

12 Digital Auditing & Assurance

Part 1 - Digital Auditing & Assurance

Advantages of Auditing Digitally New Course - (DM23)
DA.A.130 TITANUM CHO - DAA.130

Answer
 Advantages of the automated and enhanced auditing digitally (Shortcut - Quality CAR)
 Better Audit Quality: Technology's ability to evaluate large volumes of data quickly enhances audit quality by identifying recurring more testing, reducing the risk of overlooked misstatements or issues.
 Lower Costs: Automation of previously manual processes reduces the time and cost of auditing.
 Improved Risk Assessment: The audit process and real-time testing, improving risk assessment. This allows managers and auditors to focus on areas with a higher risk of material misstatement and make informed decisions.
 Enhanced Effectiveness & Efficiency: Digital audit tools and automation techniques streamline processes and **improve effectiveness**, reduce reconciliation, saving time and costs.

Challenges
 Reliance on data, integration with data security and governance, choosing the right tool and automating the right process, ensuring standardization and correct configurations to avoid error and bias, evaluating business benefits the organization wants to achieve with automation and the roadmap for digital strategy.

Digital Audit
 ↓
 DO audit of existing systems on existing systems
 ↓
 objective how IT usage can be improved.

Auditing Digitally
 ↓
 using latest technology to perform audit
 ↓
 Improving audit process

Stages in Understanding the IT environment. New Course - (DM23)
DA.A.200 TITANUM CHO - DAA.200

Answer
 What are the **stages involved in understanding the IT environment** and what **key considerations** auditor should consider?
 The stages involved in understanding of IT environment are: Understand - Identify - Assess.

Key Areas for an Auditor to Understand IT Environment
 (Shortcut - F&C & Complex)
 1. Understand the **Flow of transactions**: Understand the specific IT applications and aspects related to transaction flows and information processing. Recognize how program changes or database alterations affect these flows.
 2. **Identification of Manual and Automated Controls**: Recognize the blend of manual and automated controls and the auditor's internal control. These characteristics impact the auditor's risk assessment of material misstatement.
 3. **Identification of Significant Systems**: Recognize IT applications and infrastructure in relation to the flow of significant information within the entity's system.
 4. **Identification of the Technologies used**: Comprehend emerging technologies and their role in financial reporting. Evaluate risks from their use and consider consulting experts (emerging technologies include:
 - Blockchain (e.g., token issuers, exchanges)
 - Robotics
 - Artificial Intelligence
 - Internet of Things
 - Biometrics

Types of IT dependencies. New Course - (DM23)
DA.A.300 TITANUM CHO - DAA.125

Answer
 Auditor should **stage in ITGC to test when there are IT dependencies identified in the system**. Briefly describe the **types of IT dependencies**.
 There are five types of IT dependencies as described below:
 (Shortcut - dependencies on CS-AR)
Calculations: IT systems handle calculations, replacing manual processes. The system might apply a straight-line depreciation or calculate interest on a loan. The auditor should verify the accuracy and quantity.
Security: The IT environment enforces security and segregation of duties to prevent and detect errors, fraud, or unauthorized access.
Automated Controls: These controls in the IT environment enforce business rules. Examples include purchase order workflow approvals, specific format checks, non-duplication of customer numbers, and transaction amount limits.
Interfaces: These transfer data between IT systems. An example is moving data from a payroll subledger to the general ledger.
Reports: These are outputs from IT systems used for manual controls, business performance reviews, or by auditors for testing. Examples are vendor master and customer ageing reports.

Cyber Risk New Course - (DM23)
DA.A.400 TITANUM CHO - DAA.140

Answer
 What does **cyber risk** explain **with some examples**?
 Definition: Cyber-risk is a **subscribed attempt** to access a computing system or network intending to cause damage, steal, expose, alter, disrupt, or destroy data.
 Common Cyber-attacks: The most common types of cyber-attacks include unauthorized access, data theft, espionage, alteration, disabling, or destruction.
Malware: Malware is software designed to harm computers or networks, and includes types like ransomware, trojans, and spyware.
DOS/DDoS Attacks: Denial-of-Service (DoS) attacks flood a network with fake requests, disrupting access to services like email and websites. While usually not causing data loss, DoS attacks cost time, money, and resources to resolve.
Phishing: Phishing is a cyberattack using email, SMS, phone, or social media to trick victims into sharing sensitive information or downloading malicious files, leading to potential viruses on their devices.
Spoofing: Spoofing involves cybercriminals disguising as trusted sources to access systems, aiming to steal information, credit money, or install malware.
Identity-Based Attacks: When a user's credentials are compromised, adversaries can impersonate them. For instance, using the same ID and password for multiple accounts can lead to access to unrelated accounts when one is breached.
Insider Threats: Cyber risks from former employees can pose risks to organization due to their access to the company network, sensitive data, IP, and knowledge of business operations, making them capable of executing attacks.
DoS Tunneling: DoS Tunneling is a cyberattack using DNS queries to bypass security, allowing hackers to transmit data or deploy malware by encoding information in DNS responses.

Impact of Cyber Risk New Course - (DM23)
DA.A.500 TITANUM CHO - DAA.140

Answer
 Explain, with a few examples, **in what way** cyber risks are **issues of IT and result only in information loss to an entity. She also feels that many cyber-attacks are not directly targeted at financial systems and do not pose risk of material misstatement to financial statements of an entity. Is her view proper?**
 The cyber risks are not an issue of IT alone. Rather, it is a business risk and has an effect on whole business organization. It affects entity's revenue, liabilities, class preferences, and passenger information. It widens:
 - Regulatory costs
 - Business interruptions causing an operational challenge for an organization.
 - Data loss, operational loss and litigation.
 - Ransomware - more common these days where entire systems are encrypted, but we may also result in any impairment/impediment charges because of the loss of it.
 - Incident response cost which could be for investigation & remediations
 - Breach of Privacy, if personal data of a consumer is hacked it could have a significant impact on the organization.
 - Fines and penalties
 It may happen that many cyber-attacks are not directly targeted at financial systems. However, the access gained by the attackers may provide them the ability to:
 - Manipulate or modify financial records
 - Modify key automated business rules
 - Modify automated controls relied upon by the management.
 Further, auditor should consider whether cyber risk (like other business risks) represents a risk of material misstatement to the financial statement as part of the audit risk assessment activities. Focus should be on understanding the cyber risks affecting the entity and the actions being taken to address these risks.

Cyber security Framework New Course - (DM23)
DA.A.600 TITANUM CHO - DAA.140

Answer
 Briefly describe the **cyber security framework**.
 The **five pillars of Cybersecurity framework**:
 1. **Identify the Risk**: This involves understanding what assets we have (data, systems, applications) and what threats they face. Think of it like mapping your valuables and potential entry points for a burglar.
 2. **Protect the Risk**: Once you know what needs protection, implement safeguards like firewalls, access controls, and encryption. This is like installing burglar alarms and an alarm system on your treasure chest.
 3. **Detect the Risk (Attack)**: Monitor your systems for suspicious activity that could indicate an attack. It's like having cameras and guards constantly watching for intruders.

Advantages and disadvantages of remote audit New Course - (DM23)
DA.A.700 TITANUM CHO - DAA.220

Answer
Advantages and Disadvantages of remote audit:
Advantages:
 (Shortcut - No Selection Fee)
 No disruption: The time required to gather evidence can be spread over several weeks, reducing disruption to daily activities.
 Selection: Remote audits widen the selection of auditors from a global network of experts.
 Proactive engagement: Auditors can obtain first-hand evidence directly from the IT system if direct access is provided.
 Flexibility (Enjoy Comfort): The audit team enjoys comfort and flexibility as they can work from a home environment.
 Efficiency: Remote audits are cost and time-effective due to the elimination of travel time and expenses.
Disadvantages
 (Shortcut - CVCS)
 Connectivity: Network issues can interrupt interviews and meetings during a remote audit.
 Visualization: There is limited or no ability to visualize the facility culture of the organization or the body language of the auditees. Time and resource efficiency can also affect the effectiveness of remote audit sessions.
 Integrity: The opportunity for presenting doctored documents or omitting relevant information is increased, potentially requiring additional planning and different audit procedures. This also raises concerns about security and confidentiality violations.
 Cultural and Legal Challenges: Auditors may face cultural challenges and a lack of knowledge about local laws and regulations (like email deletion) that appears to be from an external source, such as a business or colleague taking, cannot be performed remotely.
 Security: Remote access to systems may not be allowed, necessitating an assessment of security aspects related to remote access and privacy.

Data Analytics New Course - (DM23)
DA.A.800 TITANUM CHO - DAA.240

Answer
 In an automated environment, the data stored and processed in systems can be used to get various insights into the way business operates. This data can be useful for preparation of management information system (MIS) reports and electronic dashboards that give a high level snapshot of business performance in view of above you are required to briefly discuss the meaning of data analytics and example of such data analytic techniques.
Data Analytic Techniques:
 1. Data Analytics: Transforming raw system data into meaningful information via processes, tools, and techniques.
 2. Benefits:
 - Discover and analyze data patterns
 - Identifies data anomalies
 - Extracts useful information

Examples of automated tools New Course - (DM23)
DA.A.900 TITANUM CHO - DAA.240

Answer
 Enterprises are adopting emerging technologies in a rapid pace to create synergistic and harness the latest technologies. Give 3 examples of automated tools used as a part of emerging technologies along with the risk and audit considerations associated with these tools.
Automated Tools in Audit (Shortcut - BMAN)
 Blockchain
 Robotic Process Automation
 AI (Artificial Intelligence)
 Internet of Things
 NFT (Non-Fungible Token)
Blockchain:
 - Decentralized and encrypted ledger.
 - Transactions are validated rather than replicated to participants.
 - Smart contracts prevent unauthorized modifications.
 - Wide-ranging industrial benefits recognized.
Robotic Process Automation:
 RPA is a software technology that **mimics human actions** in interacting with digital systems, enhancing process efficiency, customer experience, and control effectiveness. Unlike humans, RPA bots can work continuously with increased speed, reliability, and accuracy.
Internet of Things:
 IoT involves connecting devices, such as cell-phones, appliances, and machines, to the internet.
NFT (Non-Fungible Token):
 NFTs are digital assets that cannot be exchanged on a one-for-one basis like cryptocurrencies. They represent ownership of unique items, from photos and videos to artwork and collectibles. These digital assets are secured by blockchain, ensuring their uniqueness and authenticity.

Emerging technologies New Course - (DM23)
DA.A.940 TITANUM CHO - DAA.220

Answer
 Give example of emerging technologies available for Next Generation Audit along with the risks associated with it.
Drone Technology: Using drone technology in the remote locations for stock counts. Drones have great accuracy in data collection and can fly over large areas where it is difficult to physically examine the count of large quantities of fixed assets and inventory.
Augmented reality: The technology allows users to view the real-world environment with augmented (added) elements, generated by digital devices.
Virtual reality: VR goes a step forward and replaces the real world entry with a simulated environment, created through digital generated images, sounds, and even touch and smell. Using special equipment such as a custom headset, the user can explore a simulated world or simulate experiences such as flying or skydiving.
Metaverse: The metaverse is the emerging 3-D digital space that uses virtual reality, augmented reality, and other advanced internet technology to allow people to have fictive personal and business experiences online. It represents a convergence of digital technology to combine and extend the reach and use of Cybersecurity, Artificial Intelligence (AI), Augmented Reality (AR) and Virtual Reality (VR).

How to Audit BOT Based System New Course - (DM23)
DA.A.960 TITANUM CHO - Unique

Answer
 A large passenger carrier is having an AI bot for passenger ticket booking with following processes:
 (User interaction) The bot interacts with passengers through various channels such as a website, mobile app, or messaging platforms. Passengers can initiate a conversation with the bot by providing their travel details, preferences, and other required information.
Natural Language Processing (NLP): The bot utilizes natural language processing techniques to understand and interpret the passenger's queries and requests. It can process text or voice inputs and extract relevant information to facilitate ticket booking.
Query Handling: The bot responds to passenger queries related to ticket availability, fares, train schedules, seat preferences, and other relevant information. It can provide real-time updates and answers to common passenger questions.
Booking Process: Upon receiving a booking request, the bot collects the necessary details from the passenger, including travel dates, destination, class preferences, and passenger information. It validates the checks, checks seat availability, and calculates fares based on the carrier's pricing structure.
Integration with Booking Systems: The bot interfaces with the carrier's booking systems to check seat availability, reserve seats, and process payment transactions. It securely communicates with the backend systems to initiate the booking process.
Payment Processing: The bot facilitates secure payment transactions, allowing passengers to provide payment details and complete the booking. It may integrate with various payment gateways or services to process credit card payments, net banking, or other payment methods.
Confirmation and Ticket Generation: Once the booking is successfully processed, the bot generates a booking confirmation along with a detailed ticket number. It provides the passenger with the necessary information, including the ticket details, train information, and any other relevant instructions.
Auxiliary Services: The bot may offer additional services such as seat upgrades, meal selection, travel insurance, or other ancillary services. It can provide information and assist passengers in availing these services during the booking process.
Post-Booking Support: The bot can assist passengers with post-booking support, including itinerary changes, cancellations, or ticket modifications. It handles these requests, checks the carrier's policies, and processes the necessary changes as per the passenger's requirements.
Integration with Customer Support: The bot may be integrated with customer support systems to escalate complex queries or issues to human agents when necessary. It can provide a seamless transition from automated assistance to human interaction, ensuring a high level of customer service.

Audit of a Blockchain-Based Pilot Program New Course - (DM23)
DA.A.980 TITANUM CHO - Unique

Answer
Primary Understanding and Background Checks:
 - Obtain a comprehensive understanding of the blockchain-based pilot program, including its objectives, scope, and key processes involved.
 - Review the partnership agreements, contracts, and legal documentation governing the relationship between the Indian banks and XY Bank.
 - Identify the specific blockchain technology used, its functionalities, and the underlying smart contracts.
Assessment of Internal Controls and Security Measures:
 - Assess internal controls:
 - Review policies and procedures related to the on-chain Nostro accounts, settlement processes, and money transfer mechanisms.
 - Assess the governance framework, risk management practices, and compliance procedures established by the Indian banks or XY Bank.
Review Security Measures:
 - Assess encryption methods, cryptographic key management, and secure transmission protocols used for data protection.
 - Review measures taken to prevent unauthorized access, cyber threats, and potential vulnerabilities in the blockchain network.
Compliance and Regulatory Requirements:
 - Evaluate Compliance and Regulatory Requirements:
 - Review documentation and procedures related to customer due diligence, transaction monitoring, and reporting obligations.
 - Ensure that the pilot program adheres to industry-specific standards and best practices.
Transaction Review and Reconciliation:
 - Conduct Transaction Validity and Accuracy:
 - Validate that transactions are recorded and settled accurately on the blockchain, ensuring adherence to relevant regulations and contractual obligations.
 - Perform reconciliation exercises between on-chain Nostro accounts and the corresponding accounts held at XY Bank to confirm the accuracy of balances and transactions.
Risk Assessment and Disaster Recovery:
 - Assess Business Continuity and Disaster Recovery: Evaluate the adequacy of backup and recovery procedures, redundancy measures, and failover mechanisms to ensure uninterrupted operations.
 - Test the effectiveness of these plans by conducting simulations or examining historical incidents and response procedures.
Reporting and Recommendations:
 - Prepare and present findings, conclusions, and recommendations to the audit committee.

Tests Performed by CAAT New Course - (DM23)
DA.A.990 TITANUM CHO - Unique

Answer
 CA V is planning to use CAATs extensively in audit of a company-be it for compliance tests or substantive tests. Can you list out examples of few situations (in brief) of tests performed by him using CAATs?
 (i) **Identify Exceptions**: Identify exceptional transactions based on set criteria. For example, cash transactions above ₹10,000.
 (ii) **Identify Errors**: Identify data, which is inconsistent or erroneous. For e.g.: account number which is not numeric.
 (iii) **Verify Calculations**: Re-perform various computations in audit software to confirm the results from application software confirm with the audit software. For e.g.: TDS rate applied as per criteria.
 (iv) **Examine of Fields**: Identify fields, which have null values. For example invoices which do not have vendor name.
 (v) **Check Completeness**: Identify whether all fields have valid data. For example: null values in any key field such as date, invoice number or value or name.
 (vi) **Check Consistency**: Identify data, which are not consistent with the regular format. For example: invoices which are not in the required sequence.
 (vii) **Correlate payments**: Establish relationship between two or more tables as required. For example, invoices which are not in the required sequence.
 (viii) **Accounts exceeding authorized limit**: Identify data beyond specified limit. For example, transactions entered by user beyond their authorized limit or payment to vendor beyond amount due or overdraft allowed beyond limit.

Tests Performed by CAAT New Course - (DM23)
DA.A.990 TITANUM CHO - Unique

Answer
 A company is planning to use Robotic process automation (RPA) to streamline its hiring process. Earlier, the company used to hire from companies of various management institutes leading to high recruitment costs, inefficient hire yield and resultant lack of diversity. How RPA can be used to automate the hiring process? List out testable few such steps. What could be likely benefits of using RPA in hiring process?
 RPA can be used to streamline hiring process in a company. The tentative steps could include:
 - Place advertisements in social media/career advice sites.
 - Identify eligible candidates for the position.
 - Conduct initial screening of candidate.
 - Automate the interview process for desired and suitable roles.
 - Automate the interview process by asking to give online games to assess their skills.
 - A certain percentage of those applications are called for interview, providing an interview software.
 The automated hiring process will reduce full time effort involved, provide a wider assessment range, reduce the impact of recruiter bias, increase the efficiency of screening of interested candidates, reduce recruiting costs, increase hire yield, reduce time to hire, increase diversity.