

**Course No. : IS-01(A)**

**Course Title/Name :** Annual Audit and Assignment Level Planning in OIOS

**Period :** Two days

**Mode :** Offline

**Target Group :** Planning wing, Group officers

**Learning Objective :** To create Audit plans, Assignments and Audit programs in OIOS

**Prior Reading :** OIOS SoPs and other existing instructions

**Recommended Faculty:** OIOS Resource Persons and Sr.AOs/AAOs having experience in working with OIOS

<i>Day/Date</i>	<b>Session I</b> Session Time (hh:mm to hh:mm)	<b>Session II</b> Session Time (hh:mm to hh:mm)	<b>Session III</b> Session Time (hh:mm to hh:mm)	<b>Session IV</b> Session Time (hh:mm to hh:mm)
<b>Day I</b> dd/mm/yyyy	<b>Workflow in OIOS</b> <ul style="list-style-type: none"> <li>• Discussion on the workflow from audit plan to creation of audit report in OIOS</li> <li>• Discussion on Roles and privileges; Auditee universe</li> </ul>	<b>Creation of Annual and Assignment Level audit plans</b> <ul style="list-style-type: none"> <li>• Creation of audit plan, Assignments, Audit period, assigning tasks to officials for creating ADMs, sampling tasks and mapping entities</li> </ul>	<b>Auditee universe and Mapping entities, Audit teams</b> <ul style="list-style-type: none"> <li>• Creating and updating an entity- data entry from front end and through bulk upload</li> <li>• Audit jurisdiction</li> <li>• Mapping entities to an Assignment</li> <li>• Mapping an entity out of jurisdiction to an Assignment</li> <li>• Creation of audit teams, inspecting officer and team members, team membership</li> </ul>	<b>Linking Assignments, ADMs, Data collection projects</b> <ul style="list-style-type: none"> <li>• Linking Assignment to lead office Assignment</li> <li>• Reasons for linking assignments</li> <li>• Cloning ADMs and linking to assignments</li> <li>• Linking data collection projects to assignments</li> </ul> <b>Hands on exercises:</b> Creating Assignments and Audit Teams

			period	
<b>Day II</b> <b>dd/mm/yyyy</b>	<b>Audit programs</b> <ul style="list-style-type: none"> <li>• Creating audit programs</li> <li>• Send for review/approval</li> <li>• handling deviation notes</li> </ul>	<b>Modifying Audit programs</b> <ul style="list-style-type: none"> <li>• Deferring audit programs, creating spells, cancelling audit programs- where Field visits have been initiated and not initiated</li> </ul>	<b>Dashboards, Closing, deferring, and cancelling assignments</b> <ul style="list-style-type: none"> <li>• Using Audit execution dashboards</li> <li>• Closing mapping of entities</li> <li>• Closing Audit assignments</li> <li>• Deferring Assignments</li> <li>• Adding deferred assignments to current audit plan</li> </ul>	<b>Hands on exercises and discussion on FAQs</b> <ul style="list-style-type: none"> <li>• <b>Hands on exercise:</b> Creation of Audit program and updating them based on various scenarios</li> <li>• Discussing various scenarios faced by programming wing and handling them in OIOS</li> </ul>

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Course No. : IS-01(B)**

**Course Title/Name :** Field visits in OIOS

**Period :** Three days

**Mode :** Offline

**Target Group :** Field parties/ Vetting sections/Group officers

**Learning Objective :** To learn to perform activities in an audit

**Prior Reading :** OIOS SoPs and other existing instructions

**Recommended Faculty:** OIOS Resource Persons and Sr.AOs/AAOs having experience in working with OIOS

<i>Day/Date</i>	<b>Session I</b> Session Time (hh:mm to hh:mm)	<b>Session II</b> Session Time (hh:mm to hh:mm)	<b>Session III</b> Session Time (hh:mm to hh:mm)	<b>Session IV</b> Session Time (hh:mm to hh:mm)
<b>Day I</b> dd/mm/yyyy	<b>Workflow of a Field visit</b> <ul style="list-style-type: none"> <li>• Overview of Audit planning, audit programs</li> <li>• Roles and privileges</li> <li>• FAQs on Audit programs</li> <li>• Initiating a Field visit</li> <li>• Difference between Field visit case and On-field case</li> </ul>	<b>Issuing Requisitions, Enquiries</b> <ul style="list-style-type: none"> <li>• Creating requisitions</li> <li>• List of records</li> <li>• Adding annexures to requisitions</li> <li>• Issuing requisitions</li> <li>• Dispatch process</li> <li>• Updating requisitions with quality of records and date of receipt.</li> <li>• Creating enquiries, sending enquiry for review, approval</li> <li>• Updating enquiries by the reviewer/approver</li> </ul>	<b>Issuing Observations</b> <ul style="list-style-type: none"> <li>• Create and issue Observations</li> <li>• Create sub- paras within an observation</li> <li>• Upload Key Documents</li> <li>• Mark Annexures for dispatch</li> <li>• Send for approval, approve, and reject observations</li> <li>• Issue observations</li> <li>• Update Observation</li> <li>• Link Key documents in Regular window and</li> </ul>	<b>Practice sessions</b> <ul style="list-style-type: none"> <li>• Hands on sessions</li> <li>• Create and issue a requisition, an enquiry</li> <li>• Create a few observations, add Key documents(KDs) and mark KDs</li> </ul>

		<ul style="list-style-type: none"> <li>Track Noting history</li> <li>Description History</li> </ul>	<ul style="list-style-type: none"> <li>split window</li> <li>Convert Enquiry to Observation</li> <li>Drop Observation</li> </ul>	
<b>Day II</b> dd/mm/yyyy	<b>Mobile app, KMS and AIS</b> <ul style="list-style-type: none"> <li>Installing and using mobile app for scanning documents</li> <li>Accessing KMS and AIS and marking KDs uploaded in KMS/AIS</li> </ul>	<b>Sending Reminders; Processing receipts</b> <ul style="list-style-type: none"> <li>Create additional dispatch</li> <li>Sending communication to employees within IAAD (search and add employee)</li> <li>Creating receipts</li> <li>Forwarding replies to email listener to create receipts</li> </ul>	<b>ADMs, Sampling and Toolkits</b> <ul style="list-style-type: none"> <li>Create ADMs and send for review/approval</li> <li>Complete ADMs in Field visits.</li> <li>Create Sampling task and send for review/approval.</li> <li>Brief discussion on Toolkits; Accessing Toolkits in Field visits for entering data and editing data</li> </ul>	<b>Practice sessions</b> <ul style="list-style-type: none"> <li>Create receipts by adding manually and through listener</li> <li>Filling an ADM</li> </ul>
<b>Day III</b> dd/mm/yyyy	<b>Allocate tasks; Items for verification; Deviation in audit program</b> <ul style="list-style-type: none"> <li>Allocate tasks</li> <li>Update tasks allocated</li> <li>Complete items for verification</li> <li>Initiate deviation note</li> </ul>	<b>Verification of observations pending for closure, Generate Draft IR and submit for QA/QC</b> <ul style="list-style-type: none"> <li>Verification report of pending observations</li> <li>Part-I, Part IV and Part V of Compliance</li> </ul>	<b>Performance audits and Financial audits</b> <ul style="list-style-type: none"> <li>Working on Performance Audits; Linking assignments to lead offices' assignments</li> <li>Cloning ADMs and linking to assignments</li> <li>Cloning</li> </ul>	<b>Recap and discussion on Field visits</b> <ul style="list-style-type: none"> <li>Discussion on spells, cancellation, and postponement of audit programs</li> <li>Using KMS, issues likely to be faced by</li> </ul>

	<p>and watch its approval</p> <ul style="list-style-type: none"> <li>• Accepting cancellation of audit program</li> </ul>	<p>Audit report</p> <ul style="list-style-type: none"> <li>• Generate IR; Auto-fitting tables</li> <li>• Generate Discussion Note, Title sheet and Contribution report;</li> <li>• Using Attachment Info</li> <li>• Closing Field visits</li> <li>• Submission for QA/QC</li> </ul>	<p>toolkits</p> <ul style="list-style-type: none"> <li>• Linking data collection projects to Assignments</li> <li>• Generating Aide memoire</li> </ul>	<p>field parties and how to handle them</p> <ul style="list-style-type: none"> <li>• Suggestions in improving field visits</li> </ul>
--	---	---	--	---

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Course No. : IS-01(C)**

- Course Title/Name** : QA/QC and Processing of Audit products in OIOS
- Period** : Two days
- Mode** : Offline
- Target Group** : QA/QC wing, DP cell, Reports cell, Group officers
- Learning Objective** : To learn QA/QC, create and process Audit products in OIOS
- Prior Reading** : OIOS SoPs and other existing instructions
- Recommended Faculty:** OIOS Resource Persons and Sr.AOs/AAOs having experience in working with OIOS

<b>Day/Date</b>	<b>Session I Session Time (hh:mm to hh:mm)</b>	<b>Session II Session Time (hh:mm to hh:mm)</b>	<b>Session III Session Time (hh:mm to hh:mm)</b>	<b>Session IV Session Time (hh:mm to hh:mm)</b>
<b>Day I dd/mm/yyyy</b>	<p><b>Overview of Audit workflow</b></p> <ul style="list-style-type: none"> <li>• Overview of workflow from Audit planning to Audit products</li> <li>• Installing enterprise connect plugins and Registry keys</li> </ul>	<p><b>Performing QA/QC</b></p> <ul style="list-style-type: none"> <li>• Verification of Draft IR generated, other documents in Attachment Info</li> <li>• Vetting the observations</li> <li>• Filling necessary details like financial impact, classification, changing QA/QC status, merge observations, drop observations, add and approve/reject observations</li> </ul>	<p><b>Key documents</b></p> <ul style="list-style-type: none"> <li>• Adding Key documents to observations and KMS</li> <li>• Marking Key documents in split window view</li> <li>• Review All feature; Jump to an observation; Mark observations for review</li> </ul>	<p><b>Creation of IR/draft SAR; Hands-on sessions</b></p> <ul style="list-style-type: none"> <li>• Submit QA/QC for approval.</li> <li>• Creation and issue of IR/draft SAR after approval.</li> <li>• <b>Hands on sessions:</b> QA/QC of FVs submitted for approval Issue of IR/DSAR</li> </ul>

		<p>during QA/QC, marking PDPs.</p> <ul style="list-style-type: none"> <li>• Send to field for necessary inputs, Send for review/ approval</li> </ul>		
<p><b>Day II</b> <b>dd/mm/yyyy</b></p>	<p><b>Preparation for creation of Audit products in OIOS</b></p> <ul style="list-style-type: none"> <li>• Discussion on Audit products -OIOS and non-OIOS; local and approved by HQ; Roles and privileges;</li> <li>• Understanding KMS; Creating folders and sub-folders in KMS and assigning rights to them by KMS managers;</li> <li>• Creating the Audit product word document and Annexures with KDs linked to the documents.</li> </ul>	<p><b>Creation to issue of Audit products</b></p> <ul style="list-style-type: none"> <li>• Creation of SoFs, DPs, PA to auditee, PA to HQ</li> <li>• Creation of IRs where GO has chosen 'No' to Audit product but IR is required</li> <li>• Consolidated IRs and Integrated SoFs</li> <li>• Difference between edit documents and Add version. Noting history, Document version history</li> </ul>	<p><b>Follow up of IRs and Audit products</b></p> <ul style="list-style-type: none"> <li>• Creating receipts ; linking entities to receipts, creating Follow up tasks for taking decisions on replies received and status of observations</li> </ul>	<p><b>Communication between various wings; Creation of Audit products for Financial audits, Hands on session</b></p> <ul style="list-style-type: none"> <li>• Communicatin g PDPs, SoFs between QA/QC, DP and Reports wings</li> <li>• Creation of SARs, Provisional comments, Draft comments, Management letter</li> <li>• <b>Hands on session –</b></li> </ul> <p>Create a SoF, DP to auditee and DP to HQ.</p>

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Course No. : IS-01(D)**

**Course Title/Name :** Use of Toolkits in OIOS

**Period :** Two days

**Mode :** Offline

**Target Group :** PA parties; Data Analytics cell/IT cell, officials who would be entrusted with the task of creating toolkits

**Learning Objective :** To learn to create and publish toolkits

**Prior Reading :** OIOS SoPs and other existing instructions

**Recommended Faculty:** OIOS Resource Persons and Sr.AOs/AAOs having experience in working with OIOS

<i>Day/Date</i>	<b>Session I</b> Session Time (hh:mm to hh:mm)	<b>Session II</b> Session Time (hh:mm to hh:mm)	<b>Session III</b> Session Time (hh:mm to hh:mm)	<b>Session IV</b> Session Time (hh:mm to hh:mm)
<b>Day I</b> dd/mm/yyyy	<p><b>Overview of workflow of toolkits</b></p> <ul style="list-style-type: none"> <li>Advantages of using toolkits</li> <li>Key considerations for creating toolkits</li> <li>Concept of Data collection projects- Assignment driven and Adhoc</li> <li>Data collectors and Data project managers</li> <li>Workflow of toolkit- Creating toolkits and linking to Data collection projects</li> <li>Linking Data collection project to Assignments; Data collection links for Adhoc</li> </ul>	<p><b>Creating toolkits</b></p> <ul style="list-style-type: none"> <li>Understanding the data types; Constraints in Question names; Validation, Default values, Appearance etc</li> <li><b>Hands on session:</b> Creating a simple toolkit</li> </ul>	<p><b>Calculated expressions</b></p> <ul style="list-style-type: none"> <li>Creating calculated fields; important functions</li> </ul>	<p><b>Using CSV files in toolkits</b></p> <ul style="list-style-type: none"> <li>Using CSV files for single select, multiple select Questions</li> <li>Formats of CSV files</li> <li>Updating CSV files linked to a toolkit</li> <li><b>Hands on session</b></li> </ul> <p>Updating a toolkit to include single select and multi select Qs using CSV files, pull data utility to get data from a file.</p>



	projects			
<b>Day II</b> <b>dd/mm/yyyy</b>	<b>Groups and grid; Approving and publishing toolkits</b> <ul style="list-style-type: none"> <li>Using groups; Using grids to collect repeated data; Setting column width in groups and grids</li> <li>Approving and publishing toolkits</li> </ul>	<b>Team exercises-</b> <ul style="list-style-type: none"> <li>Discussion of scenarios for the team exercises; Creation of toolkits by the teams</li> </ul>	<b>Team exercises</b> <ul style="list-style-type: none"> <li>Creation of toolkits by the teams</li> </ul>	<b>Presentation by teams</b> <ul style="list-style-type: none"> <li>Presentation of toolkits by teams</li> <li>Discussion by teams on best designs and issues faced during creation of toolkits</li> </ul>

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Course No. : IS-02**

**Course Title/Name :** IT Audit

**Period :** Five Days

**Mode :** Offline

**Target Group :** Sr. Auditor/AOs/SR. AOs (likely to be posted for field duties)

**Learning Objective :**

1. Understand the concept of IT Audit including objectives, scope, and their role in risk management and IT governance.
2. Plan and execute IT audits, defining methodologies and assessing IT system requirements and infrastructures.
3. Understanding various aspects of IT audit, including IT system needs, acquisition, development, security controls, data analytics, change management, and IT audit reporting.
4. Apply best practices for conducting IT audits through comprehensive case studies.

**Prior Reading :** C&AG’s IT Audit Manual

- <https://cag.gov.in/uploads/media/ITAM-Vol-I-20210331113105-06464897882fc09-89548148.pdf>

**Recommended Faculty:** Internal Faculty – Sr.AOs and Group Officers having IT Audit experience and External – Chartered Accountants

<i>Day/Date</i>	<b>Session I Session Time (hh:mm to hh:mm)</b>	<b>Session II Session Time (hh:mm to hh:mm)</b>	<b>Session III Session Time (hh:mm to hh:mm)</b>	<b>Session IV Session Time (hh:mm to hh:mm)</b>
<b>Day I dd/mm/ YYYY</b>	<b>Need of IT Systems</b> <ul style="list-style-type: none"> <li>• Need for Conducting IT Audits</li> <li>• Identifying the need for IT systems in organizations</li> <li>• Conducting a feasibility study and cost-benefit</li> </ul>	<b>Overview of IT Audit_</b> <ul style="list-style-type: none"> <li>• Definition, main audit objective and scope of IT Audit</li> <li>• Understanding the IT System and its function and processes</li> <li>• Understanding the IT</li> </ul>	<b>IT Audit Planning</b> <ul style="list-style-type: none"> <li>• Audit Preparation and Planning –</li> <li>• Review and analysis of Business Process Document/SRS/other documents related to the design and implementation</li> </ul>	<b>IT Audit Planning</b> <ul style="list-style-type: none"> <li>• <b>Defining Audit methodology</b> – access to UAT environment, writing queries in English, taking the help of Auditee to convert English queries into data executable query and</li> </ul>

	<p>analysis</p> <ul style="list-style-type: none"> <li>Assessing the current IT infrastructure and gaps</li> <li>Documenting the IT system requirements</li> </ul>	<p>System and its modules, interfaces, etc.</p> <ul style="list-style-type: none"> <li>Walkthrough of an IT System through PPT</li> <li>Role of IT Audit in overall risk management</li> <li>IT Governance and Strategy</li> <li>Relevant Standards, Policies, and frameworks for IT Audit</li> </ul>	<p>of the IT System</p> <ul style="list-style-type: none"> <li>Defining Audit Scope and Audit Objectives <b>(Please See Annex A for guidance)</b></li> </ul>	<p>Data Extraction, validating business processes mapped into the system for their correctness and completeness, checking interface aspects for data mismatch/gaps in the data transfer, reconciliation mechanism between the IT systems, etc.</p>
<p><b>Day II</b> dd/mm/YYYY</p>	<p><b>Acquisition, development, and implementation of IT System</b></p> <ul style="list-style-type: none"> <li>Project Governance and Management</li> <li>Procurement of Hardware</li> <li>Procurement and/or Development of Software</li> <li>Finalizing User Requirements Specification (URS)/ Business Requirements Specification (BRS) and whether the same meets the needs of the organisation.</li> <li>Vendor assessment and selection criteria</li> <li>Procurement process and contract management</li> <li>Ensuring compliance with organizational policies and standards</li> <li>Auditing the procurement process</li> <li>Software Requirements Specification (SRS) and its components and whether it correctly maps the URS/BRS</li> </ul>		<p><b>Acquisition, development, and implementation of IT System</b></p> <ul style="list-style-type: none"> <li>Exploring different Software Development Life Cycle (SDLC) models and their applications and its adequacy to support the organisation's system requirement.</li> <li>Auditing the SDLC process (during various phases of SDLC post implementation) for adherence to best practices</li> </ul>	<p><b>Acquisition, development, and implementation of IT System</b></p> <ul style="list-style-type: none"> <li>A Case study on IT System (example- GSTN, CBIC application etc) OIOS - OIOS IA&amp;ADs IT Initiative</li> </ul>
<p><b>Day III</b> dd/mm/YYYY</p>	<p><b>Audit of Security and IT control Aspects of Hardware and Software</b></p>	<p><b>Audit of Security and IT control Aspects of Hardware and Software and Best</b></p>	<p><b>Use of various Data Analytics tools for testing the Systems in IT Audit</b></p> <ul style="list-style-type: none"> <li>Importance of data analytics in IT Audits</li> </ul>	

	<p><b>and Best Practices</b></p> <ul style="list-style-type: none"> <li>Identifying hardware and software vulnerabilities</li> <li>Assessing security controls and measures</li> </ul>	<p><b>Practices</b></p> <ul style="list-style-type: none"> <li>Defining IT General Controls, physical controls and Application Controls including managing user access and privileges</li> <li>Evaluating control effectiveness and efficiency through Audit Checklist including unauthorised login if any.</li> <li>Best practices for IT control implementation.</li> </ul>	<ul style="list-style-type: none"> <li>Use of different tools for IT Auditing like IDEA, SQL, Excel, Data Queries,</li> <li>Techniques for data extraction and analysis</li> <li>Using data analytics to identify anomalies and trends.</li> <li>Testing in UAT environment</li> </ul>	
<p><b>Day IV</b> dd/mm/y YYY</p>	<p><b>Rolling Out of IT Systems and quality assurance in IT projects</b></p> <ul style="list-style-type: none"> <li>Strategies for system rollout and monitoring the system implementation process.</li> <li>System Migration and Infrastructure Deployment</li> <li>Types of testing and their purposes</li> <li>Test planning, execution, and documentation</li> </ul>	<p><b>Rolling Out of IT Systems and quality assurance in IT projects</b></p> <ul style="list-style-type: none"> <li>Interface testing</li> <li>IT Audit considerations for system rollout like Systems as envisaged in URS and SRS, Testing and audit of IT application by the Accredited Agency before and after roll-out (Like STQC) and implementation of their recommendation, User Acceptance Testing etc. Use</li> </ul>	<p><b>IT Change Management</b></p> <ul style="list-style-type: none"> <li>Auditing existence, adequacy, and effectiveness of implementation of change control procedures.</li> </ul>	<p><b>Business Continuity Planning (BCP) and Disaster Recovery Planning (DRP)</b></p> <ul style="list-style-type: none"> <li>Importance of a documented BCP and DRP</li> <li>Identifying critical business processes and IT dependencies</li> <li>Testing for adequacy and effective functioning of BCP/DRP plans using IT Audit Checklist</li> </ul>

	<ul style="list-style-type: none"> <li>• Testing and Quality Assurance process for various components /modules of IT Systems and adequacy and effectiveness of its interfaces with other IT Systems within the organization and external IT Systems as envisaged in URS/SRS.</li> </ul>	<ul style="list-style-type: none"> <li>• Post-implementation review and auditing</li> </ul>		
<b>Day V</b> <b>dd/mm/y</b> <b>yyy</b>	<b>IT Audit Reporting and Communication</b> <ul style="list-style-type: none"> <li>• Communicating audit findings to the Auditee i.e. AR/AE/AO</li> <li>• Preparation of Audit reports</li> <li>• Data visualization for effective reporting</li> <li>• Following up of Audit Findings</li> </ul>	<b>Emerging Trends and Challenges in IT Audit</b> <ul style="list-style-type: none"> <li>• AI and automation in IT Audits</li> <li>• Cybersecurity and IT Audit implications</li> <li>• Privacy, data security and data protection considerations</li> </ul>	<b>Case Study - Comprehensive IT Audit</b> <ul style="list-style-type: none"> <li>• Discussion on IT Audit concepts with a real-world case study (like IT Audit of GSTN/Income Tax Business Application/iCES Custom Application/CBIC Application/ any other available case study)</li> <li>• Recap of key concepts and topics through case study</li> </ul>	<b>End Course Assessment and Evaluation</b>

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

-

**Exposure to audit Scope should include the following aspects:**

- IT Governance - IT organization and management (IT Steering Committee etc.), auditing procurement of hardware, Software and related systems including contract/service management contracts and issues related to Change management.
- Mapping of business processes governing the relevant functions and SLA/contracts with with SRS and IT Application to check whether IT application was developed and is being run as envisaged.
- Interface of GST IT Application with other IT applications
- IT Security- Issues concerning software integrity, operating system risks and controls, privileged access, activity logging, vendor patch management, database management risks and controls, Logical Access Controls, Physical and environment controls, Application controls, network perimeter controls and Business Continuity and Disaster Recovery Plan

**Exposure to aspects of Audit Objectives could be to assess whether:**

- IT governance and IT security is adequate and effective.
- The IT Application have been developed as envisaged and the intended benefits have been achieved.
- It has effective interfaces with other IT Applications as envisaged.

**Mapping of Scope of Audit and Audit Objectives – GST CBIC Application IT Audit**

- Mapping GST Acts/Rules and business processes to the application – There are 11 modules in the application at various stages of development as mentioned in the Annexure. We intend to cover all these modules in the current audit. If any module has not been completed/partially built, we will look into the adherence of timeline aspect of such modules.
- Interface of ICES with other IT applications- The application has interface with other IT applications like GSTN portal, ICES, Accounting authorities etc. We will look into the effectiveness of these interfaces and whether they are meeting the business requirements adequately. We will also cover aspects like data mismatch/gaps in the data transfer, reconciliation mechanism between the IT systems, scope for better interface also in this objective.

- Acquisition and Procurement – We will review the acquisition process covering aspects of deficiencies in RFP, technical evaluation process, strategy to prevent vendor lock-in and provision for exit management of vendor in contract.
- IT Governance and Management - Here we will look into the IT Governance structure and the role/working of Boards/Committees responsible for supervising the Management of this project.
- Compliance of SLA parameters- The areas covered include whether SLAs were properly defined, how they are monitored, penalty (liquidated damages) provisions in case of non-compliance and role of Project Management Consultants if any.
- Change Management – The Change Management Process defined and its implementation in practice.
- IT controls and Security
  - ✓ i. Efficacy of the BCP and DR mechanism
  - ✓ ii. Security Incident Event Management
  - ✓ iii. Access Controls – The scope of audit will be to see whether there is a framework for Access Controls and the same has been included in the IT system. We don't intend to look whether Access Controls are implemented correctly, and Segregation of Duties is effectively implemented (through data analysis/other means) for departmental officers. However, being high risk area, we will look into the Access Roles of the Vendor and Privileged Users if any.
  - ✓ iv. The scope of other aspects of IS Security like Network Security, Cloud Security, Web Security, Security of hardware/software assets, data security etc., in this audit would be get an assurance whether adequate controls/mechanism exists in the organization to address such risks. This will be done through review of documents of the audits/review of the application by other agencies like STQC and implementation of STQC recommendations. However, we will not be doing any test/checks by ourselves to ensure this.

**Course No. : IS-03**

**Course Title/Name :** Auditing in IT Enabled Environment

**Period :** Five Days

**Mode :** Offline

**Target Group :** Sr. Auditors/AAOs/SR. AOs (likely to be posted for field duties)

**Learning Objective :**

1. Understanding concept of "Audit in Information Technology Enabled environment,"
2. Learning Audit Preparation and Planning in various audits (Compliance/SSCA/Performance Audit) while auditing in IT Environment.
3. Familiarize with computer-assisted audit tools like MS Excel and IDEA for data analytics and application of these tools in audit processes.
4. Exploring various stages of the audit process and IT applications with the help of case studies.

**Prior Reading :** Understanding the workflow of the ERP System of the Audited Organisations like PFMS, GSTN, ITBA, PSU's ERP System

**Recommended Faculty:** Internal Faculty – Sr.AOs and Group Officers experience of auditing in IT enabled environment and External – Chartered Accountants

<i>Day/Date</i>	<b>Session I Session Time (hh:mm to hh:mm)</b>	<b>Session II Session Time (hh:mm to hh:mm)</b>	<b>Session III Session Time (hh:mm to hh:mm)</b>	<b>Session IV Session Time (hh:mm to hh:mm)</b>
<b>Day I dd/mm/yyyy</b>	<b>Overview of “Audit in Information Technology environment”</b> Understanding and defining “Auditing in Information Technology Enabled environment” i.e. using IT platform of the auditee organization as well as CAG’s	<b>Overview of “Audit in Information Technology environment”</b> <ul style="list-style-type: none"> <li>• Digital Transformation across Governments and public sector entities:</li> <li>• Changed Role of auditors consequent upon use of IT in providing public</li> </ul>	<b>Understanding the IT environment of the Auditee</b> <ul style="list-style-type: none"> <li>• Understanding the IT System, its purpose, functions and processes, Structure and fields of IT application and its interfaces, data types/data structure/data</li> </ul>	<b>Understanding the IT environment of the Auditee</b> <ul style="list-style-type: none"> <li>• Understanding the arrangement for accessing front-end and back-end application for data extraction and substantive audit</li> <li>• A walk-through of GSTN</li> </ul>



	OIOS Platform for doing risk based annual Audit Planning and conducting all phases of individual audit assignments.	<p>services by govt entities</p> <ul style="list-style-type: none"> <li>Understanding the main aspects of ERP used by the auditee organizations.</li> <li>Shift from physical to electronic environment through Examples of IA&amp;AD's IT projects viz. OIOS, e-OFFICE, e-HRMS</li> </ul>	fields	Application in GST, PFMS, e-Lekha in civil accounts, IT platform/ERP of one of PSU may be exposed to audience etc.)
<b>Day II</b> dd/mm/yyyy	<p><b>Planning for the Audit</b></p> <ul style="list-style-type: none"> <li>Audit Preparation and Planning (Compliance/SSCA/Performance Audit)</li> <li>Desk review (information collection, exploring the entity's website, annual reports, DDGs, MIS reports available from public domains/PFMS, previous C&amp;AG's audit reports/Inspection Reports, Parliamentary questions, newspaper clippings etc</li> </ul>	<p><b>Planning for the Audit</b></p> <ul style="list-style-type: none"> <li>Defining Audit Scope</li> <li><b>Defining Audit methodology</b> - data driven risk assessment and risk Profiling from user database to establish risk criteria, sample size and sample selection for analysis and substantive audit</li> </ul>	<p><b>Planning for the Audit</b></p> <ul style="list-style-type: none"> <li>Formulation of Audit checks</li> <li>Writing queries in English, taking the help of Auditee to convert English queries into data executable query and Data Extraction</li> </ul>	<p><b>Planning for the Audit</b></p> <ul style="list-style-type: none"> <li>Ensuring authentication and correctness of data, data analysis, and conduct of substantive audit</li> </ul>
<b>Day III</b> dd/mm/yyyy	<p><b>Access to Database and data analysis/analytics</b></p> <p>Access to IT systems/data/ information/electronic/ records/documents Analysis of data</p> <p>Frame English/SQL queries—in accordance with Audit checks</p>		<p><b>Auditing in IT environment - Financial attest Audit &amp; Appropriation/Finance Accounts Audit</b></p>	<p><b>Auditing in IT environment - Financial attest Audit &amp; Appropriation/Finance Accounts Audit</b></p>

		<ul style="list-style-type: none"> <li>• Data mining to get the financial statements and its subsidiary ledgers</li> <li>• Use of VLC/PFMS etc. database for audit checks/generating queries</li> <li>• Cross verification of journal entries in ERP/Tally environment</li> <li>• Analysis of data/Audit checks</li> </ul>	<ul style="list-style-type: none"> <li>• Preparation of Audit queries/annotated statements with replies</li> <li>• Preparation of audit reports</li> <li>• Understanding Appropriation Accounts/Finance Accounts Audit</li> <li>• Case studies for using VLC/PFMS data or using IT platform of a PSU/Autonomous Body may be taken for certification audit.</li> </ul>
<p><b>Day IV</b> dd/mm/yyyy</p>	<p><b>Computer Assisted Audit Tools required for data analysis</b></p> <ul style="list-style-type: none"> <li>○ Data analysis options in MS Excel (Overview) <ul style="list-style-type: none"> <li>➤ Importing CSV files, xlsx files</li> <li>➤ Data cleansing and preparation</li> <li>➤ Sorting &amp; filtering</li> <li>➤ Data Validations checks</li> <li>➤ Functions (VLOOKUP etc.)</li> </ul> </li> </ul> <p><i>(Ref: STM on MS excel can be referred)</i></p>	<p><b>Computer Assisted Audit Tools required for data analysis</b></p> <ul style="list-style-type: none"> <li>○ Data analysis options in IDEA (Overview) <ul style="list-style-type: none"> <li>➤ Importing various files to IDEA</li> <li>➤ Simple Extraction</li> <li>➤ Summarization</li> <li>➤ Stratification</li> <li>➤ Duplicate key, Exclusion</li> <li>➤ Sampling (Monetary Unit Sampling being used in Vouchers audit)</li> <li>➤ Gap Detection</li> </ul> </li> </ul> <p><i>(Ref: STM on IDEA can be referred)</i></p>	
<p><b>Day V</b> dd/mm/yyyy</p>	<p><b>Case studies on Data-driven Audit - Implementation of Innovative Techniques</b></p>	<p><b>Case study/ Demonstration of Audit conducted in IT</b></p>	<p>End Course Assessment and Evaluation</p>

<p><b>y</b></p>	<p>Discuss the new initiatives and Comptroller and Auditor General's reports.</p> <p><i>(Ref:1. Compendium of New Initiatives and Good Practices in the CAG's Institution</i>  <i>2: IT Audit reports)</i></p>	<p><b>environment</b></p> <p>Case study on any Audit taken up by the IA&amp;AD office along with walk through of IT application available for eg. E-lekha/ PFMS/ NTRP (Bharatkosh)/ PRAKALP/ ARPIT (Experience of GST audit/custom audit and any other audit in IT environment including all stages of Audit)</p>	
-----------------	--	---	--

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Course No. : IS-04**

**Course Title/Name :** IT Security & Cyber Law

**Period :** Five Days

**Mode :** Offline

**Target Group :** Sr.Auditor/AAOs/SR.AOs (likely to be posted for field duties)

**Learning Objective :** Given the PowerPoint presentation, case study, exercise and reading materials at the end of the course, participants will be able to describe the various aspects of IT Security & Cyber Law to the extent that it conforms with the IT Act 2000 & its amendments as evaluated by the facilitator.

**Prior Reading :** IT Act, 2000

•

[https://  
www.indiacode.nic.in/bitstream/123456789/1999/1/a2000-21.pdf](https://www.indiacode.nic.in/bitstream/123456789/1999/1/a2000-21.pdf)

**Recommended Faculty:** Expert Faculty from MeITY, IITs, NITs, IIMs, NIC, Law practitioners/officers/Professors

**(May be pan-India Course)**

<i>Day/Date</i>	<b>Session I Session Time (hh:mm to hh:mm)</b>	<b>Session II Session Time (hh:mm to hh:mm)</b>	<b>Session III Session Time (hh:mm to hh:mm)</b>	<b>Session IV Session Time (hh:mm to hh:mm)</b>
<b>Day I dd/mm/yyyy</b>	<b>Introduction to Information Technology Security</b>  To understand the outline of IT Security	<b>Concepts of Authentication, confidentiality, Integrity, Availability and Non-repudiation</b>  Introduction to Threat and vulnerabilities <ul style="list-style-type: none"> <li>• Threat Vs Vulnerability</li> <li>• Risk</li> <li>• Different types of threats</li> </ul>	<b>Different kind of Cyber-attacks and protective measure.</b>  To understand different types of cyber-attacks and protective measures	<b>Access Control</b> <ul style="list-style-type: none"> <li>• Physical &amp; Logical access control               <ul style="list-style-type: none"> <li>○ Need &amp; types.</li> <li>○ Methods for implementation</li> </ul> </li> <li>• Concept of authentication, authorization &amp; bio-metrics</li> </ul>
<b>Day II dd/mm/yyyy</b>	<b>Network Security</b> <ul style="list-style-type: none"> <li>• Role of Networks</li> <li>• Firewalls</li> </ul>	<b>Application Security</b> <ul style="list-style-type: none"> <li>• Understanding secured SDLC</li> </ul>	<b>Data encryption</b> <ul style="list-style-type: none"> <li>• What is data encryption?</li> </ul>	<b>Hardening</b> <ul style="list-style-type: none"> <li>• OS Hardening</li> </ul>

	<ul style="list-style-type: none"> <li>• Configuration</li> <li>• Patching</li> <li>• Understanding security operation centre</li> </ul>	<ul style="list-style-type: none"> <li>• OWASP Top10</li> </ul>	<ul style="list-style-type: none"> <li>• Why is data encryption needed?</li> <li>• Various data encryption techniques</li> <li>• Securing data at rest</li> <li>• Hashing, Digital signature</li> </ul>	<ul style="list-style-type: none"> <li>• Database server Hardening</li> <li>• Hardening other components</li> </ul>
<b>Day III</b> dd/mm/yyyy	<b>Internet and web security</b> <ul style="list-style-type: none"> <li>• Internet and Web security concepts</li> <li>• Webservers and Browsers,</li> <li>• HTTP, Cookies, Caching,</li> <li>• Plug-ins</li> </ul> Secure electronic transaction	<b>Mobile security</b> <ul style="list-style-type: none"> <li>• Risks</li> <li>• Vulnerabilities</li> </ul>	<b>Cloud computing</b> <ul style="list-style-type: none"> <li>• Defining Cloud computing, delivering services through the cloud.</li> <li>• Cloud specific risks</li> <li>• SaaS, PaaS, IaaS</li> </ul>	<b>Cloud computing</b> <ul style="list-style-type: none"> <li>• Security, availability and disaster recovery strategies</li> <li>• Provisions for examination/inspection of service provider</li> </ul>
<b>Day IV</b> dd/mm/yyyy	<b>IT Act 2000</b> <ul style="list-style-type: none"> <li>• Need, objective, components.</li> <li>• Major provision</li> <li>• Offences</li> <li>• Penalties</li> </ul>	<b>IT Act Amendment 2008</b> <ul style="list-style-type: none"> <li>• Major amendments</li> <li>• Reasonable security practices rules - 2011</li> <li>• Cyber crime</li> </ul>	<b>Introduction to Vulnerability &amp; Penetration testing</b> To understand standard protocols for penetration testing.  <b>Ethical Hacking</b>	<b>Social Engineering</b> <ul style="list-style-type: none"> <li>• Social engineering &amp; Security Awareness</li> </ul>
<b>Day V</b> dd/mm/yyyy	<b>Security policies</b>  To understand the importance of other policies on security  <b>Role of CERT-In</b>	<b>IS Audit &amp; Cyber law-Case studies</b>  Discussion of security related observations in CAGs Audit reports	<b>IS Audit &amp; Cyber law-Case studies</b>  Discussion of security related observations in CAGs Audit reports	End Course Assessment and Evaluation

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Course No. : IS-07**

**Course Title/Name :** Data Analytics with Knime and Tableau

**Period :** Five days

**Mode :** Offline

**Target Group :** AAOs & Sr.AOs

**Learning Objective :** After attending the training on above course participants will be familiarised with data analytics including various statistical techniques available in KNIME. Participants will be able to import and export different kind of data files through Knime. Participant will also be able get concepts of Tableau pertaining to data downloading, data connectivity, manipulation visualization, calculate fields, filters, Hierarchy, Dashboards and story preparation.

**Pre Requisite :** Participants should be familiar with MS Access, MS Excel and IDEA and preferably R

**Prior Reading :** C&AG’s Guidelines on Data Analytics

<https://cag.gov.in/uploads/guidelines/Guidelines-on-Data-Analytics-book-05de4f7fd52e565-67820093.pdf>

**Recommended Faculty :** Expert Faculty from MeITY, IITs, NITs, IIMs, NIC

**(May be pan-India Course)**

<i>Day/Date</i>	<b>Session I</b> Session Time (hh:mm to hh:mm)	<b>Session II</b> Session Time (hh:mm to hh:mm)	<b>Session III</b> Session Time (hh:mm to hh:mm)	<b>Session IV</b> Session Time (hh:mm to hh:mm)
<b>Day I</b> dd/mm/yyyy	<ul style="list-style-type: none"> <li>Introduction to Data Analytics Basic Concepts: Data, types of data: String, numeric, date; types of analytics;</li> <li><b>KNIME:</b> A Broad overview; Build a basic workflow; Understanding Nodes</li> </ul>		<b>ETL Operations :</b> <ul style="list-style-type: none"> <li>Data type conversion (Data preparation) Data downloading and sorting error</li> </ul> Hands on session	
<b>Day II</b> dd/mm/yyyy	<b>ETL Operations :</b> <ul style="list-style-type: none"> <li>Filtering</li> <li>Treating</li> <li>Missing values</li> <li>Duplicate records</li> <li>Top/bottom record etc</li> </ul>	Hands on session	<b>Statistical Analysis and deriving insights about the dataset</b>	Hands on session
<b>Day III</b> dd/mm/yyyy	<b>Reading data of different file types</b> <ul style="list-style-type: none"> <li>(XML, CSV, text) in Knime, Using writer node to export data, Export data workflow</li> </ul>		Hands on session (Case Study) <ul style="list-style-type: none"> <li>Exploring various charts available in Knime : Box Plot, Scatter Plot, Correlation etc</li> </ul>	

<b>Day IV</b> <b>dd/mm/yyyy</b>	<b>Principles of Visualisation-</b> <ul style="list-style-type: none"> <li>• Consolidation of Concepts</li> <li>• Data Analytic Principles and Approaches</li> <li>• Different type of charts their usage</li> </ul>	<b>Tableau</b> <ul style="list-style-type: none"> <li>• Data downloading</li> <li>• Database Connectivity</li> <li>• Manipulation</li> <li>• Dimensions and measures</li> <li>• Visualisation, discrete and continuous</li> <li>• Calculated fields</li> <li>• Filters</li> <li>• Hierarchy</li> </ul>	
<b>Day V</b> <b>dd/mm/yyyy</b>	<b>Tableau Exercise/ Case Study:</b> <ul style="list-style-type: none"> <li>• Analysing data, Deriving Insights; Identifying risk areas, building dashboards</li> </ul>	<b>Other features in Tableau:</b> <ul style="list-style-type: none"> <li>• Story</li> <li>• Distribution of workbooks</li> <li>• Case study with Tableau</li> </ul>	End Course Assessment and Evaluation

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Course No. : IS-09**

**Course Title/Name :** e-Office

**Period :** Three Days

**Mode :** Offline

**Target Group :** Sr. A.Os, Group “B” & “C” Officers/Officials

**Learning Objective :** By the end of the Course, the participants will be able to use E-Office effectively. They will be able to create, edit and maintain e-files, receive and diarise DAKs/Letters, write and edit Notes, different types of Drafts and dispatch approved Drafts.

**Pre Requisite :** E office SLM (already available on SAI Portal).

- [https://training.cag.gov.in/lms\\_login.aspx](https://training.cag.gov.in/lms_login.aspx)

**Recommended Faculty:** Appropriate Internal Faculty and E-Office Focal Point

<i>Day/Date</i>	<b>Session I Session Time (hh:mm to hh:mm)</b>	<b>Session II Session Time (hh:mm to hh:mm)</b>	<b>Session III Session Time (hh:mm to hh:mm)</b>	<b>Session IV Session Time (hh:mm to hh:mm)</b>
<b>Day I dd/mm/yyyy</b>	<b>Course Briefing, Registration, Entry Knowledge Test</b>	<b>DAK/Letter</b> <ul style="list-style-type: none"> <li>• Browse and Diarise sub module of Receipt to generate Receipts (Electronic and Physical)</li> <li>• Folder Management, Moving Receipts between folders,</li> <li>• Sending and pulling back</li> <li>• Initiating Action</li> <li>• Closing / Reopening Receipts</li> <li>• Generate Acknowledgement</li> <li>• Consolidated View of Receipt</li> <li>• Print/Download Receipt</li> <li>• Advance Search for Receipt</li> </ul>		<b>Creating and Maintaining Files</b> <ul style="list-style-type: none"> <li>• Create File</li> <li>• Add Correspondence in File</li> <li>• Edit File Details</li> <li>• File Attachments/De tachments</li> <li>• Link File</li> <li>• Upload Local Reference</li> <li>• Merge Physical Files</li> <li>• Send and Pull Back Files</li> </ul>
<b>Day II dd/mm/yyyy</b>	<b>Noting</b> <ul style="list-style-type: none"> <li>• Add Green/ Yellow Noting</li> <li>• Edit / Discard Saved Notes</li> <li>• View version of Yellow Note</li> <li>• Referencing in Note</li> <li>• Quick Noting</li> </ul>	<b>Actions in Files</b> <ul style="list-style-type: none"> <li>• Create Part /Volume File</li> <li>• Closing / Reopening of File</li> <li>• Initiate Action on File</li> <li>• Convert File</li> <li>• Print/Download</li> </ul>	<b>Draft</b> <ul style="list-style-type: none"> <li>• Create a New Fresh /Reply / Reminder Draft in Receipt / File</li> <li>• Edit Draft (DFA)</li> <li>• Add Recipient in Draft</li> <li>• Approve and Sign Draft (DFA)</li> <li>• Dispatch from File (Officer/CRU)</li> <li>• View Attachment if issue</li> </ul>	



	<ul style="list-style-type: none"> <li>• View version of Yellow Note</li> <li>• Attachment below note</li> </ul>	<p>File</p> <ul style="list-style-type: none"> <li>• Advance Search for File</li> <li>• File Migration</li> <li>• Park Files</li> </ul>	
<p><b>Day III</b> dd/mm/yyyy</p>	<p><b>General topics</b></p> <ul style="list-style-type: none"> <li>• Notifications</li> <li>• DSC Registration</li> <li>• Preferences</li> <li>• Section Assignment</li> <li>• User Group</li> <li>• Post mapping / demapping</li> <li>• Create employee</li> <li>• Post employee</li> <li>• Assign additional charge</li> <li>• Transfer employee</li> <li>• Role assignment</li> <li>• Introduction to Web VPN</li> </ul>	<p>End Course Assessment and Evaluation</p>	

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Course No. : IS- 10**

**Course Title/Name :** Auditing with MS-Excel

**Period :** Five Days

**Mode :** Offline

**Target Group :** Group A, B, C

**Learning Objective :** At the end of this Program the participants would be able to appreciate the challenges and opportunities in the increasingly automated environment of the auditees & learn Auditing/data analysis using Ms- Excel.

**Pre Requisite :** MS Excel SLM (already available on SAI Portal).

- [https://training.cag.gov.in/lms\\_login.aspx](https://training.cag.gov.in/lms_login.aspx)

**Recommended Faculty:** Appropriate Internal and External Faculty

Day/Date	Session I Session Time (hh:mm to hh:mm)	Session II Session Time (hh:mm to hh:mm)	Session III Session Time (hh:mm to hh:mm)	Session IV Session Time (hh:mm to hh:mm)
Day I dd/mm/yyyy	<b>Rules &amp; Regulation relating to Audit in IT Environment:</b> <ul style="list-style-type: none"> <li>• Overview of Data Analytics, 2017</li> <li>• Standing order on Audit in IT Environment, 2019</li> </ul>	<b>Data &amp; Data Types:</b> <ul style="list-style-type: none"> <li>• Structured &amp; Unstructured Data; Master Data; Transaction Data; Numeric, Data Types</li> </ul>	<b>Data Import using Ms-Excel:</b> <ul style="list-style-type: none"> <li>• Importing data(csv/text/Access/ODBC</li> <li>• Assign relevant data Type &amp; Date to each Field</li> </ul>	Exercise(Hands on Session)  raw
Day II dd/mm/yyyy	<b>Data Validation:</b> <ul style="list-style-type: none"> <li>• Understanding Excel Data Validation</li> <li>• Creating an Validation List</li> <li>• Excel Decimal Validation</li> <li>• Adding a Custom</li> </ul>	<b>Data Preparation/Cleaning using Excel Functions:</b> <ul style="list-style-type: none"> <li>• Logical functions (AND, OR, NOT)</li> <li>• Text Based LEFT(), RIGHT(), LEN(),</li> </ul>	<b>Data Preparation/Cleaning using Various Lookup Functions:</b> <ul style="list-style-type: none"> <li>• VLOOKUP() Function</li> <li>• HLOOKUP()</li> <li>• INDEX() Function</li> <li>• MATCH() Function</li> <li>SEARCH(),</li> </ul>	Exercise(Hands on Session)

	<p>Data Validation</p> <ul style="list-style-type: none"> <li>• Dynamic Formulas</li> </ul> <p>Excel Data Validation Techniques</p>	<p>CONCATENATE() Name Manager and use defined ranges in functions.</p>		
<p><b>Day III</b> dd/mm/yyyy</p>	<p><b>Data Preparation/Cleaning using Various Conditional Functions:</b></p> <ul style="list-style-type: none"> <li>• Excel's IF() Function with a Name Range; Nesting Functions</li> <li>• Nesting Excel's AND() Function within the IF() Function</li> <li>• Using Excel's Function</li> <li>• Using Excel's Function</li> <li>• Using Excel's Function</li> </ul>	<p>Exercise(Hands on Session)</p>	<p><b>Data Analysis using Conditional Formatting:</b></p> <ul style="list-style-type: none"> <li>• Editing Excel Conditional Formatting</li> <li>• Using Conditional Formatting to Find Duplicates</li> <li>• Removing Duplicates.</li> </ul>	<p>Exercise(Hands on Session)</p>
<p><b>Day IV</b> dd/mm/yyyy</p>	<p><b>Data Analysis using Pivot Table, Advance Filter :-</b></p> <ul style="list-style-type: none"> <li>• Creating PivotTable</li> <li>• Recommended PivotTables</li> <li>• PivotTable Fields</li> <li>• Pivot Table Areas, Filters, Summarizing Values by other Calculations</li> <li>• PivotTable Tools</li> </ul>	<p>Exercise</p>	<p><b>Data Visualization/Presentation:</b></p> <ul style="list-style-type: none"> <li>• Slicers</li> <li>• Pivot Charts</li> <li>• Advance Charts: - Sparkline, Inline Charts, data Charts, Line Charts, Bar Charts, Column Charts, Simple Pie Charts, Scatter Charts</li> </ul>	<p>Exercise(Hands on Session)</p>

<b>Day V</b> <b>dd/mm/yyyy</b>	<b>Development of Simple Dashboard using MS –Excel.</b>	<b>Case Study</b>	End Course Assessment and Evaluation
-----------------------------------	---	-------------------	--------------------------------------

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Course No. : IS-11**

**Course Title/Name :** Auditing with MS Access

**Period :** Three Days

**Mode :** Offline

**Target Group :** Senior Audit Officers/ Assistant Audit officers/ Supervisor (Audit)

**Learning Objective :** At the end of this course, participants will be able to

1. Handle tables in MS Access including importing and exporting of databases.
2. Execute simple and advance query on single and multiple tables
3. Generate different reports from MS Access
4. Apply data management and advance techniques in MS Access including Macros and VB

**Pre Requisite :** SLM video on MS Access (Available on SAI)

- [https://training.cag.gov.in/lms\\_login.aspx](https://training.cag.gov.in/lms_login.aspx)

**Recommended Faculty:** Appropriate Internal and External Faculty

Day/Date	Session I Session Time (hh: mm to hh: mm)	Session II Session Time (hh: mm to hh: mm)	Session III Session Time (hh: mm to hh: mm)	Session IV Session Time (hh: mm to hh: mm)
Day I dd/mm/ yyyy	<b>Introduction to MS Access and Basic Data Manipulation</b> <b>Topics to be covered in details:</b> Introduction to MS Access: <ul style="list-style-type: none"> <li>• Overview of MS Access and its features.</li> <li>• Understanding the Access workspace and interface.</li> </ul> 2. Creating a Database:	<b>Creating tables, Importing and Exporting Data from/to various file formats</b> <b>Topics to be covered in details:</b> <ul style="list-style-type: none"> <li>• Creating tables and defining fields.</li> <li>• Setting up primary keys and relationships.</li> <li>• Importing and Exporting Data:</li> <li>• Importing data from</li> </ul>	<b>Querying Data in MS Access</b> <b>Topics to be covered in details:</b> <ul style="list-style-type: none"> <li>• Basic select queries.</li> <li>• Filtering and sorting data.</li> <li>• Using criteria and expressions in queries.</li> </ul>	<b>Joining Tables in MS Access</b> <b>Topics to be covered in details:</b> <ul style="list-style-type: none"> <li>• Understanding different types of joins.</li> <li>• Writing queries with multiple tables.</li> <li>• Creating calculated fields.</li> <li>• Exercise:</li> <li>• Create a new database and</li> </ul>

	<ul style="list-style-type: none"> <li>Creating a new database file.</li> </ul>	<ul style="list-style-type: none"> <li>external sources (e.g. Excel, CSV files).</li> <li>Exporting data to other file formats.</li> </ul>		<p>design a table structure for a hypothetical dataset.</p> <ul style="list-style-type: none"> <li>Import data from an Excel file and create a query to filter and sort the imported data.</li> </ul>
Day II dd/mm/ YYYY	<p><b>Advanced Query Techniques and Data Analysis</b></p> <p><b>Topics to be covered in details:</b></p> <ul style="list-style-type: none"> <li>Advanced Query Techniques:</li> <li>Using aggregate functions (e.g., SUM, COUNT, AVG).</li> <li>Grouping and summarizing data.</li> <li>Creating parameter queries.</li> </ul> <p><b>Forms and Data Entry:</b></p> <ul style="list-style-type: none"> <li>Creating forms for data entry and editing.</li> <li>Adding validation rules and input masks.</li> <li>Designing user-friendly interfaces.</li> </ul>		<p><b>Reports and Printing in MS Access Topics to be covered in details:</b></p> <ul style="list-style-type: none"> <li>Creating basic reports.</li> <li>Customizing report layouts and formatting.</li> <li>Adding headers, footers, and page numbers. Data Analysis with Queries:</li> <li>Crosstab queries for summarizing data.</li> <li>Creating calculated fields and expressions.</li> <li>Using conditional statements in queries.</li> </ul> <p><b>Exercise:</b></p> <ul style="list-style-type: none"> <li>Design a parameter query to filter and summarize data from a specific date range.</li> <li>Create a form for data entry and design a report to print the entered data.</li> </ul>	
Day III dd/mm/ YYYY	<p><b>Data Management and Advanced Techniques</b></p>		<p><b>Macros and Automation and Advanced Data Analysis Techniques</b></p>	<p><b>Using VB with MS Access Topics to be covered:</b></p>
	<p><b>Topics to be covered:</b></p> <ul style="list-style-type: none"> <li>Data Validation and Relationships:</li> <li>Implementing referential integrity.</li> <li>Creating lookup fields and validation rules.</li> <li>Defining table relationships.</li> </ul>	<p><b>Topics to be covered:</b></p> <p><b>Data Import and Export from external data sources</b></p> <ul style="list-style-type: none"> <li>Importing data from various sources (e.g., SQL Server, text files).</li> <li>Linking external data sources to Access.</li> <li>Exporting data to Excel for further analysis.</li> </ul>	<p><b>Topics to be covered:</b></p> <ul style="list-style-type: none"> <li>Creating macros to automate tasks.</li> <li>Assigning macros to buttons and events.</li> <li>Using conditional macros.</li> </ul> <p><b>Advanced Data Analysis Techniques:</b></p> <ul style="list-style-type: none"> <li>Using parameter queries for dynamic analysis.</li> </ul>	<p>Introduction to Visual Basic for Applications (VBA) in Access.</p> <p>Exercise:</p> <ul style="list-style-type: none"> <li>Create a form with lookup fields and validation rules.</li> <li>Import data from a text file and link an external data source to Access.</li> </ul> <p>Create a macro to automate</p>

			<ul style="list-style-type: none"><li>• Pivot Tables and Pivot Charts in Access.</li></ul>	a repetitive task.
--	--	--	--	--------------------

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Annexure-I**  
**Session-wise Learning Objectives**

<b>Course Title/Name</b>		:	Auditing with MS Access	
<b>Period</b>		:	03 DAYS	
<b>Day/Date</b>	<b>Session I</b>	<b>Session II</b>	<b>Session III</b>	<b>Session IV</b>
	<b>Session Time (hh: mm to hh: mm)</b>	<b>Session Time (hh: mm to hh: mm)</b>	<b>Session Time (hh: mm to hh: mm)</b>	<b>Session Time (hh: mm to hh: mm)</b>
Day I	<p><b>Session Heading: Introduction to MS Access and Basic Data Manipulation</b></p> <p><b>1. Learning Objective:</b> Understand the purpose and features of MS Access.</p> <p>2. Navigate the Access workspace and interface effectively.</p> <p>3. Create a new database and design tables with appropriate fields.</p> <p>4. Query data using basic select statements and apply filters and sorting.</p>	<p><b>Session Heading: Creating tables and Importing and Exporting Data from/to various file formats</b></p> <p><b>1. Learning Objective:</b> Understand the concept of database tables and their importance in Organizing data effectively.</p> <p>2. Learn how to create tables in MS Access, define fields, and set primary keys.</p> <p>3. Explore various data types and their appropriate usage for different types of information.</p> <p>4. Gain proficiency in importing data from external sources, such as Excel or CSV</p>	<p><b>Session Heading: Querying Data in MS Access</b></p> <p><b>1. Learning Objective:</b> Understand the purpose and benefits of querying data in MS Access.</p> <p>2. Learn how to write basic select queries to retrieve specific data from tables.</p> <p>3. Explore filtering and sorting techniques to refine query results.</p> <p>4. Understand how to use criteria and expressions to perform more complex queries.</p> <p>5. Learn to create calculated fields in</p>	<p><b>Session Heading: Joining Tables in MS Access</b></p> <p><b>Learning Objective:</b></p> <p>1. Understand the concept of table joins and their importance in database relationships.</p> <p>2. Learn the different types of table joins available in MS Access (e.g., inner join, left join, right join).</p> <p>3. Know how to write SQL queries to join tables based on common fields.</p> <p>4. Understand the significance of primary and foreign keys in establishing table relationships.</p> <p>5. Learn how to interpret and analyze the results of table joins.</p> <p>6. Gain hands-on experience in joining</p>



		<p>files, into MS Access tables.</p> <ol style="list-style-type: none"> <li>5. Learn how to export data from MS Access tables to different file formats, such as Excel, CSV, or text files.</li> <li>6. Understand the importance of data integrity during the import and export processes.</li> <li>7. Familiarize oneself with best practices for handling large datasets during the import and export operations.</li> <li>8. Learn techniques to validate and clean imported data to ensure accuracy and consistency within the database.</li> </ol>	<p>queries to perform calculations on data.</p> <ol style="list-style-type: none"> <li>7. Practice writing queries that utilize aggregate functions for data summarization.</li> <li>8. Explore the concept of parameter queries for dynamic and flexible querying.</li> <li>9. Understand how to use conditional statements in queries for data analysis.</li> <li>10. Gain hands-on experience by working on exercises to reinforce query skills.</li> </ol>	<p>multiple tables using the query design view in MS Access.</p> <ol style="list-style-type: none"> <li>7. Understand the potential challenges and considerations when joining tables, such as data duplication and performance impact.</li> </ol>
Day II	<p><b>Session Heading: Advanced Query Techniques and Data Analysis</b></p> <ol style="list-style-type: none"> <li>1. <b>Learning Objective:</b> Understand and apply advanced query techniques such as aggregate functions,</li> </ol>	<p><b>Session Heading: – Reports and Printing in MS Access</b></p> <ol style="list-style-type: none"> <li>1. <b>Learning Objective:</b> Understand the purpose of reports and their role in data analysis.</li> <li>2. Learn how to create basic reports in MS Access.</li> <li>3. Explore customization options for report layouts and</li> </ol>		

	<p>grouping, and parameter queries.</p> <ol style="list-style-type: none"> <li>2. Explore and utilize data analysis capabilities in MS Access through crosstab queries and calculated fields.</li> <li>3. Gain proficiency in using conditional statements within queries for advanced data analysis.</li> <li>4. Learn to create forms for data entry and editing, and design reports for presenting analyzed data.</li> <li>5. Develop skills in using parameter queries for dynamic data analysis.</li> </ol>	<p>formatting.</p> <ol style="list-style-type: none"> <li>4. Understand how to add headers, footers, and page numbers to reports.</li> <li>5. Learn how to apply grouping and sorting in reports.</li> <li>6. Explore advanced features such as sub reports and calculated fields in reports.</li> <li>7. Understand how to export reports to different file formats for sharing or printing.</li> <li>8. Learn how to print reports with specific page settings and print options.</li> <li>9. Understand how to incorporate charts and graphs into reports for visual data representation.</li> </ol>		
Day III	<p><b>Session Heading: Data Management and Advanced Techniques</b></p>		<p><b>Session: Macros and Automation and Advanced Data Analysis Techniques</b></p>	<p><b>Using VB with MS Access</b></p>
	<p><b>Learning Objective:</b></p> <ol style="list-style-type: none"> <li>1. Understand the concepts of data management in MS Access.</li> <li>2. Learn how to establish and manage relationships between tables.</li> <li>3. Explore data validation techniques to ensure data integrity.</li> </ol>	<p><b>Learning Objective:</b></p> <ol style="list-style-type: none"> <li>1. Gain proficiency in importing and exporting data from/to external databases.</li> <li>2. Discover advanced query techniques for complex data analysis.</li> <li>3. Exporting data to various databases.</li> </ol>	<p><b>Learning Objective:</b></p> <ol style="list-style-type: none"> <li>1. Understand the concept of macros and their role in automating repetitive tasks in MS Access.</li> <li>2. Learn to create macros in MS Access to automate actions such as opening forms, running queries, and performing calculations.</li> <li>3. Explore advanced techniques in macros,</li> </ol>	<p><b>Learning Objective:</b></p> <ol style="list-style-type: none"> <li>1. Understand the basics of Visual Basic for Applications (VBA) and its integration with MS Access.</li> <li>2. Learn how to write VBA code to automate tasks and enhance functionality in MS Access.</li> <li>3. Gain knowledge of the VBA programming environment in MS Access and its key components.</li> <li>4. Explore the use of VBA</li> </ol>

			<p>including conditional statements and looping, to create more complex automation routines.</p> <p>4. Gain knowledge of advanced data analysis techniques in MS Access, such as parameter queries and pivot tables, for dynamic and insightful data analysis.</p>	<p>to create custom forms, reports, and interactive interfaces in MS Access.</p> <p>5. Learn how to use VBA to manipulate data, perform calculations, and implement business logic in MS Access.</p> <p>6. Understand how to handle errors and debug VBA code effectively in MS Access.</p> <p>7. Learn advanced VBA techniques, such as working with external data sources/databases and creating custom functions.</p> <p><b>End of Training Examination, Feedback and Valediction</b></p>
--	--	--	--	--

**Course No. : IS-12**

**Course Title/Name :** Data Analytics with R

**Period :** Five days

**Mode :** Offline

**Target Group :** Senior Audit Officers / Assistant Audit Officers

**Learning Objective :** At the end of this course participants will be able to

1. Understanding statistical concepts for data analytics
2. Familiarizing with Data Structures in R, R-script and the R-studio interface
3. Learning about functions in R, Data Table
4. Descriptive Analysis using R – Central tendencies, Dispersion, Correlation
5. Familiarizing with basic R packages
6. Data visualization using R
7. Querying in R, Conditional statements, Loops
8. Apply the learning thorough case study

**Prior Reading :** C&AG's Guidelines on Data Analytics

- <https://cag.gov.in/uploads/guidelines/Guidelines-on-Data-Analytics-book-05de4f7fd52e565-67820093.pdf>

**Recommended Faculty :** Expert Faculty from MeITY, IITs, NITs, IIMs, NIC

**(May be pan-India Course)**

<i>Day/Date</i>	<b>Session I</b> Session Time (hh:mm to hh:mm)	<b>Session II</b> Session Time (hh:mm to hh:mm)	<b>Session III</b> Session Time (hh:mm to hh:mm)	<b>Session IV</b> Session Time (hh:mm to hh:mm)
<b>Day I</b> dd/mm/yyyy	<b>Introduction to Statistical Concepts</b> <ul style="list-style-type: none"><li>• Data types, Classification, Frequency distribution</li><li>• Measures of Central Tendencies</li><li>• Measures of Dispersion, Correlation and Regression</li></ul>		<b>Introduction to R</b> <ul style="list-style-type: none"><li>• Introduction to R scripts, Projects, Directories</li><li>• Introduction to R-Studio Interface</li><li>• Data Classes - Numeric, Character, Date, Factor, etc</li><li>• Operators in R – Arithmetic, Logical, Relational and Assignment, etc</li></ul>	
<b>Day II</b> dd/mm/yyyy	<b>Introduction to R</b> <ul style="list-style-type: none"><li>• Understanding Data structures in R – Lists, Vectors, Data frames,</li><li>• Functions in R</li></ul>		<b>Exploratory analysis</b> <ul style="list-style-type: none"><li>• Importing data into R</li><li>• Understanding the dimensions of data</li><li>• Deriving basic statistics – Central</li></ul>	

		tendencies and correlation	
		<ul style="list-style-type: none"> <li>Plotting Data – histograms, boxplots and scatter plots</li> </ul>	
<b>Day III</b> <b>dd/mm/yyyy</b>	<b>Querying in R</b> <ul style="list-style-type: none"> <li>Sub-setting and Appending data</li> <li>Introduction to data.table - Installation, syntax, using the package for analysis, use of special symbols .SD and .SDcols</li> </ul>	<b>Querying in R</b> <ul style="list-style-type: none"> <li>Aggregation, Data manipulation, Grouping, Combining queries using chaining</li> </ul>	
<b>Day IV</b> <b>dd/mm/yyyy</b>	<b>Querying in R &amp; Visualization</b> <ul style="list-style-type: none"> <li>Keys - Setting, removing and changing keys on data.tables.</li> <li>Joins – Understanding the types of joins, Joining Tables</li> <li>Types of graphs, Understanding data relationships to choose the right graph.</li> </ul>	<b>Data visualization – Hands on</b> <ul style="list-style-type: none"> <li>Understanding ggplot2 syntax. Concept of layers, aesthetic mapping and geoms.</li> <li>Creating a base plot layer, manipulating plot elements, creating scatter plots, smoothing line, histogram, density plots, boxplots, barplots and line plots</li> </ul>	
<b>Day V</b> <b>dd/mm/yyyy</b>	<b>R programming</b> <ul style="list-style-type: none"> <li>Conditional statements, Loops</li> </ul>	<b>Case study</b> <ul style="list-style-type: none"> <li>Case study using R features</li> </ul>	<b>End Course Assessment and Evaluation</b>

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Course No. General-06**

- Course Title/Name** : Works Audit
- Course details** : Various types of contracts, General and special conditions of contracts, DPR of Roads and Bridges, preparation of estimates, AA &TS, Tender process, Analysis of rates , extra item etc
- Period** : Five Days
- Mode** : Offline
- Target Group** : SAOs/AAOs working in works audit or likely to be posted in works audit
- Learning Objective** : To give the participants overall idea about
1. Overview of Public Works Department and role of Audit therein
  2. Types of contracts. General and special conditions of contract, Principal to be observed in framing contract agreements, Detailed project Reports of construction of Bridges and Road
  3. Estimates of works, how it is prepared, important audit checks
  4. Concept of Tender and Agreement
  5. Analysis of rates and Schedule of Rates (SOR) and method of its preparation. Significance of Measurement Book.
  6. Price Adjustment to Contractor in works as per SBD Contract. Awarding Extra item, determination of rates for extra item
- Prior Reading** : Works Audit Manual, Relevant PWD Code
- <https://cag.gov.in/uploads/media/Works-Audit-Manual-20200630172843.pdf>
- Recommended Faculty** : Internal - Public Works Audit and External - Public Works Department

Day/Date	Session I Session Time (hh:mm to hh:mm)	Session II Session Time (hh:mm to hh:mm)	Session III Session Time (hh:mm to hh:mm)	Session IV Session Time (hh:mm to hh:mm)
Day I dd/mm/yyyy	• Overview of Public Works Department	• Various types of contracts	• Design of Roads • Lane fixation of Road	


	<ul style="list-style-type: none"> <li>• Role of Audit in PWD</li> </ul>	<ul style="list-style-type: none"> <li>• General and special conditions of contract</li> <li>• Principal to be observed in framing contract agreements</li> <li>• Documents forming integral part of contracts</li> </ul>	<ul style="list-style-type: none"> <li>• Traffic Survey</li> <li>• Soil Testing</li> <li>• Preparation of DPR (Road level) Early level Fixation of road level</li> </ul>	
<p align="center"><b>Day II</b> dd/mm/yyyy</p>	<ul style="list-style-type: none"> <li>• How Detailed Project Reports for Construction of Bridges are prepared?</li> <li>• Important points to be checked by audit in audit of construction of bridges</li> </ul>		<ul style="list-style-type: none"> <li>• Points to be seen while preparing the estimate for work</li> <li>• Importance of PWD and PWA code</li> <li>• Points to be seen while preparing the estimate for work</li> </ul>	
<p align="center"><b>Day III</b> dd/mm/yyyy</p>	<ul style="list-style-type: none"> <li>• Administrative Approval and Technical Sanction</li> <li>• Revised Estimation</li> <li>• Types of estimates</li> <li>• Initial records maintained by Public Works Department and points to be seen in these records</li> </ul>		<ul style="list-style-type: none"> <li>• Concept of Tender and Agreement</li> <li>• F2 Agreement</li> <li>• Standard Bidding Documents (SBD) and Turnkey Project</li> <li>• Precautions to be observed while opening tenders, treatment for delay and late tenders, tender committee, agreement forms, signing of agreements</li> </ul>	
<p align="center"><b>Day IV</b> dd/mm/yyyy</p>	<ul style="list-style-type: none"> <li>• Importance of analysis of rates and Schedule of Rates (SOR)</li> <li>• Method of preparation of SOR</li> <li>• Significance of Measurement Book</li> <li>• Points to be checked in audit</li> </ul>		<ul style="list-style-type: none"> <li>• Study tour to the ongoing local projects of PWD. Distance to be travelled should not be more than 30 kms.</li> </ul>	
<p align="center"><b>Day V</b> dd/mm/yyyy</p>	<ul style="list-style-type: none"> <li>• Management of Price Adjustment to Contractor in works as per SBD Contract awarding extra item</li> <li>• Determination of Extra item rate</li> </ul>	<ul style="list-style-type: none"> <li>• Important and interesting case studies based on CAG Audit Reports</li> </ul>	<ul style="list-style-type: none"> <li>• Important and interesting case studies based on CAG Audit Reports</li> </ul>	<p>End course assessment and Evaluation.</p>

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM



**Course No. General-08**

<b>Course Title/Name</b>	:	Compliance Audit
<b>Course details</b>	:	Provisions of Compliance Audit Manual and CAGs DPC Act.
<b>Period</b>	:	Three days
<b>Mode</b>	:	Offline
<b>Target Group</b>	:	Sr. Audit Officers/Assistant Audit Officers/Supervisors from Audit Offices
<b>Learning Objective:</b>	:	1. To understand provisions of Compliance Audit manual 2. To be able to conduct compliance audit in a Comprehensive manner
<b>Prior Reading</b>	:	Compliance Auditing Guidelines and Cases of Compliance Audit in “e-compendium of Case Studies” prepared by the Training Division of Headquarters <ul style="list-style-type: none"> <li>• <a href="https://cag.gov.in/uploads/guidelines/Compliance-Guidelines-approved-final-preface-05de4efef9159d0-85033036.pdf">https://cag.gov.in/uploads/guidelines/Compliance-Guidelines-approved-final-preface-05de4efef9159d0-85033036.pdf</a></li> <li>• <a href="https://training.cag.gov.in">https://training.cag.gov.in</a></li> </ul> <div style="text-align: center;">   e-Compendium of Case Studies.pdf </div>
<b>Recommended Faculty</b>	:	SAO and Group Officers

Day/Date	Session I Session Time (hh:mm to hh:mm)	Session II Session Time (hh:mm to hh:mm)	Session III Session Time (hh:mm to hh:mm)	Session IV Session Time (hh:mm to hh:mm)
<b>Day I</b> dd/mm/ YYYY	<ul style="list-style-type: none"> <li>• Overview of CAGs DPC Act. 1971</li> </ul>	<ul style="list-style-type: none"> <li>• CAGs Auditing Standards 2017 with reference to Purpose and Authority of standards</li> <li>• Public Sector Auditing and its Objectives</li> <li>• Types of Public Sector Audits</li> <li>• Elements of Public Sector Auditing</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance Audit Guidelines regarding Planning, Implementation, Reporting, follow up and assurance.</li> <li>• Entry conference, preparation of its minutes</li> <li>• Conducting audit, Preparation of IR, Exit meeting</li> </ul>	<ul style="list-style-type: none"> <li>• Importance of Professional judgement, professional skepticism.</li> <li>• Concept of identifying auditable entities into apex units, auditee units, and implementing units for Audit Plan.</li> <li>• Resource and time management</li> <li>• Risk assessment.</li> </ul>

				<ul style="list-style-type: none"> <li>• Preparation of annual plan for compliance audits based on Risk Profiling.</li> <li>• Audit Design Matrix</li> </ul>
<p align="center"><b>Day II</b> dd/mm/ yyyy</p>	<ul style="list-style-type: none"> <li>• Audit Criteria</li> <li>• Audit Evidence.</li> <li>• Importance of Audit Evidence in Compliance Audit</li> </ul>	<ul style="list-style-type: none"> <li>• Inspection Report</li> <li>• Departmental Appreciation Note</li> <li>• Audit Finding Matrix</li> <li>• Compliance Audit Report.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensuring Quality of reporting in the Inspection reports as per Standard</li> <li>• Understanding the different stages involved in the reporting process. <ul style="list-style-type: none"> <li>• Process of approval of reports</li> <li>• Discussion on IRs, Potential Draft Paragraphs</li> <li>• Content of Audit Report</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Understanding the different stages involved in the reporting process.</li> <li>• Process of approval of reports. Outlining the steps and procedures for approving audit reports.</li> <li>• Discussion on IRs, Potential Draft Paragraphs, Process of preparation of Compliance Audit Report and follow up from original file.</li> <li>• Discussion on conversion of Inspection Report Para to Audit para printed in Audit Report.</li> </ul>
<p align="center"><b>Day III</b> dd/mm/ yyyy</p>	<ul style="list-style-type: none"> <li>• Compliance Auditing in IT Environment.</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion on Cases of Compliance Audit in “e-compendium of Case Studies” prepared by the Training Division of Headquarters</li> </ul>	End course assessment and Evaluation.	

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM



**Course No. General-12**

**Course Title/Name** : Certification Audit of Autonomous bodies.

**Course Details** : Manual of Audit of Autonomous bodies, Format of Accounts, Certification and drafting of SAR

**Period** : Four days

**Mode** : Offline

**Target Group** : Sr.Audit Officers/Assistant Audit Officers conducting audit of Autonomous bodies.

**Learning Objective** : At the end of the course the participants will be able to:-

1. Understand authority of DPC Act, wrt certification of accounts of autonomous bodies, various other acts.
2. Understand objectives, format, components preparation and presentation of Financial Accounts along with accounting policies, application of relevant ICAI's accounting standards.
3. Understand audit planning, audit procedure, materiality and risk associated with audit of Autonomous bodies.
4. Formats of SARs, Audit Certificates as directed by headquarters office.

**Prior Reading** : Manual of Instructions for Audit of Autonomous Bodies, Guidelines and Instructions issued by C&AG, Approved formats of Accounts, Relevant Accounting Principles and Accounting Standards

- [https://cag.gov.in/uploads/act\\_and\\_manual/SAR-MANUAL-0645358a9b907d7-02871291.pdf](https://cag.gov.in/uploads/act_and_manual/SAR-MANUAL-0645358a9b907d7-02871291.pdf)
- [https://cga.nic.in/writereaddata/Uniform\\_format\\_of\\_Accounts.pdf](https://cga.nic.in/writereaddata/Uniform_format_of_Accounts.pdf)
- <https://www.icai.org/www.icai.org/post/accounting-standards-as-on-1stfeb2022>

**Recommended Faculty:** Internal Faculty – Group Officers / Sr.AOs and External Faculty – Chartered Accountants and Autonomous Bodies' Officers

<i>Day/Date</i>	<b>Session I</b> Session Time (hh:mm to hh:mm)	<b>Session II</b> Session Time (hh:mm to hh:mm)	<b>Session III</b> Session Time (hh:mm to hh:mm)	<b>Session IV</b> Session Time (hh:mm to hh:mm)
<b>Day I</b> dd/mm/yyyy	<ul style="list-style-type: none"> <li>• Salient features of Manual of Instructions on Audit of Autonomous Bodies</li> </ul>		<b>Introduction to Mercantile Accounting</b> <ul style="list-style-type: none"> <li>• (Receipt and Payments Account and Income &amp; expenditure Account)</li> </ul>	

<p style="text-align: center;"><b>Day II</b> dd/mm/yyyy</p>	<p style="text-align: center;"><b>Introduction to Mercantile Accounting</b></p> <ul style="list-style-type: none"> <li>• (Analysis of Balance Sheet- Importance of Accounting Policies/ Notes on Accounts- Accounting Standard</li> </ul>	<ul style="list-style-type: none"> <li>• Format of Accounts of Autonomous Bodies</li> <li>• Disclosure of Accounting Policies and Notes to Accounts</li> <li>• Unabsorbed business losses.</li> </ul>
<p style="text-align: center;"><b>Day III</b> dd/mm/yyyy</p>	<ul style="list-style-type: none"> <li>• Certification of Accounts and audit of Autonomous Bodies</li> </ul>	<ul style="list-style-type: none"> <li>• Drafting and preparation of Separate Audits Report and Management letters</li> </ul>
<p style="text-align: center;"><b>Day IV</b> dd/mm/yyyy</p>	<ul style="list-style-type: none"> <li>• Discussion on Important Points noticed during Audit of Autonomous Bodies</li> </ul>	<p>End course assessment and Evaluation.</p>

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM

**Course No. General-15**

- Course Title/Name** : Risk-based Audit Planning, Risk Profiling.
- Period** : Three days
- Mode** : Offline
- Target** : Senior Audit Officers / Assistant Audit Officers / Supervisors
- Learning Objective** : The objective of this training programme is to familiarize participants with the Risk Based Annual Audit Planning and Assignment Level Audit Planning, Understanding the risk assessment in audit, risk profiling
- Prior Reading** : C&AG’s Guidelines on Risked Based Annual Audit Planning, Audit Tools used for risk assessment, Compliance Audit Guidelines
- <https://cag.gov.in/uploads/guidelines/Compliance-Guidelines-approved-final-preface-05de4efef9159d0-85033036.pdf>
- Recommended Faculty:** Internal Faculty – Group Officers / Sr.AOs, External Faculty – Chartered Accountants

<i>Day/Date</i>	<b>Session I</b>		<b>Session II</b>		<b>Session III</b>		<b>Session IV</b>	
	<b>Session (hh:mm to hh:mm)</b>	<b>Time to</b>	<b>Session (hh:mm to hh:mm)</b>	<b>Time to</b>	<b>Session (hh:mm to hh:mm)</b>	<b>Time</b>	<b>Session (hh:mm to hh:mm)</b>	<b>Time</b>
<b>Day I</b> <b>dd/mm/yyyy</b>	<b>Introduction to Audit Planning</b>				<b>Preparation for Annual Audit Plan</b>			
	<ul style="list-style-type: none"> <li>• Importance and need of Risk Based Audit Planning and its stages – Annual Planning and Assignment Level Planning</li> <li>• Planning Process- Understanding the Entity- Apex unit, Audit Unit and Implementing Unit, Understanding the Accounting and Internal Control System</li> <li>• Determine Materiality, Assess Material Risks, Design Audit Procedures</li> </ul>				<ul style="list-style-type: none"> <li>• Introduction about risk assessment and its need</li> <li>• Types of risk - Role and adequacy of internal controls – Assessing the risk vis-à-vis Assertion levels. Inherent and Control risk</li> <li>• Calculation of inherent and control risk (CR model) as per C&amp;AG office guidelines issued in 2018</li> <li>• Risk assessment methodology-complexity in the transaction, Newspaper items, follow-up of Audit after few years, number of Part-IIA paras in previous years, Media reports and visibility of topics, request from auditee’s department, Trend of expenditure/non-expenditure/receipt</li> </ul>			

		<p>and quantum of the unit...</p> <ul style="list-style-type: none"> <li>• Risk assessment methodology-complexity in the transaction, Newspaper items, follow-up of Audit after few years, number of Part-IIA paras in previous years, Media reports and visibility of topics, request from auditee’s department, Trend of expenditure/non-expenditure/receipt and quantum of the unit...</li> <li>• Categorization of the unit based on risk assessment- A, B and C</li> <li>• Selection of the unit-Annual, biennial or so on based on the categorization.</li> <li>• Studying/assessing the Control Environment and Control activities put in place – Risk factors (Materiality, Control Environment/vulnerability, Sensitivity and Management concerns)</li> </ul>
<p><b>Day II</b> dd/mm/yyyy</p>	<p><b>Preparation for Individual Audit Plan (Entity Level Risk Assessment)</b></p> <ul style="list-style-type: none"> <li>• Audit Preparation and Planning (Compliance/SSCA/Performance Audit)</li> <li>• Desk Review (Before taking up the audit, auditee’s information is collected by exploring the entity’s website, annual reports, DDGs, MIS reports available from public domain/PFMS, previous C&amp;AG’s audit reports/Inspection Reports, Parliamentary questions, newspaper clippings etc)</li> <li>• Interview/Consultation with entity to identify entity level risks</li> <li>• Understanding internal Controls</li> <li>• Defining Audit Scope, Formulation of Audit objectives, Criteria, , Audit Design Matrix etc.</li> <li>• Defining Audit methodology - data driven risk assessment and risk Profiling from user database to</li> </ul>	<p><b>Risk assessment in computerised environment</b></p> <ul style="list-style-type: none"> <li>• Standards regarding the Treatment of Risks and the Control in the Informatics Systems</li> <li>• ISA 315 (Revised), Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and Its Environment issued by International Auditing and Assurance Standards Board (IAASB)</li> </ul>

	establish risk criteria, sample size and sample selection for analysis and substantive audit		
<b>Day III</b> <b>dd/mm/yyyy</b>	<b>Statistical Sampling</b> <ul style="list-style-type: none"> <li>• Need for sampling in Audit</li> <li>• Various methods of sampling</li> <li>• Sampling errors Vs Non-sampling errors</li> <li>• Factors in drawing a sample</li> <li>• Sampling technique</li> <li>• Use of various IT tools and data analytical techniques</li> </ul>	<b>Assignment Level risk assessment</b> <ul style="list-style-type: none"> <li>• Discussion with case study (GST Audit/Custom Audit/Any other Audit)</li> </ul>	End course assessment and Evaluation.

**Refreshment breaks:** HH:MM to HH:MM and HH:MM to HH:MM

**Lunch break:** HH:MM to HH:MM