

**Training
Programme
EDP Course
Contents
2019-20**

1. **Course Title** : **Database and System Concepts & Introduction to MS-Access.**
2. **Date** : 22.04.2019 to 26.04.2019.
3. **Duration** : 5 days.
4. **Location** : Regional Training Institute, Shillong.
5. **Programme Background:** Proposed by Headquarters Office and accepted by the RAC Shillong. The Training Programme is being conducted based on projected training requirements of user offices of RTI, Shillong.
6. **Learning Objectives:** The course will enable the participants to define database and system and use MS Access effectively in the departmental use.
7. **Programme Content and Structure:**
 - Concept of DBMS, RDBMS, Purpose of Database Systems, Data Structure, Database query language, Relational Model, Application in databases.
 - About MS-Access, Various components of MS-Access, Data Type Creating Database and tables.
 - Setting relationships between tables, Setting fields properties. Add/Edit/View the data from tables, Insert columns, hide/unhide column, Freeze/unfreeze columns.
 - Types of query, use of Aggregate functions and other options in query design Advance query – update query, Delete query. Querying from multiple tables.
 - Practice Exercises.
 - Working with Form. Creating form (without wizard). Selecting controls, Section, Forms. Change the field position i.e. alignment, re-size of a control, changing the format of label and text box. Controlling the tab Order. Adding un-bound control i.e. option Groups, Option buttons, Check boxes, Combo Boxes, Command buttons.
 - Practice Exercises.
 - About report design. Creating different report with or without wizard.
 - Practice Exercises.
8. **Methodology:** Lectures, Presentations, Interactive sessions Practical Exercises and feedback through course end test.

9. Target Participants: Group ‘B’ and ‘C’ officers/officials of the user offices of the RTI, Shillong.

10. Additional Information:

Faculty: The faculty will be drawn from resource pool comprising of Group ‘A’ Group ‘B’ and Group ‘C’ officers/officials from the IA&AD.

Feedback on previous Course: The course was rated 4.9 on a scale of 1 to 5 by the participants.

1. Course Title : MS Excel

2. Date : 29.04.2019 to 03.05.2019.

3. Duration : 5 days.

4. Location : Regional Training Institute, Shillong.

5. Programme Background: The training programme on “MS Excel” is being conducted based on projected training requirements of User Offices of RTI, Shillong.

6. Learning Objectives: The course will familiarize participants with concept of electronic workbook and help the participants to learn how to use a popular workbook programme for departmental applications.

7. Programme Content and Structure:

- Start MS Excel and identify the various parts of workbook. Window and Excel window.
- Distinguish between workbook and worksheet.
- Enter values and labels, edit and format them.
- Working with series, working with range.
- Apply formula & Functions and Link different Sheets.
- Goal seek, advance features including auditing, Protect and unprotect worksheet data.
- Use validating rules while entering data.
- Create and Save Graph.

8. Methodology: Lectures, Presentations, Interactive sessions, Practical Exercises and feedback through course end test.

9. Target Participants: Group 'B' and 'C' officers/officials of the user offices of the RTI, Shillong.

10. Additional Information:

Faculty: The faculty will draw from resource pool comprising of Group 'A' Group 'B' and Group 'C' officers and officials from the IA&AD.

Feedback on previous Course: The course was rated 3.9 on a scale of 1 to 5 by the participants.

- 1. Course Title** : **Audit in IT Environment (Hqrs Course).**
- 2. Date** : 08.07.2019 to 12.07.2019.
: 16.09.2019 to 20.09.2019
- 3. Duration** : 5 days (each).
- 4. Location** : Regional Training Institute, Shillong.
- 5. Programme Background:** Proposed by Headquarters Office and accepted by the RAC Shillong.
- 6. Learning Objectives:** The course will enable the participants to define IT Audit and its IT Controls and apply in field IT Audit.
- 7. Programme Content and Structure:**
 - Ice Breaking Session. Entry Knowledge Test. Understanding IT Environment Challenges and opportunities.
 - Importance of Controls with specific reference to Application Controls.
 - Introduction to CAATs – IDEA and Excel.
 - Excel as data Analytic tool – Features of Excel.
 - Conditional Formatting.
 - Filter including advance filter.
 - Pivot Table.
 - Hands on session.
 - Excel Functions – User defined functions.
 - Numeric, Text.
 - Conditional, Date and Time.

- Financial Aggregation.
- Creating Projects – Managed and External, Import of Data from diverse format – Excel, Access, CSV, Text; understanding data using the field statistics, checking validity of data through control totals, creating current documentation of task performed using the history property, projects overview.
- Importance of PDF/PRN Data, Importing data using ODBC, indexing of data-quick index, composite index, sorting data.
- Field manipulation in IDEA – Append, remove, modify columns – Data types – Virtual, non-virtual, editable, Enabling/Disabling, deletion of non virtual fields, Analysis.
- Basic Data analysis in IDEA – Duplicate Key Detection, Exclusion, Gap Detection.
- Summarization.
- Data extraction – Direct extraction, Key value extraction, top/bottom Record extraction, Indexed Extraction.
- Working with multiple databases – join, visual connector, append, compare.
- Commonly used @ functions in IDEA, introduction to # functions.
- Stratification of data, ageing analysis, sampling.
- Exporting data from IDEA to other formats, Creating and printing reports in IDEA.
- Revision & Queries, Hands on sessions.
- Case Study – Selection of vouchers.
- Way Forward – Overview of Qlikview.
- Way Forward – Overview of Tableau.

8. Methodology: Lectures, Presentations, Interactive sessions, Practical Exercises, Case studies and feedback through course end test.

9. Target Participants: Group ‘B’ and ‘C’ officers/officials of the user offices of the RTI, Shillong.

10. Additional Information:

Faculty: The faculty will be drawn from resource pool comprising of Group ‘A’ Group ‘B’ and Group ‘C’ officers/official from the IA&AD.

Feedback on previous Course: The course was rated 4.5 on a scale of 1 to 5 by the participants.

- 1. Course Title** : **Trouble Shooting (Hardware and Software).**
- 2. Date** : 22.07.2019 to 26.07.2019
- 3. Duration** : 5 days.
- 4. Location** : Regional Training Institute, Shillong.
- 5. Programme Background:** The training programme on “Trouble Shooting (Hardware and Software)” is being conducted based on projected training requirements of User Offices of RTI, Shillong.
- 6. Learning Objectives:** The course will enable the participants to troubleshoot Hardware and Software problem for departmental use.
- 7. Programme Content and Structure:**
 - Start off troubleshooting tips. Hardware troubleshooting tips, Software troubleshooting tips. Repartitioning, reformatting and reinstallation of OS (Windows).
 - Installation of dual OS (windows and Linux in on single PC) Installation of Application software.
 - Practice on reformatting, repartitioning and Installation of OS and Application Software.
 - Error Checking, Defragmentation, Backup/Restore, Add remove Program, Disk clean up, Restoring windows, Installation of Modem and Printer.
 - Network related issue: Setting up of LAN, Configuring of LAN, Sharing of printer and other resources on a LAN, Sharing of Internet connection.
- 8. Methodology:** Lectures, Presentations, Interactive sessions Practice and feedback through course end test.
- 9. Target Participants:** Group ‘B’ and ‘C’ officers/officials of the user offices of the RTI, Shillong.
- 10. Additional Information:**

Faculty: The faculty will be drawn from resource pool comprising of Educational Institutions, NIC, HCL an Group 'A' & Group 'B' officers from the IA&AD both in service and retired.

Feedback on previous Course: The course was rated 3.9 on a scale of 1 to 5 by the participants.

1. **Course Title** : **Oracle-SQL**
2. **Date** : 05.08.2019 to 09.08.2019.
3. **Duration** : 05 days.
4. **Location** : Regional Training Institute, Shillong.
5. **Programme Background:** The training programme on "Oracle SQL is being conducted based on projected training requirements of User Offices of RTI, Shillong.
6. **Learning Objectives:** The course will enable the participants to query Oracle database effectively for departmental use.
7. **Programme Content and Structure:**
 - Introduction to Oracle. Overview of Oracle server and its various object types.
 - What is SQL, Role of Sql, Type of Sql commands, Logging in & logging out into Oracle Server.
 - Writing SQL statement, Executing SQL statement, Comparison of SQL & SQL* plus, some important editing and file SQL plus commands.
 - Data Type in Oracle Basic select statement. Different parts of the select statement. Using column aliases, Arithmetic operators, Concatenation operator, order by clause distinct, comparison.
 - operators(<=, !=, in, like, between, is null) and logical operator (and, or, not), Character & Date string. Updating and deleting records. Practical Exercises.
 - Single row functions: character, Numeric, date functions, Conversion function including date format and date arithmetic. NVL and DECODE functions. Using aggregate functions, Group by and having clause. Practical Exercises.
 - What is join? Different types; Equi join Non-Equi Join and outer join. Using group by and having clause with Join. Sub-queries returned single value &

multiple values; Using group by and having clause with the sub-queries.
Exercise.

- Create table, Create table with constraints, Adding Records. Viewing tables from data dictionary. Practical Exercises.
- Altering table structure, Altering constraints & viewing constraints from data dictionary. Indexing, views, sequence and synonyms. Viewing from data dictionary. Practical Exercises.
- Introduction to PL/SQL Structure of PL/SQL. Identifiers — Variables, Constants, Reserved words, Literals, Declaration using %TYPE & %ROWTYPE attributes. Data Types, Expressions & Comparison, Comments, Labels.
- If condition and dbms output. Writing simple program. Practical Exercises.
- Working with various Loops; while loop, for loop etc. Practical Exercises.
- Working with cursor and exception handling. Writing simple Trigger. Exercise.

8. Methodology: Lectures, Presentations, Interactive sessions Practical Exercises and feedback through course end test.

9. Target Participants: Group ‘B’ and ‘C’ officers/officials of the user offices of the RTI, Shillong.

10. Additional Information:

Faculty: The faculty will be drawn from resource pool comprising of Group ‘A’ and Group ‘B’ officers from the IA&AD.

Feedback on previous Course: The course was rated 3.75 on a scale of 1 to 5 by the participants.

- 1. Course Title** : **IT Audit (Basic).**
- 2. Date** : 21.10.2019 to 25.10.2019
- 3. Duration** : 5 days.
- 4. Location** : Regional Training Institute, Shillong.

- 5. Programme Background:** Proposed by Headquarters office and accepted by the RAC Shillong the Training Programme is being conducted based on project training requirements of users offices of RTI, Shillong.
- 6. Learning Objectives:** The course will enable the participants to define IT Audit and its IT Controls and apply in field IT Audit.
- 7. Programme Content and Structure:**
- **IT Awareness.** DEFINITION of Information, difference between data and information, Physical concepts-storage, retrieval and processing of data, comparison of manual and computer storage.
 - What is a computer, its components, layout and it's functions. Characteristics of computers. What is hardware, Different types of units including peripherals? What is software, why it is needed, categories of software system and applications software?
 - Data communication and Networks.
 - **Definition of IT Audit:** Objectives of IT Audit, Mandate for IT Audit, Steps in IT Audit, IT Audit Process-Planning.
 - Preliminary assessment and information gathering – understanding the organization, its environment, structure and Criticality of systems, nature of hardware and software.
 - **Definition of IT Controls:** Controls in IT Environment.
 - **General IT Controls:** (i) Organizational and Management controls, (ii) IT Operational Controls. (iii) IT Physical and Logical Access Controls (iv) IT Acquisition Controls, Programme Change Controls, Business Continuity and Disaster Recovery Controls.
 - **Audit of Application Controls:** - Input Controls Processing Controls, Output Controls, Master/Standing Data File Controls.
 - Network and Internet Controls, End User Computing Controls.
- 8. Methodology:** Lectures, Presentations, Interactive sessions and feedback through course end test.

9. Target Participants: Group ‘B’ and ‘C’ officers/officials of the user offices of the RTI, Shillong. This course is primarily for participants who would be utilized for IT Audit in field offices.

10. Additional Information:

Faculty: The faculty will be drawn from resource pool comprising of Group ‘A’ and Group ‘B’ officers from the IA&AD.

Feedback on previous Course: The course was rated 4.58 on a scale of 1 to 5 by the participants.

- 1. Course Title : IDEA**
- 2. Date : 04.11.2019 to 08.11.2019.**
- 3. Duration : 5 days.**
- 4. Location : Regional Training Institute, Shillong.**
- 5. Programme Background:** The training programme on “IDEA” is being conducted based on projected training requirements of User Offices of RTI, Shillong.
- 6. Learning Objectives:** The course will enable the participants to use IDEA for extracting data and analyzing data of Auditee organizations.
- 7. Programme Content and Structure:**
 - Basics of Data Structures. IDEA: An Overview.
 - Getting started: Record Extraction, Field Summarization, and Field Stratification. Essentials of Data Downloading.
 - Practical Exercises.
 - Use of IDEA features followed by Exercise to practice analysis function for checking duplicates, indexing, summarizing and checking field statistics.
 - Practical Exercises.
 - Exercise related with downloading of MS Access database file, creating of virtual fields, duplicate records detection and record extraction.
 - Practical Exercises.
 - Using @ functions in IDEA. Use of IDEA features followed by Exercise to practice IDEA features useful in conduct of financial audit.
 - Practical Exercises.

8. Methodology: Lectures, Presentations, Interactive sessions Practical Exercises and feedback through course end test.

9. Target Participants: Group 'B' and 'C' officers/officials of the user offices of the RTI, Shillong.

10. Additional Information:

Faculty: The faculty will be drawn from resource pool comprising of Group 'A' and Group 'B' officers from the IA&AD.

Feedback on previous Course: The course was rated 4.65 on a scale of 1 to 5 by the participants.

1. Course Title : Computer Networking.

2. Date : 18.11.2019 to 22.11.2019

3. Duration : 5 days.

4. Location : Regional Training Institute, Shillong.

5. Programme Background: The training programme on "Computer Networking" is being conducted based on projected training requirements of User Offices of RTI, Shillong.

6. Learning Objectives: The course will enable the participants to define types of Computer Networking, its topologies, protocols, OSI, TCI/IP, DNS.

7. Programme Content and Structure:

- Basic Networking Concepts. Introduction to Network, Data Transmission in a network, Transmission Modes & Speeds, Transmission Medium, Communication processors Network Topologies Protocols and Standards OSI Reference Model.
- Concepts of LAN. Advantages and Disadvantages of LAN. Types of LAN. Different Topologies used in LAN.
- WAN Internetworking technologies. WAN Utilization. WAN connections.
- Data Communication. Switching, Hubs, Routers, Bridges.
- Planning a TCP/IP Network. Using Public and Private Addresses. IP Addresses and Subnet Mask. Understanding IP Address Classes.
- Planning a Name Resolution Strategy. DNS and NetBIOS. Understanding Domains. Understanding FQDN Notation.

- Sharing files, printers and other resources using Windows.
- Different OS in Network, Networking connection Types, Configure a DIAL-UP & Local Area connection in Windows File Systems.
- Sharing files, printers and other resources, Passwords and Security.

8. Methodology: Lectures, Presentations Interactive sessions and feedback through course end test.

9. Target Participants: Group ‘B’ and ‘C’ officers/officials of the user offices of the RTI, Shillong.

10. Additional Information:

Faculty : The faculty will be drawn from resource pool comprising of Educational Institutions, NIC, HCL and Group ‘A’ & Group ‘B’ officers from the IA&AD both in service and retired.

Feedback on previous Course: This course was rated 4.8 on a scale of 1 to 5 by the participants.

- 1. Course Title : Big Data Analytic (Using Tableau and KNIME).**
- 2. Date : 09.12.2019 to 13.12.2019**
- 3. Duration : 5 days.**
- 4. Location : Regional Training Institute, Shillong.**
- 5. Programme Background:** The training programme on “Big Data Analytic (Using Tableau and KNIME)” is being conducted based on projected training requirements of User Offices of RTI, Shillong.
- 6. Learning Objectives:** The course will enable the participants to know the use of Tableau and KNIME software for analysis big data analytic.
- 7. Programme Content and Structure:**
 - Basic Concepts of Data Types of data string, Numeric data, types of analytics.
 - Descriptive Analytics; Statistical Approaches in Analytics: Central Tendencies (Mean, Median, Mode).
 - KNIME: A Broad overview; Build a basic workflow.
 - Data downloading sorting errors; property tax.

- Statistical Approaches in Analytics; Spread and shape of Distribution: Range, Skewness, Kurtosis, Standard Deviation, Variance, Interquartile range, Box plots.
- Exposure to and Application of Multivariate Statistical concepts: Correlation; Regression Analytics.
- Application of Statistical concepts in KNIME using property Tax data; Deriving insights from Property Tax data.
- Exercise/Case Study using KNIME: Defence Pension Case Study: Data import, Manipulation, Data Type conversion (Data Preparation), Treating Missing values, Statistical Analysis and deriving insights about the dataset.
- Tableau: Data Downloading; Database Connectivity; Manipulation; Visualization, Calculated fields; Filters; Hierarchy, Dashboards files Tableau Exercise/ Case Study: Analysing data, Deriving Insights; Identifying risk areas, building dashboards.

8. Methodology: Lectures, Presentations Interactive sessions and feedback through course end test.

9. Target Participants: Group 'B' and 'C' officers/officials of the user offices of the RTI, Shillong.

10. Additional Information:

Faculty : The faculty will be drawn from resource pool comprising of Educational Institutions, NIC, HCL and Group 'A' & Group 'B' officers from the IA&AD both in service and retired.

Feedback on previous Course: The course was rated 4.10 on a scale of 1 to 5 by the participants.

1. Course Title : Public Financial Management System (PFMS), use of iBEMS/ EIS/PFMS, Qlik View and other software used by Hqrs and field offices, system automated information for pension, Gazetted Entitlement Management system and Integrated financial management system

2. Date : 27.01.2020 to 31.01.2020.

: 09.03.2020 to 13.03.2020

3. Duration : 5 days.

4. Location : Regional Training Institute, Shillong.

5. Programme Background: The training programme on “Public Financial Management System (PFMS)” is being conducted based on projected training requirements of User Offices of RTI, Shillong.

6. The course schedule and other details are under preparation.

7. Methodology: Lectures, Presentations, Interactive sessions, Practical Exercises and feedback through course end test.

8. Target Participants: Group ‘B’ and ‘C’ officers/officials of the user offices of the RTI, Shillong.

9. Additional Information:

Faculty: The faculty will draw from resource pool comprising of Group ‘A’ Group ‘B’ and Group ‘C’ officers and officials from the IA&AD.

Feedback on previous Course: The course was rated 4.8 on a scale of 1 to 5 by the participants.

1. Course Title : **IT Audit (Advanced).**

2. Date : 10.02.2020 to 20.02.2020.

3. Duration : 10 days.

4. Location : Regional Training Institute, Shillong.

5. Programme Background: Proposed by Headquarters office and accepted by the RAC Shillong the training programme on “IT Audit (Advanced)” is being conducted based on projected training requirements of User Offices of RTI, Shillong.

6. Learning Objectives: The course will give participants more exposure to IT Audit, use of CAATs for data downloading and data analysis. The participants will be able to carry out IT Audit more effectively understanding the important business models, contracts, SLAs, e-Governance and IT Security.

7. Programme Content and Structure:

- **Definition of IT Audit**, Objectives of IT Audit, Mandate for IT Audit, Steps in IT Audit, IT Audit Process-Planning.
- Preliminary assessment and information gathering – understanding the organization, its environment, structure and Criticality of systems, nature of hardware and software.
- **Definition of IT Controls:** Controls in IT Environment.
- **General IT Controls:-** (i) Organizational and Management controls, (ii) IT Operational Controls. (iii) IT Physical and Logical Access Controls (iv) IT Acquisition Controls, Programme Change Controls, Business Continuity and Disaster Recovery Controls. **Case Studies.**
- **Audit of Application Controls:** - Input Controls Processing Controls, Output Controls, Master/Standing Data File Controls.
- Network and Internet Controls, End User Computing Controls. **Case Studies.**
- **IT Security** – Risk Assessment, Network Security, Access Controls, Confidentiality, Business Continuity. IT Act 2000.
- **E-Governance**-Definition, Objective of e-governance, Factor impacting e-governance projects, Challenges in Auditing e-governance.
- **System Development Methodology**- IT Project failures, feasibility study and project initiation, specification and procurement, design and development, testing and accepting, system implementation and post implementation review.
- Audit of developing systems – project management, risk management funding, deliverables.
- **Data Downloading**, Data storage, File formats, Flat files Relational Database Management systems, other forms Pre-requisite for Data Downloading.
- Import/Export file in MS-Excel and MS-Access.

- CAATS: Win IDEA. Starting Win Idea. Identifying the various components of Idea screen with NO files imported/open and with database open. Familiarizing with database window toolbar.
- Importing a MS-Excel file (Client master file), an ASCII fixed length file and dbf.
- CAATs – Win (IDEA) Importing report file and Client master file using ODBC.
- Practical Exercises.
- CAATs – Win (IDEA) Analyzing imported master file. File Stratification. Field summarization. Aging.
- What is data extraction? Simple Record extraction. Practical Exercises.
- More extraction, duplicate keys, gap detection, sort, index, field manipulation. Extraction using @ function. Practical Exercises.

8. Methodology: Lectures, Presentations, Interactive sessions, Practical Exercises, Case studies and feedback through course end test.

9. Target Participants: Group ‘B’ and ‘C’ officers/officials of the user offices of the RTI, Shillong (who has undertaken training on IT Audit (Basic)). This course is primarily for participants who would be utilized for IT Audit in field offices.

10. Additional Information:

Faculty: The faculty will be drawn from resource pool comprising of Group ‘A’ and Group ‘B’ officers from the IA&AD.

Feedback on previous Course: The course was rated 4.22 on a scale of 1 to 5 by the participants.

- 1. Course Title** : Use of VLC Software for Audit.
- 2. Date** : 03.02.2020to 07.02.2020.
- 3. Duration** : 5 days.
- 4. Location** : Regional Training Institute, Shillong.

5. Programme Background: The training programme on “Use of VLC Software for Audit” is being conducted based on projected training requirements of User Offices of RTI, Shillong.

6. Learning Objectives: The course will enable the participants to use Audit Module for audit purposes.

7. Programme Content and Structure:

- Overview of VLC Package. Master Module, Compilation Module, Treasury Module, Book1, Book2, Book3 Module, Works Module.
- Accounts current Module, Pension Compilation Module, Loan Compilation Module, Security Module, Miscellaneous Module, Audit Module.
- Overview of VLC Package Continue. Source of VLC data. Categorization of vouchers in VLC package.
- Different DDO’s. Various Classifications of vouchers.
- Audit Module. Use of Voucher Query Screen (Demonstration and Practical use). Navigate to voucher for details query. Navigate to Forest for details query. Navigate to Works for details.
- Various Audit Module Reports. Criterion Based Account Consolidation Report (Receipt) & (Payment). Voucher listing based on Exception Condition. Stratified voucher sampling. Profile on Schemes and Project expenditure (Scheme-wise).
- Profile of Schemes and Project Expenditure (Grant –wise). Categorization of Expenditure under Estt/Non-Estt. Scheme wise work reports.
- Querying VLC data using Oracle SQL command.

8. Methodology: Lectures, Presentations, Interactive sessions Practical Exercises and feedback through course end test.

9. Target Participants: Group ‘B’ and ‘C’ officers/officials of the user offices of the RTI, Shillong.

10. Additional Information:

Faculty: The faculty will be drawn from resource pool comprising of Group ‘A’, Group ‘B’ and Group ‘C’ officers/officials from the IA&AD.

Feedback on previous Course: The course was rated 4.5 on a scale of 1 to 5 by the participants.
