14. AUDIT SAMPLING

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)
4.	-	-	-	-	5	-	-	-	-	-	5	-
6.	-	-	-	-	-	-	-	-	-	-	-	5
14.	-	-	-	-	-	-	6	-	-	-	-	-
16.	-	-	-	-	-	-	-	4	-	-	-	-

Q.No.1. Define the term Audit Sampling and Mention the objective of auditor?

DEFINITION AS PER SA530:

According to SA 530 – Audit Sampling, Audit sampling refers to the application of audit procedures to less than 100% of items within a population based on which the auditor draws conclusions about the population.

OBJECTIVE OF AUDITOR UNDER SA- 530:

The objective of the auditor when using audit sampling is to provide a reasonable basis to draw conclusions about the population from which the sample is selected.

Q.No.2. Write a short note on approaches to sampling

There are TWO approaches for sampling:

A. **STATISTICAL SAMPLING:** The characteristics of statistical sampling are as below:

1. It is an approach that has the random selection of the sample items;

2. The auditor use the probability theory to evaluate sample results

3. The auditor will take into account sampling risk characteristics.

B. **NON-STATISTICAL SAMPLING:**

1. A sampling approach that does not have characteristics of statistical sampling is considered non-statistical sampling.

2. The non-statistical sampling is neither objective nor scientific.

3. In this approach the risk of personal bias in selection of sample items cannot be eliminated.

CONCLUSION:

1. Whatever may be the approach, the sample must be representative of Population. Otherwise it would not be referred as appropriate sample.

2. The sampling approach is a matter of professional judgment.

RELEVANT QUESTIONS:

1. Whatever may be the approach non statistical or statistical sampling, the sample must be representative. Discuss explaining statistical and Non statistical sampling. A. Write above full answer.	RTP-M18(N)

Q.No.3. Write a short note on Statistical Sampling

i)   Audit testing done through this approach is <u>more scientific.</u>

ii) It involves use of <u>mathematical laws of probability</u> in determining the appropriate sample size in varying circumstances.

iii) Statistical sampling <u>widely used</u> where a <u>population consists of a large number</u>.

iv) It is used more in the case of transactions involving

- Trade receivables confirmation.
- Payroll checking.
- Petty cash vouchers.
- Purchases or Sales

v)   In statistical sampling, the <u>sample results are measurable as to the adequacy and reliability</u> of the audit objectives

Q.No.4. what are the factors should be considered for deciding upon the extent of checking on a sampling plan.

Following are the factors that should be considered for deciding upon the extent of checking on a sampling plan:

i)   <u>Size of the organisation</u> under audit.

ii) Level of <u>effectiveness of internal controls</u>.

iii) Adequacy and <u>reliability of books</u> and records.

iv) <u>Tolerable error</u> range.

v)   Degree of the <u>desired confidence</u> required for auditor.

RELEVANT QUESTIONS:

1. Factors that should be considered for deciding upon the extent of checking a sampling plan. B. **Write above full answer.**	QP-N18(N)-5M
2. Discuss the factors that auditor should consider for deciding upon extent of checking in a sampling plan.	RTP-M19(N)

Q.No.5. What are the advantages of Statistical Sampling?

ii) The <u>sample size does not increase</u> in proportion to the <u>increase in the size of Population</u>.

iii) The sample selection is <u>more objective and based on random numbers</u>.

iv) With the <u>minimum sample size</u> the associated <u>risk can be calculated</u> with precision.

v)   It provides a means for deriving a <u>"calculated risk" and corresponding precision</u>.

vi) It may provide a <u>better description of a large mass of data</u> than a prima facie examination of entire data.

RELEVANT QUESTIONS:

1. What are the advantages of statistical sampling in auditing? A. **Write any three points.**	QP-M19(O)-3M

Q.No.6. What are the requirement as to sample design, sample size and sample selection? (SM-TYK)

The Requirement relating to sample design, sample size and sample selection are as below:

<u>SAMPLE DESIGN:</u> The auditor shall consider the <u>purpose of audit procedure</u> and <u>characteristics of population</u> from which the sample will be drawn.

<u>SAMPLE SIZE:</u> The auditor shall determine the sample size that is <u>sufficient to reduce sampling risk</u> to an acceptable low level.

<u>SAMPLE SELECTION:</u> The selection of sample shall be in such a way that <u>each item of population will have a chance of selection</u>.

<u>RELEVANT QUESTIONS:</u>

1. State the requirements related to audit sampling, sample design, sample size and selection of items for testing. A. **Write above full answer.**	QP-N18(O)-5M

Q.No.8. What are the factors that influence auditor's judgment in determining an appropriate sample size?

The auditor shall determine the sample that <u>sufficient to reduce sampling risk</u> to an acceptable low level. The following are the various factors that influence auditor's judgment about sample size:

1. The <u>degree of assurance</u> the auditor is expecting to obtain. E.g., Higher the sample size, higher the degree of assurance.

2. Auditor's judgment about <u>risk of material misstatements</u>. E.g., If Risk of MMS increases then sample size also increases.

3. <u>Tolerable</u> rate of deviation and tolerable misstatement. E.g., If the <u>tolerable rate</u> of deviation / misstatements <u>increases then the sample size decreases</u> and vice versa.

4. <u>Expected</u> rate of deviation and expected misstatements. E.g., If the <u>expected rate of deviation increases</u> then the sample <u>size also increases</u>.

5. The <u>size and characteristics</u> of population.

Note: Tolerance means risk acceptance. Higher the risk accepted, lower the sample size.

<u>RELEVANT QUESTIONS:</u>

1. The sample size can be determined by the application of a statistically-based formula or through the exercise of professional judgment. When circumstances are similar, the effect on sample size of factors will be similar regardless of whether a statistical or non-statistical approach is chosen. Explain stating the examples of factors that the auditor when determining the sample size for test of controls. A. **Write above full answer.**	**MTP-M19(N)** **MTP-N18(N)** **MTP-M18(N)**

Q.No.9. Write a short note on Selection of Items for Testing in statistical sampling.

1. In Statistical sampling, sample items are selected in a way that each <u>sampling unit has a probability of being selected</u>. The selection happens in an <u>unbiased manner</u>.

2. In non-statistical sampling, <u>personal judgment is used</u> to select sample items.

3. The principal methods of selecting samples are the use of random selection, systematic selection and haphazard selection.

Q.No.10. Write a short note on the Stratification and Value Weighted Selection

In considering the characteristics of the population from which the sample will be drawn, the auditor may determine that stratification or value-weighted selection is appropriate

1. **STRATIFICATION:**

   a) Audit efficiency may be improved if the auditor <u>stratifies a population by dividing it into sub-populations</u> which have an identifying characteristic.

   b) The objective of stratification is <u>to select sample from all parts of population</u> having different characteristics.

   c) When performing tests of details, the population is often <u>stratified based on monetary value</u>.

2. **VALUE-WEIGHTED SELECTION:**

   a) When performing tests of details it may be efficient <u>to identify the sampling unit</u> as the <u>individual monetary units</u>.

   b) The audit <u>effort is directed to the larger value items</u> because they have a greater chance of selection, and can result in smaller sample sizes.

   c) This approach may be used in <u>conjunction with the</u> systematic method of sample selection and is most efficient when selecting items using random selection.

RELEVANT QUESTIONS:

1. XYZ Ltd is engaged in trading of electronic goods and having huge accounts receivables. For analysing the whole accounts receivables, auditor wanted to use sampling technique. In considering the characteristics of the population from which the sample will be drawn, the auditor determines that stratification or value-weighted selection technique is appropriate. SA 530 provides guidance to the auditor on the use of stratification and value - weighted sampling techniques. Advise the auditor in accordance with SA 530. A. **Write above full answer.**	RTP-M18(N) MTP-M18(N)

Q.No.11. Write a short note on Sample Selection Methods

1. **RANDOM SAMPLING:**

   Random sampling includes two very popular methods which are discussed below

   a) **Simple Random Sampling:**

   Under this method each unit of the whole population has an equal chance of being selected

   b) **Stratified Sampling:**

   This method involves dividing the whole population to be tested in <u>a few separate groups called strata</u> and taking a <u>sample from each strata</u>.

2. **INTERVAL SAMPLING OR SYSTEMATIC SAMPLING:**

   a) Systematic selection is a selection method in which the number of <u>sampling units in the population is divided by the sample size</u> to give a sampling interval.

   b) For example, Item number-50 is determined as a starting point within the first 50, each 50th sampling unit thereafter is selected.

3. **MONETARY UNIT SAMPLING:**

   It is a type of <u>value-weighted selection</u> in which sample size, selection and evaluation of results are in monetary amounts.

4. **HAPHAZARD SAMPLING:**

   a) In this method the auditor selects the sample <u>without following a structured technique</u>.

   b) Even though no structured technique is used, the auditor would on the other hand avoid any conscious bias or predictability.

   c) This method is <u>not superior</u> when compared with other statistical sampling methods.

   d) In this method also all the sampling units in the population <u>have a chance of selection</u>.

   Note: It is more or less the <u>same as simple random sampling</u>.

5. **BLOCK SAMPLING:**

   This method involves selection of a block(s) of <u>contiguous items</u> from within the population.

RELEVANT QUESTIONS:

1. Write a short note on Haphazard sampling? A. **Write Point – D.**	QP-N17(O)-4M

Q.No.12. Write a short note on Random Sampling.

Random selection ensures that <u>all items in the population</u> or within each stratum have a <u>known chance of selection.</u>

It may involve use of random number tables. These are further divided into two types:

1. **SIMPLE RANDOM SAMPLING:**

   i) Under this method each unit of the whole population, *e.g.* purchase or sales invoice, has an equal chance of being selected

   ii) Random number tables are simple and easy to use and also <u>provide assurance that the bias does not affect</u> the selection.

   iii) This method is <u>considered appropriate</u> where the population has a <u>reasonably similar units</u> and in a reasonable range.

2. **STRATIFIED SAMPLING:**

   i) This method involves <u>dividing the whole population</u> to be tested in a <u>few separate groups</u> called strata.

   ii) Each stratum is treated as if it was a separate population and items are selected from each of these stratums.

   iii) The <u>number of groups</u> into which the whole population has to be divided is determined on the basis of <u>auditor judgment</u>.

   iv) Example: Trade receivables balances may be divided into four groups as follows:-

      a) Balances in excess of Rs.10,00,000;

      b) Balances in the range of Rs. 5, 50,001 to Rs. 10,00,000;

      c) Balances in the range of Rs. 2,25,001 to Rs. 5,50,000; and

      d) Balances Rs. 2,25,000 and below.

✓ From these above groups the auditor may pick up <u>different percentage of items from each of the group.</u>

✓ From the <u>top group</u> i.e. balances in excess of Rs 10,00,000, the auditor may examine <u>all the items</u>;

✓ From the <u>second group - 25 per cent</u> of the items; from the <u>third group - 10 per cent</u> of the items; and

✓ From the <u>lowest group - 2 per cent</u> of the items may be selected.

RELEVANT QUESTIONS:

1. Write a short note on Random Sampling. A. **Write above full answer.**	QP-M17(O)-6M
2. Random selection ensures that all items in the population or within each stratum have a known chance of selection. A. **Write above answer without example.**	RTP-N17(O)

Q.No.13. Write a short note on Sampling Risk.

MEANING:

1. The risk that the <u>auditor's conclusion based on a sample</u> may be <u>different</u> from the <u>conclusion if the entire population</u> were subjected to the same audit procedure.

2. In other words, the risk of <u>selecting an inappropriate sample</u> is also known as sampling risk.

3. The following are the consequences or erroneous conclusions due to sampling risk:

TEST OF CONTROLS:

Risk of over reliance: That controls are <u>more effective than they actually are</u>. The auditor is primarily <u>concerned with this type of erroneous conclusion</u> because it affects audit effectiveness and is more likely to lead to an inappropriate audit opinion.

Risk of under reliance: That controls are less effective than they actually are. This type of erroneous conclusion <u>affects audit efficiency as it would usually lead to additional work</u> to establish that initial conclusions were incorrect.

i) TEST OF DETAILS:

Risk of Incorrect Acceptance: Treating that a material <u>misstatement does not exist when in fact it exist</u> in the population. This type of risk leads to audit risk.

Risk of Incorrect Rejection: Treating that a material <u>misstatement exists when in fact it does not exist</u> in the population. This may not affect the audit risk.

RELEVANT QUESTIONS:

1. What type of erroneous conclusions that arise due to sampling risk? A. **Write above full answer.**	QP-M19(N)-4M
2. While planning the audit of S Ltd. you want to apply sampling techniques. What are the risk factors you should keep in mind? A. **Write above answer.**	RTP-N18(N) MTP-M19(N)
3. The auditor is faced with sampling risk in both test of controls and substantive procedures. Comment with reference to SA 530 on "Audit Sampling". A. **Write above full answer.**	RTP-N17(O)

PRACTICAL QUESTIONS FOR SELF STUDY

Q.No.14. Write a short note on Non-Sampling Risk

1. Non-Sampling Risk is the risk that the auditor reaches an <u>erroneous conclusion for any reason other than sampling risk</u>. Non sampling risk can <u>never be mathematically measured</u>.

2. Following are the examples of non-sampling risk

   • Use of <u>inappropriate audit procedures</u>.

   • Misinterpretation of audit evidence.

3. Following are the sources of Non-Sampling risk:

   • Human Mistakes.

   • Misinterpreting the sample results.

   • <u>Relying on erroneous</u> information e.g. erroneous confirmation.

Q.No.15. Write a short note on Non-Statistical Sampling

i) Under this approach, the sample size and its composition are determined <u>on the basis of the personal experience and knowledge</u> of the auditor.

ii) The non-statistical sampling is neither objective nor scientific.

iii) In this approach the <u>risk of personal bias in selection</u> of sample items <u>cannot be eliminated.</u>

iv) In this approach the <u>auditor's opinion determines the sample size</u> but it cannot be measured how far the sample size would fulfil the audit objective.

v) The auditor has to determine the <u>adequacy of cut-off procedures</u> to check large number of items towards the close of the year.

vi) The <u>sample results cannot be measured</u> because the sample has been selected based on the personal bias.

Q.No.16. Define the term Population and discuss the characteristics of Population

<u>DEFINITION:</u>

Population refers to the <u>entire set of data</u> from which a sample is selected and the auditor wishes to draw conclusions on such population

The auditor should select <u>sample items</u> which can be expected to be <u>representative of the population</u>.

<u>CHARACTERISTICS OF POPULATION:</u>

1. **APPROPRIATENESS:**

   • The auditor will need to determine that the population from which the sample is drawn is appropriate.

   • The individual items of the population are known as sampling units.

   • The population can be divided into sampling units.

2. COMPLETENESS:

The population needs to include all relevant items from throughout the entire period.

3. RELIABLE:

The auditor should consider the complete and accurate information while performing the audit sampling.

Q.No.17. Write a short note on Sample Design

When designing an audit sample, the auditor shall consider the <u>purpose of the audit procedures</u> and <u>the characteristics of the population</u> from which the sample will be drawn.

1. <u>PURPOSE OF THE AUDIT PROCEDURE</u>:

The auditor shall <u>understand the purpose</u> of audit procedure i.e., Is the sample about Test of controls or Test of Details. Based on understanding the purpose the auditor <u>shall determine the characteristics of population</u> to design an appropriate sample method (Simple or Stratified).

2. <u>CHARACTERISTICS OF POPULATION</u>: While considering the characteristics of population the auditor shall also consider few other things such as:

a) TEST OF CONTROLS:

1. The auditor makes an assessment of the <u>expected rate of deviation</u> Based on the auditor's understanding of the relevant controls.

2. This assessment is made in order <u>to design an audit sample and to determine sample size</u>.

b) TEST OF DETAILS:

i) **Stratification:**

Audit efficiency may be improved <u>if the auditor stratifies a population</u> by dividing it into sub-populations.

ii) **Value-Weighted Selection:**

When performing tests of details it may be efficient <u>to identify the sampling unit</u> as the <u>individual monetary units</u> that make up the population.

Q.No.18. What are the precautions to be taken while taking Test checking?

The following are the precautions to be taken while adopting test checking:

1. Identify the areas where <u>test check cannot be done</u>. (Negative list)

2. The transactions of the concern shall be <u>stratified if wide variations</u> are there between the transactions of same kind or when the <u>population is heterogeneous</u>.

3. Authorisations, documentation, recording of the transaction shall be studied <u>right from beginning to end</u>. (Walk through test or audit in-depth)

4. Evaluate <u>internal control system</u> to determine their efficiency and effectiveness.

5. Prepare a <u>clear test check plan</u> such as sample design and sample size.

6. Ensure the sample <u>selection is done in an unbiased manner</u> or by using random number tables.

<u>RELEVANT QUESTIONS:</u>

1. What precautions the auditor shall take while applying test check techniques? A. **Write any 4 Points.**	QP-M16(O)-4M

Q.No.19 Write a short note on Projection of Misstatement based on sampling.

1. The auditor is required to project misstatements for the population to obtain a broad view of the scale of misstatement.

2. When a misstatement has been established as an anomaly, it may be excluded when projecting misstatements to the population. (Non-anomalous projection)

3. However, the effect of any such misstatement, if uncorrected, still needs to be considered in addition to the projection of the non-anomalous misstatements.

4. In case of tests of details, the auditor shall project misstatements found in the sample to the population.

5. In case of tests of controls, no explicit projection of deviations is necessary since the sample deviation rate is also the projected deviation rate for the population as a whole.

Note:

Anomaly refers to a misstatement or deviation that is demonstrably not representative of population and hence it is not considered while calculating projected misstatement.

RELEVANT QUESTIONS:

1. The auditor is required to project misstatements for the population to obtain a broad view of the scale of misstatement. Explain. A. **Write the above answer**	RTP-M19(N)

Q.No.20. Write about evaluation of sample results?

The auditor shall evaluate the results of the sample and assess whether the use of audit sampling has provided a reasonable basis for conclusions about the population that has been tested.

1. In case of Test of Controls an unexpectedly high sample deviation rate may lead to an increase in the assessed risk of material misstatement.

2. An unexpectedly high misstatement amount in a sample may cause the auditor to believe that a class of transactions or account balance is materially misstated.

3. The best way to evaluate the result of sample by auditor is to consider projected misstatement and anomalous misstatement.

4. When the projected misstatement plus anomalous misstatement exceeds tolerable misstatement, the sample does not provide a reasonable basis for conclusions about the population that has been tested.

5. The closer the projected misstatement plus anomalous misstatement is to tolerable misstatement, the more likely that actual misstatement in the population may exceed tolerable misstatement.

6. Also, if the projected misstatement is greater than the auditor's expectations of misstatement used to determine the sample size, the auditor may conclude that there is an unacceptable sampling risk that the actual misstatement in the population exceeds the tolerable misstatement.

CONCLUSION:

If the auditor concludes that audit sampling has not provided a reasonable basis for conclusions about the population that has been tested:

1. The auditor may request Management to investigate misstatements that have been identified or

2. Conduct additional audit procedures.

3. For example, the auditor might extend the sample size, test an alternative control or modify related substantive procedures.

Note:

1. Projected misstatements are calculated based on those that are repetitive in nature.

2. Anomalous misstatements are those that are not repetitive in nature but are considered while calculating materiality of aggregate misstatements on whole population.

<u>RELEVANT QUESTIONS:</u>

1. The auditor shall evaluate the results of the sample and whether the use of audit sampling has provided a reasonable basis for conclusions about the population that has been tested. Explain A. **Write the above answer**	**RTP-N18(N)** **MTP-N18(N)**

THE END