

12. AUDIT IN AUTOMATED ENVIRONMENT**QUESTION - WISE ANALYSIS OF PREVIOUS EXAMINATIONS**

Question No.	M-14	N-14	M-15	N-15	M-16	N-16	M-17	N-17	M-18 (O)	M-18 (N)	N-18 (O)	N-18 (N)
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Q.No.1. What is an automated environment and explain the key features of an automated environment? (A) (NEW SM)

AUTOMATED ENVIRONMENT:

A. MEANING: An automated environment basically refers to a business environment where the processes, operations, accounting and even decisions are carried out by using computer systems. They are also known as Information Systems (IS) or Information Technology (IT) systems.

Nowadays, it is very common to see computer systems being used in almost every type of business.

For example, in case of banking business, the transactions are carried out using ATMs (Automated Teller Machines), or using “apps” on mobile phones, etc.

B. KEY FEATURES OF AN AUTOMATED ENVIRONMENT:

1. Enables faster operations
2. Accuracy in data processing and computation
3. Ability to process large volumes of data
4. Integration between business operations
5. Better security and controls
6. Less prone to human errors
7. Provides latest information

SIMILAR QUESTIONS:

1. The fundamental principle of an automated environment is the ability to carry out business with less manual intervention. Explain A. Write above answer.	MTP M19 (N)
2. Explain Meaning of an automated environment. Also discuss the key features of an automated environment. A. Write above answer.	RTP M19 (N)

Q.No.2. Explain the Relevance of “Information Technology (IT)” in an audit. (A)

A. AUTOMATION OF FOLLOWING: The need for relevance of IT in audit raised due to the automation of the following:

1. Carrying of computation and calculations (E.g., bank interest computation).
2. Accounting entries are posted automatically (System generated).
3. Business policies and procedures, including internal controls relating to User access and security are made by assigning system roles to users. (E.g., delegation of authority for journal approvals).
4. Generation of reports used in business. (E.g., debtors ageing report, register of loans).
5. User access and Security is controlled by assigning system roles. (E.g., Segregation of duties)

B. RELEVANCE IN AN AUDIT:

1. Auditors rely on information and reports generated by IT systems which may impact the audit.
2. SA - 315 requires the audit to understand, assess and respond to risks identified in IT.
3. By relying on automated environment and using data analytics, it is possible to increase efficiency and effectiveness of audit.
4. Other reasons namely:
 - a) Increased use of Systems and Application software in Business. For example, use of ERPs
 - b) Complexity of transactions has increased (multiple systems, network of systems)
 - c) Hi-tech nature of business (Telecom, e-Commerce).
 - d) Volumes of transactions are high (Insurance, Banking).
 - e) Regulatory requirement (E.g., Companies act 2013 - Sec. 143(3)(i), IT act 2008)

SIMILAR QUESTIONS:

1. Briefly mention three reasons why IT should be considered relevant to audit of financial statements? A. Write Point - B	NEW SM-TYK
2. Discuss the situations in which IT will be relevant to audit. A. Write above answer	RTP M18(N)
3. When a business operates in a more automated environment it is likely that we will see several business functions and activities happening within the systems. Explain stating the points that an auditor should consider to substantiate the above. A. Write Point - A	RTP N18(N)

Q.No.3. Write a short note on: Understanding of entity's automated environment. (B)

In an audit of financial statements, an auditor is required to understand the entity and its business, including IT as per SA 315. Understanding the entity and its automated environment involves understanding how IT department is organised, IT activities, relevant and controls.

Points that an auditor should consider to obtain an understanding of the company's automated environment are as follows:

1. Information systems being used (one or more application systems and what they are)
2. Their purpose (financial and non-financial).
3. Location of IT systems - (local vs. global).
4. Architecture (desktop based, client-server, web application, cloud based).
5. Version (functions and risks could vary in different versions of same application).
6. Interfaces within systems (in case multiple systems exist).
7. In-house vs. Packaged.
8. Outsourced activities (IT maintenance and support).
9. Key persons (CIO, CISO, Administrators).

DOCUMENTATION: The understanding of a company's IT environment that is obtained should be documented as per SA 230 - Audit Documentation. An example of audit documentation of IT Understanding is as below:

Information Systems being used	Version	Purpose	Location-Local vs. global	Architecture	Interfaces within systems	In-House vs. Packaged	Outsourced Activities	Key Persons	In-Scope
SAP	ECC 6.0, EHPS	Accounting, Supply chain, Production	Texas, USA	Client/Server, Unix, AIX 5.3, MS-SQL Server 2008	Paymaster	Packaged		CIO, Administrators	Yes

SIMILAR QUESTIONS:

1. State the information to be gathered by auditor about CIS environment that is relevant to the audit plan. A. Write above answer.	N18(O) - 6M
2. List any five points that an auditor should consider to obtain an understanding of the company's automated environment. A. Write above answer.	M18 (N) - 5M
3. In an audit of financial statements, an auditor is required to understand the entity and its business, including IT as per SA 315. Understanding the entity and its automated environment involves understanding how IT department is organised, IT activities, the IT dependencies, relevant risks and controls. Advise some of the points that an auditor should consider to obtain an understanding of the company's automated environment. A. Write above answer.	MTP M18 (N), RTP M18 (N)

Q.No.4. Explain the Risks arise from use of IT systems and also describe the impact of such risks on Audit. (A) (NEW SM, RTP M18 (N), MTP2 M18(N), M18 (N) - 5M)

A. RISK ARISE FROM USE OF IT SYSTEMS:

After having obtained an understanding of the IT systems and the automated environment of a company, the auditor should also understand the following risks that arise from the use of IT systems:

1. Inaccurate processing of data, processing inaccurate data, or both.
2. Unauthorized access to data.
3. Unauthorised data changes (backend changes).
4. Excessive access / Privileged access (super users).
5. Unauthorized changes to systems or programs.
6. Failure to make necessary changes to systems or programs.
7. Loss of data.

B. IMPACT OF IT RELATED RISKS ON AUDIT:

1. **IMPACT ON SUBSTANTIVE PROCEDURES:** Auditor may not be able to rely on the data obtained from systems where such risks exist. This means, all forms of data, information or reports that he obtains from systems must be thoroughly tested and corroborated for completeness and accuracy.
2. **IMPACT ON COMPLIANCE PROCEDURES:** Auditor will not be able to rely on automated controls, calculations, accounting procedures that are built into the applications. Resultantly more substantive audit work is needed.
3. **IMPACT ON REPORTING:** The auditor may communicate first to those charged with governance and may issue a modified opinion, if necessary.

SIMILAR QUESTIONS:

1. Describe how risks in IT systems, if not mitigated, could have an impact on audit. A. Write Point - B	NEW SM - TYK
2. The auditor should understand and consider the risks that may arise from the use of IT systems. A. Write Point - A.	M18(N) - 5M

3. Having obtained an understanding of the IT systems and the automated environment of a company, the auditor should also understand the following risks that arise from the use of IT systems. A. Write Point - A.	MTP N18(N)
4. Discuss the impact of IT related risks on substantive audit, controls and reporting. A. Write Point - B.	RTP M18(N)

Q.No.5. Write a short note on: Testing methods used in an automated environment. (A)

A. METHODS:

1. **INQUIRY:** It is the most efficient audit test but should always be used in combination with any one of the other audit testing methods. Inquiry alone is not sufficient. Generally, applying inquiry in combination with inspection gives the most effective and efficient audit evidence.
2. **REPERFORMANCE:** It gives the best audit evidence. However, testing by reperformance could be very time consuming. Carry out a test check (negative testing) and observe the error message displayed by the application.
3. **INSPECTION:** it involves inspection of the configuration defined in an application, system logs to determine any changes made since last audit testing or Inspection of technical manual / user manual of systems and applications.
4. **OBSERVATION:** It involves observing how a user processes transactions under different scenarios.

B. PROFESSIONAL JUDGEMENT:

1. Which audit test to use, when and in what combination to use, is a matter of Professional Judgement and will vary depending on several factors including risk assessment, control environment, desired level of evidence required, history of errors / misstatements, complexity of business, etc.
2. Generally Inquiry in combination with Inspection gives the most efficient and effective audit evidence.
3. When testing in an automated environment, few common points to be examined are:
 - a) Obtain an understanding of how an automated transaction is processed by doing a walkthrough of one end-to-end transaction.
 - b) Inspect the configuration defined in an application.
 - c) Inspect the system logs to determine any changes made since last audit testing
 - d) Inspect technical manual / user manual of systems and applications.
 - e) Carry out a test check (negative testing) and observe the error message displayed by the application.

SIMILAR QUESTIONS:

1. What are the different testing methods used when auditing in an automated environment. Which is the most effective and efficient method of testing? A. Write Point - A and B (1 and 2).	NEW SM - TYK
2. Generally, applying inquiry in combination with inspection gives the most effective and efficient audit evidence. However, which audit test to use, when and in what combination is a matter of professional judgement. Discuss stating the different ways testing is performed in an automated environment. A. Write Point - A and B (1 and 2).	MTP N18(N)
3. Discuss different ways testing is performed in an automated environment. A. Write Point - A.	MTP M18(N)

Q.No.6. What do you mean by the word Internal Financial Controls (IFC) and also explain regulatory requirement of such controls? (B) (NEW SM)

- A. **DEFINITION:** The term Internal Financial Controls (IFC) basically refers to the policies and procedures put in place by companies for ensuring:
- Reliability of financial reporting
 - Effectiveness and efficiency of operations
 - Compliance with applicable laws and regulations
 - Safeguarding of assets
 - Prevention and detection of frauds

- B. **STATUTORY REQUIREMENT:** The Companies Act, 2013 has placed a greater emphasis on the effective implementation and reporting on the internal controls for a company. The table below gives a summary of the requirements of the Act.

Provision	Who is responsible	Applicability
Sec 134(5)(e)	Board of Directors	Listed Companies
Sec 149(8)	Independent Directors	All companies having such Directors
Sec 177	Audit Committee	All companies such committee
Sec 143(3)(i)	Statutory Auditors	Companies subject to exceptions

- C. **RESPONSIBILITY OF MANAGEMENT AND AUDITORS:** The directors and management have primary responsibility of implementing and maintaining an effective internal controls and auditors are expected to evaluate, validate and report on the design and operating effectiveness of internal financial controls.

Q.No.7. Write a short note: Data analytics for audit. (A)

(NEW SM)

A. **MEANING:**

- The combination of Processes, Tools and Techniques that are used to tap vast amounts of electronic data to obtain meaningful information is called data analytics.
- Such tools and techniques the auditors use in audit for analysing the data in electronic form to obtain audit evidence is known as Computer Assisted Auditing Techniques (CAATs).
- Companies can benefit immensely from the use of data analytics in terms of increased profitability, better customer service, gaining competitive advantage, more efficient operations, etc.

B. **SIGNIFICANCE OF DATA ANALYTICS FOR AUDITOR:**

The auditors can make use of similar tools and techniques in the audit process and obtain good results.

Data analytics can be used, in testing of electronic records and data residing in IT systems, to perform the following:

- Check completeness of data and population that is used in either test of controls or substantive audit tests.
- Selection of audit samples - random sampling, systematic sampling.
- Re-computation of balances - reconstruction of trial balance from transaction data.
- Reperformance of mathematical calculations - depreciation, bank interest calculation.
- Analysis of journal entries as required by SA 240.
- Fraud investigation.

SIMILAR QUESTIONS:

<p>1. Explain the following:</p> <p>a) CAAT - Write Point - A(2)</p> <p>b) Data Analytics - Write Point - A(1)</p> <p>c) Database - a logical subsystem where data is stored in a predefined form and retrieved for use</p> <p>d) Information systems - collection of HW, SW, networks and processes that are used in business to carryout operations and transactions.</p> <p>e) Privileged Access - Super user access to IT systems with No or Less limits.</p>	N18 (N) - 5M
<p>2. In today's digital age when companies rely on more and more on IT systems and networks to operate business, the amount of data and information that exists in these systems is enormous. Explain stating uses of Data analytics.</p> <p>A. Write above answer.</p>	MTP M19(N) RTP N18(N)

Q.No.8. Discuss how auditor should assess and report audit findings? (B)

- At the conclusion of each audit, it is possible that there will be certain findings or exceptions in IT environment and IT controls of the company.
- If the auditor identifies any weaknesses or deficiencies then the same may be reported to relevant stakeholders including management and those charged with governance viz., Board of directors, Audit committee. (Letter of Weakness)
- While reporting the weaknesses the auditor shall consider the following points:
 - Are there any weaknesses in IT controls?
 - What is the impact of these weaknesses on overall audit?
 - Report deficiencies to management. Letter of Weakness or Management Letter.
 - Communicate in writing any significant deficiencies to Those Charged with Governance.
- A deficiency in internal control exists if a control is designed, implemented or operated in such a way that it is unable to prevent, or detect and correct, misstatements in the financial statements on a timely basis; or the control is missing.

QUESTIONS FOR ACADEMIC INTEREST - FOR STUDENT'S SELF STUDY**Q.No.9. Explain the types of controls in an Automated environment? (C)****(NEW SM)**

- General IT controls
 - Application controls
 - IT-Dependent controls
- A. **GENERAL IT CONTROLS:** "General IT controls are policies and procedures that relate to many applications and support the effective functioning of application controls. They are also known as "pervasive" controls or "indirect" controls.
- General IT-controls commonly include controls over the following:
- Data centre and network operations
 - Program change
 - Access security
 - Application system acquisition, development, and maintenance (Business Applications)

1. Data Centre and Network Operations:

- a) **Objective:** To ensure that production systems are processed to meet financial reporting objectives.
- b) **Activities:**
 - i) Overall Management of Computer Operations Activities
 - ii) Batch jobs - preparing, scheduling and executing
 - iii) Backups - monitoring, storage & retention
 - iv) Performance Monitoring - operating system, database and networks
 - v) Recovery from Failures - BCP, DRP
 - vi) Help Desk Functions - recording, monitoring & tracking
 - vii) Service Level Agreements - monitoring & compliance
 - viii) Documentation - operations manuals, service reports

2. Program Change:

- a) **Objective:** To ensure that modified systems continue to meet financial reporting objectives.
- b) **Activities:**
 - i) Change Management Process - definition, roles & responsibilities
 - ii) Change Requests - record, manage, track
 - iii) Making Changes - analyse, design, develop
 - iv) Test Changes - test plan, test cases, UAT
 - v) Apply Changes in Production
 - vi) Emergency & Minor Changes
 - vii) Documentation - user/technical manuals
 - viii) User Training

3. Access Security:

- a) **Objective:** To ensure that access to programs and data is authenticated and authorized to meet financial reporting objectives.
- b) **Activities:**
 - i) Security Organization & Management
 - ii) Security Policies & Procedures
 - iii) Application Security
 - iv) Data Security
 - v) Operating System Security
 - vi) Network Security - internal network, perimeter network
 - vii) Physical Security - access controls, environment controls
 - viii) System Administration & Privileged Accounts - Sys admins, DBAs, Super users

4. Application system acquisition, development, and maintenance:

- a) **Objective:** To ensure that systems are developed, configured and implemented to meet financial reporting objectives.
- b) **Activities:**
 - i) Overall Mgmt. of Development Activities
 - ii) Project Initiation
 - iii) Analysis & Design

- iv) Construction
- v) Testing & Quality Assurance
- vi) Data Conversion
- vii) Go-Live Decision
- viii) Documentation & Training

Q.No.10. Explain the audit approach under automated environment. (C)**Audit approach under automated environment****A. Risk Assessment**

- a) Identify significant accounts and disclosures
- b) Qualitative and quantitative considerations
- c) Relevant financial statements assertions
- d) Identify likely sources of misstatements
- e) Consider risk arising from use of IT systems

B. Understanding and evaluating

- a) Document understanding business process using flow charts or narratives
- b) Prepare risk control matrix
- c) Understand design of controls by performing walkthroughs of the end to end process
- d) Process wide considerations for entity level controls
- e) Segregations of duties
- f) It general controls and applications controls

C. Test for operating effectiveness

- a) Assess nature timing and extent of controls testing
- b) Assess reliability of source data , completeness of populations
- c) Testing of key reports and spread sheets
- d) Sample testing
- e) Consider competence and independence of staff/team performing controls testing

D. Reporting

- a) Evaluate control deficiency
- b) Significant deficiencies material weakness
- c) Remediation of control weakness
- d) Internal control memo or management letter
- e) Audit report

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THE END