

Statistics - ICS Part 1 Statistics Chapter 6 Short Questions Preparation

Q1. Write down the different set operations.

Ans 1: Four set operations are

Ans 2: 1- Union of sets

Ans 3: 2- Intersection of set

Ans 4: 3- Difference of sets

Ans 5: 4- Complement of a set

Q2. State the properties of a random experiment.

Ans 1:

1. The experiment can be repeated any number of times.
2. A random trial consists of at least two possible outcomes.

Q3. What are combinations?

Ans 1: When a selection of object is made without paying regard to the order of selection it is called combination,

Q4. What is Venn diagram?

Ans 1: Venn diagram is a diagram in which universal set U is represented by a rectangle and its subset is represented by a circle.

Q5. Distinguish between permutation and combination.

Ans 1: A permutation is an ordered arrangement of objects, whereas a combination is an arrangement without regard to their order.

Q6. What do you mean by not mutually exclusive events?

Ans 1: If two events can occur together then these events are said to be not mutually exclusive events.

Q7. Differentiate between independent and dependent events.

Ans 1: If the occurrence of event A affects the occurrence of event B, then A and B are said to be dependent. If the occurrence of event A does not affect the occurrence of event B, then A and B are independent.

Q8. Define Sample point.

Ans 1: Each element in the sample space is called a sample point.

Q9. What is the fundamental principle of counting.

Ans 1: If operation A can be performed in m ways and operation B in n ways, then the two operations can be performed together in $m \times n$ ways. This principle can be extended to more than two operations.

Q10. Distinguish between permutations and combinations.

Ans 1: Both permutation and combination are arrangements of all or some of a set of objects.

Ans 2: If we take into account the order or sequence, we want permutations.

Ans 3: If the arrangement is immaterial and we are interested only in the composition of the group, we want combinations.
