**Q1) What is the difference between a probability mass function (PMF) and a probability density function (PDF)?**

1. A PMF is continuous, while a PDF is discrete.
2. A PMF is used for continuous random variables, while a PDF is used for discrete random variables.
3. A PMF gives the probability of a specific outcome, while a PDF gives the probability density of an outcome.
4. A PMF and a PDF are equivalent terms.

**Q2) What does the cumulative density function (CDF) represent?**

1. The probability of a specific outcome.
2. The probability density of an outcome.
3. The cumulative probability up to a specific value.
4. The expected value of a random variable.

**Q3) Which of the following is an example of a normal distribution?**

1. The distribution of the number of heads obtained from flipping a fair coin.
2. The distribution of the sum of two dice rolls.
3. The distribution of heights of adult humans.
4. The distribution of the number of cars passing through a toll booth in one hour.

**Q4) What is the formula for the cumulative distribution function (CDF)?**

1. F(x) = P(X > x)
2. F(x) = P(X < x)
3. F(x) = P(X = x)
4. F(x) = P(X >= x)

**Q5) What is the Bernoulli distribution?**

1. A distribution used to model the number of successes in a sequence of independent trials.
2. A distribution used to model the number of occurrences of a particular event in a fixed interval of time.
3. A distribution used to model the number of people in a certain age group.
4. A distribution used to model the number of defective items in a production batch

**Q6) What is the Uniform distribution?**

1. A distribution used to model the number of occurrences of a particular event in a fixed interval of time.
2. A distribution used to model the number of people in a certain age group.
3. A continuous probability distribution with a constant probability density between two limits.
4. A discrete probability distribution with equal probabilities for all outcomes.

**Q7) What are Z-scores used for?**

1. To standardize a normal distribution.
2. To compute the probability of a specific outcome in a normal distribution.
3. To determine if a sample mean is significantly different from a population mean.
4. To determine the range of values that a random variable is likely to take on.

**Answers:**

**Q1)** A PMF gives the probability of a specific outcome, while a PDF gives the probability density of an outcome. (Option C)

**Q2)** The cumulative probability up to a specific value. (Option C)

**Q3)** the distribution of heights of adults humans (Option C)

**Q4)** F(x) = P(X<x) (Option B)

**Q5)** A distribution used to model the number of successes in a sequence of independent trails.(Option A)

**Q6)** A continuous probability distribution with constant probability density between two limits(Option C)

**Q7)** To standardize normal distribution (Option A)