा आयोग नेपाल विविध सेवा, राजपत्रािक्कत तृतीय श्रेणी, कम्प्युटर अधिकृत पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

#### द्वितीय पत्र (Paper II): Technical Subject

#### Section A-30 Marks

1. Computer Fundamentals

1.1 Computers, Kinds of Computers in respect of size and function

1.2 Generation of Computers

1.3 Components and Architecture of Computers, Connecting the Components,

1.4 Getting started: Orientation to personal computers, system unit, Starting the computers

1.5 Input Devices: keyboard, mouse, other input devices

1.6 Processing: CPU, Memory

1.7 Storages devices: Overview of Storage Devices, Floppy Disk Drive, Hard Drive, Universal Serial Bus (USB) Devices and Other Storage Devices

1.8 Output devices: Monitors, Printers, Modems, Soundboards

- 1.9 Dos survival guide: Using Command Prompt, Creating and using AUTOEXEC.BAT and CONFIG.SYS
- 1.10 Windows survival guide: Windows Desktop, Program Manager, Organizing the Desktop, File Manager

1.11 pplication software: Using Application Software

1.12 Windows Explorer, E-mails, Internet, Intranet, Extranets, Ethernet, HTTP

1.13 Computer Viruses, Antivirus

2. Data Structure and Algorithms

2.1 Fundamental of Data Structures, Abstract Data types

2.2 Lists, Linked Lists, Stacks

2.3 Queues, Priority Queue

2.4 Trees: Traversal, Implementations, Binary Trees, Binary Search Trees, Balanced Search Trees, AVL Trees

2.5 Indexing Methods. Hashing Trees, Suffix Trees

2.6 Worst-Case and Expected time Complexity

2.7 Analysis of Simple Recursive and Nonrecursive Algorithms

2.8 Searching, Merging and Sorting

- 2.9 Introductory Notions of algorithm design: Divide-and-Conquer, Dynamic Programming, Greedy Methods, Backtracking
- 2.10 Graph algorithms: Depth-first Search and Breadth-first Search, Shortest Path Problems, Minimum Spanning Trees, Directed Acyclic Graphs

3. Programming Language

3.1 Overview of Programming Language: History, Programming Paradigms, The role of Language translates in the Programming Process.

3.2 Fundamental Issues in Language Design.

3.3 Virtual Machines, Code Generation, Loop Optimization.

3.4 Concept of Procedural Programming, Structural Programming, Object-Oriented Programming.

3.5 Concept of C programming, C++ Programming,

3.6 Java Programming for Declaration, Modularity and Storage Management Software Development

# नेपाल विविध सेवा, राजपत्राष्ट्रित तृतीय श्रेणी, कम्प्युटर अधिकृत पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

#### Section B-20 Marks

#### 4. System Analysis and Design

- 4.1 Definition of the System, System Owner, System User, System Designers and system Builders, System Analysts, Variations on the System Analyst title, System life Cycle
- 4.2 Joint Application Development (JAD): JAD definition, JAD purpose, JAD Philosophy, JAD Scope
- 4.3 Involved in a JAD: Sponsor, Business Users, System Analyst
- 4.4 Roles of JAD Group Member: Project Leader, Record Keeper, Time Keeper.
- 4.5 System Design Environment: Development Process, Management Process, System Structure, Basic Component of Computer based Information System, Personal/ Centralized/Distribution System
- 4.6 Concept formations: Introduction, Finding the Problem, Evaluating the Proposal, Technical Feasibility, Operational Feasibility, Economic Feasibility.
- 4.7 Requirements analysis: Representing System Analysis Model, Requirement Model, Design Model
- 4.8 Development Process: Design Method
- 4.9 Entity Relationship Diagram (E-R Diagram): Notations, Entities: Strong Entities, Weak Entities, Attributes: Simple and Composite, Single Valued and Multiple Valued, Null and Derived Attribute
- 4.10 Relationship Sets: Degree of Relationship and Cardinality Relationship, Specialization, Generalization, Aggregation
- 4.11 Data Flow Diagrams (DFDs): Introductions, Data flow Diagram, Symbol, Files or data store, External entities, Data flows
- 4.12 Describing System by Data Flow Diagram: Context diagram, Top level DFD, Expansion Level DFD, Conversions of Data
- 4.13 Object Modeling: Object -Oriented Concept, Object Structure, Object Feature, Class and Object
- 4.14 Representation: Association, Composition, Inheritance, Multiple Inheritances
- 4.15 Modeling: Use Case Diagram, State Diagram, Event Flow Diagram.
- 4.16 Documentation: Automatic and Manual System

#### Section C-20 Marks

#### 5. Operating Systems

- 5.1 Definittion, Development and Functions of Operating Systems
- 5.2 Basic components of the Operating Systems, Information Storage and Management Systems
- 5.3 Disk Allocation and Scheduling Methods, Basic Memory Management strategies, Virtual Memory Management Techniques, Define a Process and features of the Process Management System
- 5.4 Features of Process Scheduling; List the features of Inter-Process Communication and Deadlocks
- 5.5 Concepts of Parallel and Distributed Processing, Identify Security Threats to Operating Systems
- 5.6 Overview of the MS-DOS Operating System
- 5.7 Introduction to the Windows Family of Products, Unix Family of Products, Linux Family of Products
- 5.8 Introduction to Windows Networking
- 5.9 Windows Architecture, Linux Architecture

# नेपाल विविध सेवा, राजपत्रािक्कत तृतीय श्रेणी, कम्प्युटर अधिकृत पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

- 5.10 Troubleshooting Windows & Linux
- 5.11 Managing Network Printing
- 5.12 Managing Hard Disks and Partitions
- 5.13 Monitoring and Troubleshooting Windows
- 5.14 Users, Groups and Permission Linux and Windows

#### 6. Database Management System and Design

- 6.1 Introduction, A Database Model, Relational Database Model, Integrity, RDBMS
- 6.2 SQL and Embedded SQL
- 6.3 Writing Basic SQL SELECT Statements
- 6.4 Restricting and Sorting data
- 6.5 Single Row Functions
- 6.6 Displaying Data from Multiple Tables
- 6.7 Aggregation Data Using Group Functions
- 6.8 Sub Queries, Manipulating Data and Creating & Managing Tables
- 6.9 Creating Views and Controlling User Access
- 6.10 Using Set Operators, Datetime Function
- 6.11 Database Design: Logical Design, Conceptual Design, Mapping Conceptual to Logical, Pragmatic issues, Physical Design, Integrity and Correctness, Relational Algebra, Relational Calculus
- 6.12 Normalization: 1NF, 2NF, 3NF, BCNF, 4NF, 5NF, DKNF
- 6.13 Architecture of DBMS: Client-server, Open Architectures, Transaction Processing, Multi-User & Concurrency, and Backup & Recovery Database
- 6.14 Basic Concept of major RDBMS products: Oracle, Sybase, DB2, SQL Server and other Databases

#### Section D-30 Marks

#### 7. Networking

- 7.1 Basic Network Theory: Network Definition, Network Models, Connectivity, Network Addressing.
- 7.2 Network Connectivity: Data Package, Establishing a Connection, Reliable Delivery, Network Connectivity, Noise Control, Building Codes, Connection Devices
- 7.3 Advanced Network Theory: OSI model, Ethernet, Network Resources, Token ring, FDDI, Wireless Networking
- 7.4 Common Network Protocols: Families of Protocols, NetBEUI, Bridge and Switches, TCP/IP Protocol, Building TCP/IP Network, TCP/IP Suite
- 7.5 TCP/IP Services: Dynamic Host Configuration Protocol, DNS Name Resolution, NetBIOS support, SNMP, TCP/IP Utilities, FTP
- 7.6 Network LAN Infrastructure: LAN Protocols on a Network, IP Routing, IP Routing Tables, Router Discovery Protocols, Data Movement in a Routed Network, Virtual LANs (VLANS)
- 7.7 Network WAN Infrastructure: WAN Environment, Wan Transmission Technologies, Wan Connectivity Devices, Voice Over Data Services
- 7.8 Remote Networking: Remote Networking, Remote Access protocols, VPN Technologies
- 7.9 Computer Security: Computer Virus, Worm, Trojan Horse
- 7.10 Network Security: Introduction, Virus Protection, Local Security, Network Access, Internet Security

#### नेपाल विविध सेवा, राजपत्राष्ट्रित तृतीय श्रेणी, कम्प्युटर अधिकृत पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

- 7.11 Disaster Recovery: Need for Disaster Recovery, Disaster Recovery plan, Data backup, Fault Tolerance
- 7.12 Advanced Data Storage Techniques: Enterprise Data Storage, Clustering, Network Attached Storage, Storage Area Networks
- 7.13 Network Troubleshooting: Using Systematic Approach to Troubleshooting.
- 7.14 Network Support Tools: Utilities, Network Baseline
- 7.15 Network Access Points, Common Network Component, Common Peripheral Ports

#### 8. Computer Architecture & Organization

- 8.1 Evaluation of Computers, Design Methodology, Set Architecture, MIPS ISA, ALU Design
- 8.2 Datapath Design: Single and Multiple Cycle Implementations, Pipelining, Memory Hierarchy, Input/Output System: Bus & Role of Operating System

#### 9. Complier Design

- 9.1 Introduction to Compiling
- 9.2 Logical Analysis, Syntax Analysis, Semantic Analysis
- 9.3 Run Time environment
- 9.4 Intermediate Code Generation, Code Optimization
- 9.5 Compiler Generation Tools

#### 10. E-Commerce Technology

- 10.1 Introduction to E-Commerce
- 10.2 Electronic Commerce Strategies
- 10.3 Electronic Commerce Security Issues
- 10.4 Success Models of E-Governance
- 10.5 **E-Business:** b2b, b2c, b2e, c2c, g2g, g2c
- 10.6 Principles of Electronic Payment, Strategies & Systems
- 10.7 E-marketing, Reverse Engineering
- 10.8 E-Banking, EDI Methods, SWIFT
- 10.9 Encryption and Decryption Methods, XML, Layout Managers, Event Model

#### 11. MIS and Web Engineering

- 11.1 Information Systems, Client-Server Computing
- 11.2 Information Systems and Decision Making.
- 11.3 Database Design issues, Data Mining, Data Warehousing
- 11.4 Knowledge Management, The strategic use of Information Technology.
- 11.5 Work Process Redesign (Reengineering) with Information Technology, Enterprise Resources Planning Systems, Information Systems Security, Information Privacy, and Global Information Technology issues
- 11.6 Software Supported Demonstrations including advanced Spreadsheet topics Software Component Based Systems (CBSE)
- 11.7 Multimedia
- 11.8 Object-Oriented Programming with COMS & DECOMS
- 11.9 Group Decision Support Systems
- 11.10 Basics of Website Design

#### 12. IT in Nepal

- 12.1 History of IT in Nepal
- 12.2 IT Policy of Nepal
- 12.3 Electronic Transaction Act
- 12.4 Copyright Act
- 12.5 Uses of Computers and Software Development
- 12.6 Nepali Unicode, Nepali Fonts
- 12.7 Licensing Issues

### अनुसूची १. सूचना प्रविधि अधिकृतको कार्यशर्त (TOR) को बिवरण

| पद: सूचना प्रविधि अधिकृत (IT Officer)  | सेवा प्रकृति : सेवा करार  |
|--|---|
| कार्यालय: भिमाद नगर कार्यपालिकाको कार्यलय,<br>भिमाद ।  | सुपरीवेक्षकः प्रमुख प्रशासकीय अधिकृत र PLGSP<br>Expert  |
| कार्य समय : नगरपालिकाले निर्धारण गरे बमोजिम  | सेवा अवधि : सेवा करार सम्भौता बमोजिम  |
| प्रितिवेदन पेश गर्नुपर्ने निकायः नगरपालिका, PLGSP (<br>आवश्यक परेमा सम्वन्धित मन्त्रालय तथा विभागमा समेत<br>प्रतिवेदन पेश गर्नु पर्नेछ)। | मूख्य कार्य: - नगरपालिकालाई सूचना तथा सञ्चार प्रविधि र विद्युतीय शासनको क्षेत्रमा आवश्यक सहयोग गरी अपेक्षित नितजा प्राप्त गर्ने। - PLGSP को सम्पर्क व्यक्ति (Focal Person) को रुपमा रही सम्बन्धित कार्यक्रम समन्वय इकाइलाई आवश्यक समन्वय र सहयोग गर्ने। |

#### उद्देश्यहरु:

- नगरपालिकाको सूचना तथा सेवाहरुमा आम जनताको पहुँच एवं पारदर्शितामा वृद्धि गर्ने,
- नगरपालिकाको Filling system लाई Paperless गराउने कार्यमा आवश्यक सहयोग गर्ने ।
- नगरपालिकाबाट प्रदान गरिने आधारभूत सेवा प्रवाहमा सूचना तथा सञ्चार प्रविधि प्रयोग गरी विद्युतीय शासन (E-Governance) स्थापना गर्न सहयोग गर्ने,
- विद्युतीय शासन (E-Governance) अनुरुप नगरपालिकाको आवश्यकतालाई सम्बोधन गर्न कार्यालयका थप आवश्यकताहरुको संकलन तथा विश्लेषण गर्ने ।

### सूचना प्रविधि अधिकृत (IT Officer) ले गर्ने कार्यहरु निम्नानुसार हुनेछन् :

| मुख्य   | कियाकलाप   | कार्यसम्पादन सूचक   | सूचकको स्रोत   |
|---|--|---|--|
| (website, soft<br>स्थापना तथा स   | सूचना प्रविधि प्रणाली<br>ware, system)<br>ञ्चालन गर्नको लागि<br>ग उपलब्ध गराउने ।  | <ul> <li>नगरपालिकामा स्थापना भई सञ्चालनमा<br/>रहेका प्रणालीहरु र तिनको प्रयोग भई<br/>सेवामा प्रभावकारीता आएको ।</li> <li>नगरपालिकामा विभिन्न सूचना तथा<br/>प्रतिवेदन निर्धारित समयमा नियमित<br/>आउने प्रकृयाको विकास भएको ।</li> </ul>  | <ul> <li>नगरपालिकामा स्थापना<br/>भएको प्रणालीहरुको<br/>सञ्चालन र प्रतिवेदन</li> </ul>  |
| अन्य सूचना प्रवि<br>कर्मचारीलाई IC  | ा अधिकारी लगाएत<br>इधिसँग सम्बन्धित<br>T सम्बन्धि ज्ञान तथा<br>गर्न तालिम योजना  | कम्तिमा २ वटा तालिम सञ्चालन भई<br>सम्बन्धित कर्मचारीले दक्षता हासिल<br>गरेको ।  | <ul> <li>तालिम तथा अभिमुखिकरण प्रतिवेदन/नगरपालिकाको अभिलेख</li> </ul>  |
| विद्युतीय शासन,<br>प्रविधि सम्बन्धी   | सवै कर्मचारीहरुलाई<br>सूचना तथा सञ्चार<br>तालीम र<br>हार्यक्रम सञ्चालन   | <ul> <li>किम्तिमा २ वटा तालीम तथा<br/>अनुशिक्षणवाट कर्मचारीले तालीम तथा<br/>सीप प्राप्त गरेको</li> </ul>  | <ul> <li>नगरपालिकाको तालीम<br/>अभिमुखिकरण कार्यक्रम<br/>सञ्चालन गरेको माइन्यूट,<br/>तालीम प्रतिवेदन</li> </ul>   |
| कार्यालय व्यवस्थ  | ो तयार गर्ने र   | नगरपालिकामा नयाँ प्रणालीहरु निर्माण<br>भई सुचारु रुपले सञ्चालनमा आएको ।   | <ul> <li>नगरपालिकाको सम्विन्धत</li> <li>शाखाको प्रतिवेदन</li> </ul>  |
| <ul> <li>नगरपालिकामा<br/>रहेका सबै सफ्ट<br/>सञ्चालन गर्न रं<br/>अभिलेख तथा प्र<br/>आवश्यक सहयो<br/>o Vital Even<br/>Social Sector</li> <li>Municipal</li> </ul> | हाल सञ्चालनमा<br>वेयर प्रणाली<br>सेटअप गरी सही<br>तिवेदन तयार पार्न<br>ग पुऱ्याउने । जस्तैः<br>t Registration and<br>urity (VERSS)-MIS<br>Administration<br>nue System | <ul> <li>नगरपालिकामा रहेका प्रणालीहरु सुचारु रुपले सञ्चालनमा आएको,</li> <li>कार्यालयको आवश्यक विवरण, आन्तरिक कार्यहरु Computerised भई अद्यावधिक भएको,</li> <li>सेवाग्राहीहरुको विवरण प्राप्त गर्ने सेवा Computerised भई अद्यावधिक भएको,</li> <li>व्यक्तिगत घटना दर्ता सम्बन्धी सबै प्रकारका सूचना MIS मा अद्यावधिक भएको।</li> </ul> | <ul> <li>प्रयोगमा रहेका प्रणालीहरुको प्रतिवेदन,</li> <li>MARS र VERSS मा दर्ता भई सेवा लिएका सेवाग्राहीको संख्यात्मक विवरण,</li> <li>नगरपालिकाको सम्वन्धित शाखाको प्रतिवेदन</li> </ul> |
|   | उपकरण, System र<br>गलिकामा स्थापना गर्न  | <ul> <li>विद्युतीय शासनका उपकरण र उपायहरु<br/>स्थापना भई सुचारु भएको ।</li> </ul>   | <ul> <li>नगरपालिकाको सम्विन्धित<br/>शाखाको प्रतिवेदन ।</li> </ul>  |

| Г |                                 |  |  |   |
|---|---------------------------------|--|--|---|
|   |                                 | उपकरणहरु (कम्प्युटर, ल्यापटप,<br>प्रिन्टर, स्क्यानर, सर्भर, सोलार<br>ब्याकअप आदि)  |  |   |
| - | 0                               | कार्यालयमा इन्टरनेट सेवा र   |  |   |
|   | _                               | 'Free Wi-Fi zone'  |  |   |
|   | 0                               | वेबसाइट<br>आधिकारिक सामाजिक सञ्जाल   |  |   |
|   |                                 | (फेसबुक, ट्वीटर, यु-ट्युब आदि)   |  |   |
|   | 0                               | सरकारी ईमेल  |  |   |
|   | 0                               | डिजिटल नागरिक वडापत्र  |  |   |
| - |                                 | (Digital Citizen Charter)  |  |   |
|   | 0                               | डिजिटल सूचना पाटी (Digital   |  |   |
|   |                                 | Notice Board)  |  |   |
|   | 0                               | इ-हाजिरी (Bio-metric   |  |   |
|   | 0                               | attendance)<br>सामुहीक एस.एम. एस. (Group   |  |   |
|   | 0                               | SMS)   |  |   |
|   | 0                               | अडियो नोटिस वोर्ड (Audio   | The second secon |   |
|   |                                 | notice Board)  |  |   |
|   | 0                               | पालो व्यवस्थापन प्रणाली  |  |   |
|   |                                 | (Queue Management  |  |   |
|   | _                               | System)  |  |   |
|   | 0                               | मोबाइल एप्लिकेसन (Mobile<br>Application)   |  |   |
|   | 0                               | हस्त लिखित दस्तावेजहरुको   |  |   |
|   |                                 | कम्प्युटरकृत   |  |   |
|   | 0                               | सफ्टवेयर प्रणाली निर्माण गरी   |  |   |
|   |                                 | प्रयोगमा ल्याउने आदि।  |  |   |
| • | आ.व<br>काय<br>⁄ परि             | पालिकाको कार्यालयले गतः<br>त.मा कार्यान्वयन गरेको र हाल<br>न्वियनमा रहेका कार्यक्रम<br>रयोजनाहरुको लगत<br>स्थितरुपमा राख्न सहयोग गर्ने । | <ul> <li>नगरपालिकामा भएका सबै प्रकारका<br/>आयोजना/ कार्यक्रमहरुको अवस्था<br/>सम्बन्धी अध्यावधिक सूचना<br/>Computerised भएको ।</li> </ul>   | <ul> <li>नगरपालिकाको सम्बन्धित</li> <li>शाखाको प्रतिवेदन</li> </ul> |
| • | शाख<br>संस्थ<br>संस्थ<br>राख्ने | पालिका अन्तरगतका विषयगत  | <ul> <li>उल्लिखित सबै उपभोक्ता समूह, स्थानीय<br/>सेवा प्रदायक, गैइ सरकारी संस्था,<br/>समुदायमा आधारित संघ संस्थाहरुको<br/>संख्या, कार्यक्षेत्र, कार्यक्रम आदि विस्तृत<br/>विवरण अध्याविधक गिरएको ।</li> </ul>  | <ul> <li>नगरपालिकाको सम्बन्धित</li> <li>शाखाको प्रतिवेदन</li> </ul> |
|   | गर्ने व                         | नक्शाङ्कनलाई Digitisation<br>लगायत नगरपालिकाको प्रोफाइल<br>उन र अद्यावधिक गर्न सहयोग   | <ul> <li>नगरपालिकाको प्रोफाइल तथा श्रोत<br/>नक्साहरु वार्षिक रुपमा अद्यावधिक<br/>गरिएको ।</li> </ul>   | <ul> <li>नगरपालिकाको सूचना<br/>तथा अभिलेख केन्द्र ।</li> </ul>      |

| <ul> <li>नगरपालिकामा सूचना केन्द्रको स्थापना<br/>र सञ्चालन गर्न सहयोग गर्ने ।</li> </ul>   | <ul> <li>नगरपालिकामा सञ्चालित सूचना केन्द्रमा<br/>रहेका सूचनाहरु अद्यावधिक गरी आवश्यक<br/>सहयोग गरेको ।</li> </ul>              | <ul> <li>नगरपालिकाको सम्बन्धित</li> <li>शाखाको प्रतिवेदन</li> </ul> |
|--|---|---|
| <ul> <li>नगरपालिकाको वेवसाइट र ईमेललाई<br/>अद्यावधिक गरी सञ्चालन गर्न सहयोग<br/>गर्ने ,</li> </ul>   | <ul> <li>नगरपालिकाको सम्पूर्ण जानकारी सिहतको<br/>वेबसाइट र इमेल तयार भई निरन्तर र<br/>अद्यावधिक रुपमा सञ्चालन भएको ।</li> </ul> | <ul> <li>नगरपालिकाको वेबसाइट<br/>र इमेल</li> </ul>                  |
| <ul> <li>नगरपालिकाको कम्प्यूटर प्रणाली<br/>सम्बन्धी दैनिक क्रियाकलापहरु सुचारु<br/>रुपमा सञ्चालन भएको सुनिश्चित गर्न<br/>सहयोग गर्ने ।</li> </ul>  | • नगरपालिकाको सबै शाखा, उपशाखाहरुमा<br>रहेका कम्प्यूटरहरु सञ्चालनमा रहेको ।   | <ul> <li>नगरपालिकाको जिन्सी<br/>शाखाको प्रतिवेदन</li> </ul>         |
| • नगरपालिकाका कर्मचारीलाई ICT सम्बन्धी ज्ञान तथा सीप हस्तान्तरण सूचना तथा सञ्चार प्रविधि ब्लग Knowledge Management Database-KMDB,ict 4lb.org.np मा नगरपालिकामा प्रयोगमा आउने ICT सम्बन्धि लेखहरु (Tutorial)प्रकाशित गर्ने। | ICT सम्वन्धि लेखहरु Tutorial प्रकाशित<br>भएको ।   | KDMB मा प्रकाशित लेखहरु   |
| <ul> <li>नगरपालिकाको सूचना प्रविधि क्षेत्रमा</li> <li>आवश्यक रहेका गतिविधिहरु सहित</li> <li>वार्षिक ICT योजना तयार गर्ने ।</li> </ul>  | वार्षिक रुपमा ICT योजना तयार गरी स्वीकृतिका लागि पेश गरिएको ।   | <ul> <li>ICT योजनाको दस्तावेज</li> </ul>                            |
| नगरपालिकाको ICT status / System     को अडिट बिवरण संकलन गर्ने ।  | <ul> <li>वार्षिक रुपमा ICT को अडिट विवरण<br/>भएको ।</li> </ul>  | • अडिट प्रतिवेदन  |

## कार्यिबवरणका लक्ष्य तथा उद्देश्य पूरा गरा गर्न आवश्यक क्षमता तथा स्रोतसाधनहरु :

| सीप तथा क्षमता                   | स्रोत साधनहरु र उपकरणहरु                   | सहयोगी व्यवस्थाहरु तथा वातावरण  |
|----------------------------------|--|---|
| सूचना तथा संचार प्रविधिमा दक्षता | <ul><li>ल्यापटप</li><li>इन्टरनेट</li></ul> | <ul> <li>कार्यक्रम सम्बन्धमा आधारभूत एवं अन्य विषयतग तालीम, अभिमूखीकरण</li> <li>सन्दर्भ सामाग्रीहरुको उपलब्धता (नीतिगत दस्तावेजहरु, कार्यक्रम दस्तावेज र कार्य योजना, आदि)</li> <li>अनुभव आदान प्रदान र सिकाईको अवसर</li> </ul> |
|                                  |  | <ul> <li>उपयुक्त कार्य वातावरण (सूचनामा<br/>पहुँच, अन्तर सम्बन्धको विकास,<br/>उत्प्रेणा आदि)</li> </ul>   |