

## Statistics - ICS Part 2 Statistics English Medium Chapter 2 Short Questions Preparation

Q1. How many samples of size  $n$  can be drawn from a population having  $N$  elements when sampling is done with replacement ?

**Ans 1:** Number of total possible samples will be  $N^n$ .

Q2. What is a sampling error ? How can we reduce this error ?

**Ans 1:** It is the difference between a statistic and respective parameter. It can be reduced by employing better technique, supervision, randomness and increasing the sample size.

Q3. What are the main advantages of sampling ?

**Ans 1:** (i) It saves time, labour and money.  
(ii) When elements sampled are damaged or destroyed it is the practical method to obtained data.  
(iii) It is more scientific than complete census.

Q4. What is meant by a random sample ?

**Ans 1:** If  $n$  elements are selected from a population in such a way that every set of  $n$  elements are said to be a random sample.

Q5. How many samples of size  $n$  can be drawn form a population having  $N$  elements when sampling is done without replacement ?

**Ans 1:**

Q6. What is the meant by proportion ?

**Ans 1:** It is the ratio of number of elements possessing a given characteristic in the population or sample to the total number of elements in the population or sample.

Q7. What is systematic sampling ?

**Ans 1:** it is a sampling scheme in which every  $k^{\text{th}}$  element is selected from an arranged population with a random start from the first  $k$  elements. Where  
 $k = N/n$

Q8.

**Ans 1:**

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Q9. What is stratified sampling ?

**Ans 1:** It is a sampling scheme in which proportionate number of sampling elements are randomly selected from different strata's or groups of a heterogeneous population.

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Q10. What is simple random sampling ?

**Ans 1:** The sampling scheme in which each element / group of elements of the population has an equal chance of selection for the sample.

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