**Q1) Which type of probability distribution is used to model the number of successes in a fixed number of independent trials?**

1. Binomial Distribution
2. Poisson Distribution
3. Normal Distribution
4. Exponential Distribution

**Q2) Which probability distribution is used to model the number of events occurring in a fixed interval of time or space?**

1. Binomial Distribution
2. Poisson Distribution
3. Normal Distribution
4. Exponential Distribution

**Q3) Which probability distribution is symmetric and bell-shaped?**

1. Binomial Distribution
2. Poisson Distribution
3. Normal Distribution
4. Exponential Distribution

**Q4) In a binomial distribution, what is the formula for calculating the probability of k successes in n trials?**

1. P(k) = nCk \* p^k \* (1-p)^(n-k)
2. P(k) = e^(-λ) \* λ^k / k!
3. P(k) = μ + σZ
4. P(k) = λ^k \* e^(-λ) / k!

**Q5) In a Poisson distribution, what is the formula for calculating the probability of k events occurring in a fixed time interval?**

1. P(k) = nCk \* p^k \* (1-p)^(n-k)
2. P(k) = e^(-λ) \* λ^k / k!
3. P(k) = μ + σZ
4. P(k) = λ^k \* e^(-λ) / k!

**Q6) In a normal distribution, what is the percentage of data that falls within one standard deviation of the mean?**

1. 68%
2. 95%
3. 99.7%
4. 100%

**Q7) In a binomial distribution, what happens to the shape of the distribution as the number of trials increases?**

1. It becomes wider.
2. It becomes narrower.
3. It becomes taller.
4. It becomes flatter.

**Q8) In a Poisson distribution, what happens to the shape of the distribution as the mean increases?**

1. It becomes wider.
2. It becomes narrower.
3. It becomes taller.
4. It becomes flatter.

**Answers:**

**Q1)** Binomial Distribution (Option A)

**Q2)** Poison Distribution (Option B)

**Q3)** Normal Distribution (Option C)

**Q4)** P(k) = nCk \* p^k \* (1-p)^(n-k) (Option A)

**Q5)** P(k) = e^(-λ) \* λ^k / k! (Option B)

**Q6)** 68% (Option A)

**Q7)** It becomes narrower (Option B)

**Q8)** It becomes taler (Option C)