

Statistics - ICS Part 1 Statistics Chapter 7 Short Questions Preparation

Q1. When does probability becomes negative.

Ans 1: The probability cannot be negative for ever.

Q2. What do you mean by Equally Likely events.

Ans 1: When each outcome of a sample space is as likely to occur as any other, the outcomes are said to be equally likely, e.g. if we toss a fair coin, the head is as likely to occur as the tail

Q3. State the classical or a priori definition of probability.

Ans 1: The probability of an event A is the number of outcomes favourable to the occurrence of A divided by the total number of possible outcomes.

Q4. Distinguish between joint probability and marginal probability.

Ans 1: The joint probability, denoted by $P(AB)$ or $P(A \cap B)$, is the probability that both A and B will occur. The marginal probability $P(A)$ is the probability that A will occur, whether or not B happens.

Q5. Define a continuous random variable.

Ans 1: A random variable is called continuous if the set of values it takes is an entire interval on the number line.

Q6. Define Independent events.

Ans 1: The Events A and B are said to be independent if the occurrence or non-occurrence of event A does not affect the probability of occurrence of B. This means that irrespective of whether event A has occurred or not, the probability of occurrence of B is to be the same.

Q7. Give two examples of Mutually Exclusive Events.

Ans 1: 1- If we roll a die, all the six faces of a die are mutually exclusive.

Ans 2: 2- If we toss a coin a head and tail are mutually exclusive.

Q8. What is the difference between an outcome and an event.

Ans 1: An outcome is a particular result of an experiment, whereas an event is the collection of one or more outcomes of an experiment.

Q9. State the properties of a random experiment.

Ans 1: a random experiment has two properties in common, Firstly, each experiment has several possible outcomes which can be described in advance. For example in tossing a coin, the possible outcomes are head and tail.

Q10. What is the axiomatic approach to probability.

Ans 1: In this approach, the probability that an event A will occur is a number $P(A)$ which satisfies the following axioms.
