PROBABILITY

BERNOULLI TRIALS AND BINOMIAL DISTRIBUTION

EXERCISE (FOR COMPETITIVE EXAM)

Q.1 What is the alternative term for Bernoulli trials?
(a) Two-way experiment (b) Dichotomous experiment
(c) Nucleon experiment (d) Three-way experiment

Q.2 After which Swiss mathematician is the term "Bernoulli trials" named?
(a) Jacob Bernoulli (b) Albert Einstein
(c) Johann Gutenberg (d) Archimedes

Q.3 Bernoulli trials specifically involve outcomes that are mutually exclusive.
(a) True (b) False

Q.4 How many possible outcomes can occur in a Bernoulli trial?
(a) 3 (b) 2 (c) 5 (d) 2^n

Q.5 Bernoulli trials are also known as _____ or _____ questions.
(a) positive, negative
(b) natural, whole
(c) yes, no
(d) mutually exclusive, mutually inclusive

Q.6 To which category of probability distribution does the Poisson distribution belong?

(a) Continuous probability distribution
(b) Sine probability distribution
(c) Discrete probability distribution
(d) Mutual probability distribution

Q.7 The Poisson distribution depicts the expected count of occurrences of an event within a specific time interval.

(a) False (b) True

Q.8 What is the probability formula for the Poisson distribution?
(a) $P(x; \mu) = (e^{-\mu}) (\mu^x) / x!$ (b) $P(x; \mu) = (e^{-x}) (\mu^x) / x!$
(c) $P(x; \mu) = (e^{-\mu}) (\mu) / x!$ (d) $P(x; \mu) = (e^{-\mu}) (\mu^x) / x$

Q.9 What is the expression for the binomial distribution formula?

(a) $P[X = x] = {}^{n}C_{n}\, p^{x}\, q^{n-x}$ (b) $P[X = x] = {}^{x}C_{x}\, p^{x}\, q^{n-x}$

(c) $P[X = x] = {}^{n}C_{x}\, p^{x}\, q^{n-x}$ (d) $P[X = x] = {}^{n}C_{x}\, p^{n}\, q^{n-x}$

Q.10 In a binomial distribution, (n-x) represents the number of successes.

(a) False (b) True

Q.11 $P(x; \mu) = (e^{-\mu})\, (\mu^{x}) / x!$ is the formula for _____

(a) parametric distribution (b) continuous distribution

(c) poisson distribution (d) extreme distribution

Q.12 The formula $P[X = x] = {}^{n}C_{x}\, p^{x}\, q^{n-x}$ represent as _____

(a) parametric distribution (b) binomial distribution

(c) poisson distribution (d) extreme distribution

ANSWER KEY

1. (b)

2. (a)

3. (a)

4. (b)

5. (c)

6. (c)

7. (b)

8. (a)

9. (c)

10. (a)

11. (c)

12. (b)