

# Key Focus Areas of the Training Programmes 2018-19

## 1. Strategic IT Management

- Understanding Organizational Vision and outlook
- Business case analysis – physical & financial feasibility
- Orientation & knowledge of Policy, legal and administrative frameworks
- Stakeholder identification, segmentation and planning
- Process re-engineering & design
- Analysis of alternatives – People, Process & Technology
- Identification of implementation & knowledge
- Procurement of technology services
- Contract Management
- Project funding, finances and business models
- Project implementation strategy and management framework

## 2. IT Application in Management

- Application of ICT tools & techniques needed in planning, scheduling, controlling and implementing management & administrative functions
- IT tools & techniques used in Management and Administrative functions
- Applications commonly needed by managers and administrators in both; public and private sectors
- Preparing action plan documents on IT applications for the respective functions

## 3. Window networking, security and Networking Concepts/Essentials

- Networking fundamentals
- Security layers
- Authentication, authorization and accounting
- Security policies
- Network security
- Protecting server and client
- Configuring and Managing SOHO Routers

## 4. PC Repair & Maintenance

- Components of a computer
- Microprocessor
- Memory
- I/O
- Monitors and Displays
- Printers
- Power supplies. Ratings
- Electro-Static Discharge (ESD) and Safety Precautions.
- The WEEE directive, correct disposal of PC and printer waste.
- Installing and commissioning functioning systems.

- Fault Diagnosis
- 5. ITIL (Foundation)**
- Introduction
  - Service Management as a practice
  - Service Strategy
  - Service Design
  - Service Transition
  - Service Operation
  - Continual Service Improvement
- 6. Windows server 2012/2016 Administration**
- a. Windows Server 2016 –**
- Installation, Storage, and computer with Windows Server 2016
  - Networking with Windows Server 2016
  - Identity with Windows Server 2016
- b. Windows Server 2012 –**
- Installing and Configuring Windows Server 2012
  - Administering Windows Server 2012
  - Configuring Advanced Windows Server 2012 Services
- 7. RDBMS concepts & oracle 11g Administration & Management**
- a. RDBMS concepts - Introduction to SQL**
- Understand the basic concepts of relational databases.
  - Run data manipulation statements (DML).
  - Control database access to specific objects.
  - Manage schema objects.
  - Manage objects with data dictionary views.
  - Retrieve row and column data from tables.
  - Control privileges at the object and system level.
  - Create indexes and constraints; alter existing schema objects.
  - Create and query external tables
- b. Oracle 11g Administration & Management**
- Exploring the Oracle Database Architecture
  - Installing and Creating an Oracle Database
  - Managing the Oracle Database Instance and ASM Instance
  - Configuring the Oracle Network Environment
  - Managing Database Storage Structures
  - Administering User Security
  - Managing Data Concurrency and Undo Data
  - Implementing Oracle Database Auditing
  - Database Maintenance and Performance Management
  - Backup and Recovery Concepts
  - Moving Data and Performing Database Recovery

## 8. Oracle Developer suit 11g & 6i

- Introduction and Pre-requisites
- Developer Tool
- The Oracle Forms Builder Main Screen and Oracle Forms Design
- Creating and Running an Oracle Form with single block
- Creating Master/Detail Form
- List of Values (LOVs) and No Base Table Fields
- Oracle Forms Program Units and Stored Program unit
- Oracle Reports Basics
- Creating menus in Oracle Forms

## 9. Programme Management

- Introduction
- Strategic Program Management
- Program Life Cycle
- Benefits Management
- Stakeholder Management
- Governance

## 10. Optic Fibre Communications, Networking & Management & repair

- Introduction to Optical Fiber
- Fiber Theory/Optical Fibers
- Cables, Connector, Splicing
- Cable Management and Installation
- Test Equipment and Testing
- Optical Testing
- Restoration/Maintenance
- Safety Design
- Systems Overview and Safety Meeting Splicing
- Connectorization and Cable Preparation
- OTDR Operation
- Optical Loss Testing

## 11. Corel Draw X8 (for Desktop publishing) – Key Focus Areas:

- CorelDRAW basics
- CorelDRAW workspace
- Lines, shapes and outlines
- Objects, symbols and layers
- Color, fills and transparencies
- Special effects
- Text
- Templates & Styles
- Pages & layout
- Bitmaps
- Printing

- Web graphics
- File formats
- Customizing & automating

## 12. HTML5

### a. Fundamentals of HTML5

- Introduction to web
- HTML Basics
- HTML 5 Introduction, Syntax, New Elements

### b. Functionalities of HTML5

- HTML 5 Canvas, SVG(Scalable Vector Graphics), Audio, Video, Geo Location, Drag/drop
- HTML 5 Input types, Form elements, Attributes, Semantic
- HTML 5 Web storage, App cache, web workers, SSE(server- sent events)
- HTML 5 Media, Multimedia, MathML

### c. CSS3 (Cascading Style Sheets)

- Introduction
- Borders, background, text effects, fonts
- 2D Transforms, 3D Transforms, transition, user interface

## 13. Chief Information Officers' Programme

- eGovernance in India & Key initiatives under Digital India
- eGovernance strategy formulation
- eGovernance structural transformation
- Leading with and without authority: Directing and motivating collective action across independent constituencies
- Modern day ICT and project sustainability
- eGovernance procurement
- Detailed Project Report & Request for Proposal
- Regulatory Framework for e-Gov/ICT projects
- Information Security Management

## 14. eGovernance Competency Framework

- Background and need for competency framework
- The e-Governance Competency framework (eGCF)
- Roles in an e-Governance / ICT project
- eGCF implementation toolkit
- How to use the eGCF

## 15. e-Governance Project Lifecycle

- Introduction to e-Governance
- e-Governance Project Development Lifecycle
- e-Governance Vision and Strategy development
- Services prioritization and roadmap development for e-Governance implementation
- Government Process Reengineering in e-Governance
- Information Security management and standards for e-Governance implementation

- Implementation Approach and Planning for e-Governance projects
- Change Management and Capacity building in e-Governance
- Business Models for implementation of e-Governance projects
- Preparation of DPR and RFP
- Procurement and Contract Development
- Legal and policy framework for e-Governance projects
- Project and Program Management for e-Governance projects
- Monitoring and Evaluation for e-Governance projects

## **16. Vision & Strategy development in e-Governance**

- Overview of e-Governance project lifecycle
- Need for vision & strategy
- Key considerations in strategy development for e-Governance
- Development of vision statements
- Identifying actionable and measurable initiatives
- Ensure maximum utilization of resources
- Define path from pilot experiments to sustainable and scalable systems

## **17. Government Process Reengineering**

- Overview of process reengineering
- Assessment and definition of problems in the existing processes
- Understanding the needs
- Definition of the vision for process reengineering
- Preparation of process maps
- Business process analysis
- Approach for implementation of reengineered processes
- Change Management for implementation of reengineered processes

## **18. Procurement in e-Governance**

- Procurement - an important and significant process of any major ICT / e-Gov project
- Preparation of a Detailed Project Report (DPR)
- Floating a Request for Proposal (RFP)
- Managing a contract end-to-end
- Transitional Management
- General Financial Rules (GFR)
- Government e-Marketplace (GeM)

## **19. Business Models & Public Private Partnerships**

- Introduction to e-Governance lifecycle and project cost components
- Introduction to business models
- Introduction to Public Private Partnerships (PPP)
- Business Model development for e-Governance Infrastructure Projects
- Business Model development for e-Governance Application Development Projects

- Business Model development for e-Governance Service Delivery Projects
- Procurement and Selection of Implementation Partner
- Contract Development and Execution

## **20. Change Management & Capacity Building**

- Introduction to organizational change
- Introduction to 'Change' in the context of Government and e-Governance
- Approach to Change Management
- Introduction to Tools and techniques for Change Management
- Establishing foundation to change for e-Governance programmes
- Identifying enablers and disablers to change
- Building a Change Team
- Skill Assessment and Development
- Developing a Communication Strategy
- Measuring Performance to drive change
- Implementation

## **21. Information Security Management**

- Introduction to Information Security in e-Governance
- Models and Frameworks for Information Security Management
- Securing Business Applications
- Securing Data and Database systems
- Securing network and IT Infrastructure
- Securing web applications
- Security in end user environment
- Physical and Environmental Security
- Information Security Policy and Organization
- Disaster Recovery Planning
- Information Security Audits
- Public Key Infrastructure, Cryptography and Encryption
- Legal framework of Information Security
- Public Key Infrastructure, Cryptography and Encryption
- Legal framework of Information Security

## **22. Regulatory Framework**

- Need for Regulatory framework for e-Governance
- IT Act 2000 & Amendments of 2008
- Digital Signature regime
- Cyber-crime provisions in IT Act
- Regulatory Framework for e-Governance
- Other aspects of legal framework
- Procurement in e-Governance
- Contract Management: Understanding contracts
- Contract Management Lifecycle

## 23. Enterprise Application & Open Source Systems

- Introduction to ERP Applications
- ERP Applications, Benefits and Challenges
- Procurement Approach and Implementation of ERP Applications
- Open source standards
- Operations and management of ERP applications
- Quality Assurance in ERP Applications
- Introduction to Open Source Systems
- Open Source Systems for Government
- Benefits and challenges in Open source systems implementation
- Procurement of Open Source Systems

## 24. Project Management (PMP & PRINCE-2)

### a. PRINCE2

- Introduction to of PRINCE2 Methodologies
- 7 Themes
- 7 Principles
- 7 Processes
- Tailoring

### b. PMP

- Project Management Fundamentals
- Project Management Processes for a Project
- Project Management Process Interactions
- Project Management Knowledge Areas
- Project Integration Management
- Project Scope Management
- Project Time Management
- Project Cost Management
- Project Quality Management
- Project Human Resource Management
- Project Communications Management
- Project Risk Management
- Project Procurement Management
- Professional and Social Responsibility

## 25. Information Technology Service Management / Operations

- Information Technology service management
- Information Technology operations management
- Tools for ITSM (Agile, CMMI, COBIT, ITIL etc.)
- International Standards for ITSM (ISO 20000:2012; ISO 27001:2013; ISO 9001:2015)
- Business process frameworks (Lean, Six Sigma, MOF 2008 etc.)

## 26. Risk Management

- Concepts and definitions related to risk management. Risk Management standards, frameworks and methodologies

- Implementation of a risk management framework
- Understanding an organization and its context
- Risk identification
- Risk analysis and risk evaluation
- Risk treatment
- Risk acceptance and residual risk management
- Risk communication and consultation
- Risk monitoring and review

## **27. Cloud Computing,/Cyber Security /Big Data Analytics**

### **a. Cloud Computing -**

- Cloud computing lifecycle & components
- Cloud service delivery & deployment models
- Cloud reference architecture
- Benefits & Risks of Cloud computing

### **b. Big Data Analytics -**

- Big Data and its future
- Hadoop
- Addressing the data puzzle
- Intro to NoSQL and SQL vs NoSQL
- Managing Analytic projects
- Application of Analytics in Government departments
- Change Management
- Big data implementation checklist for analytics project managers

### **c. Cyber Security -**

- Networking concepts with packets formats and wireless Networks.
- Security threats and Vulnerabilities.
- Security in Network, Application, Endpoint, Data, Cloud and Mobile.
- Security laws and Standards
- Cryptography and security management practices.
- Access control and Intrusion Detection
- Server management and Firewalls
- Security for VPN and Next Generation Networks
- System security and OS security
- Disaster recovery/ Business continuity planning
- End - user education

## **28. Digital India Workshop**

- Vision areas of Digital India
- Overview of Digital India
- Pillars of Digital India
- How Digital India would be realized – Implementation approach



**29. e-Governance Best Practices Study Tour**

- Visits to successful e-Gov/ICT projects in the identified state to observe the following key areas:
  - Process Reengineering
  - Procurement process
  - Business Models in implementing e-Gov/ICT projects
  - Vendor Management
  - Change Management

**30. MS office tools (MS Office, power point, Excel) & Basics of internet**

**a. Microsoft Word 2013**

- Introduction to MS – Word
- Features, Usage of Menu bar and Tool bar Tabs
- Editing & Formatting Techniques
- Working with Pictures, Charts and Tables
- Mail Merge, Envelops & Labels

**b. Microsoft Excel 2013**

- Introduction to MS-Excel
- Features, Usage of Tool bar Tabs
- Functional Formula, Text Formulas
- Sorting & Filtering Data
- Conditional Formatting, Validations
- Using logical functions (AND, OR, NOT)
- Using lookup and reference functions (VLOOKUP, HLOOKUP, MATCH, INDEX)
- Graphs , Charts
- Pivot Tables & Charts

**c. Microsoft PowerPoint 2013 -**

- Introduction to MS-power point
- Features, Usage of Tool bar Tabs
- Creating, Designing Slides and Custom Animations
- Create Timing Presentation, Slide Shows Presentation
- Editing & Formatting Text, pictures, Tables
- Working with Themes and Styles, Auto shapes
- Working with Charts, Graphs, & Tables
- Working with Media Clips and Animation

**d. Basics of Internet -**

- Internet Fundamentals
- Connections
- Internet Browser
- Blogs, Social networks, Email, Search engines
- Copyrights, trademarks and plagiarism
- The shady side
- The dark side of internet – predators, scams, hoaxes
- Ethics and netiquette

## **31. Internet of Things**

- Understanding Internet of Things (IoT) and its potential
- Government IoT policy for India
- Role of IoT in Smart Cities
- Global initiatives using IoT
- Best practices / Case Studies

## **32. Geographic Information Systems**

- Critical Success Factors in GIS implementation
- Challenges in Implementation of GIS Projects
- Technological, Implementation & Legal Concerns
- Enterprise GIS
- Global Experiences
- Best practices & project field visits

## **33. Block Chain Technologies & its use in Governance**

- Introduction to block chain technology
- Design elements involved in the technology
- Features of the technology
- Various applications in the field of banking and financial services
- Case studies in the international context
- Role of Block Chain Technology in the future machine economy

## **34. Design Thinking and User eXperience Design (UXD)**

- Need for change in current service delivery model and role of e-Governance
- Application of design thinking principles and methods to drive human centred innovation
- Challenging assumptions, problem reframing, visualization, user and context focus and iterative thinking
- e-Governance project design process
- Ideation techniques
- Prototyping and user testing
- Systems thinking to design user driven IT based systems and services
- Design framework and its application for customer centred e-Governance systems and services
- Integration of design thinking principles in designing organizations

## **35. Monitoring & Evaluation of e-Governance Projects**

- Monitoring & Evaluation fundamental concepts
- Introduction to various impact evaluation methods in practice
- Standards, capacity & resources for Monitoring & Evaluation
- Key elements for evaluation
- M&E framework & methodology
- Role of M&E unit and successful implementation of M&E plan with relevant case studies