*POISSON DISTRIBUTION*

1. In a Poisson distribution, if ‘n’ is the number of trials and ‘p’ is the probability of success, the mean value is given by
2. **λ = np**
3. λ = (np)2
4. λ = np(1-p)
5. λ = p
6. If λ is the mean of a Poisson distribution, then variance is given by
   1. λ2
   2. **λ**
   3. λ/2
7. The p.d.f (probability density function) of Poisson distribution is given by
8. If λ is the mean of a Poisson distribution, the standard deviation is given by
   1. λ2
   2. λ
   3. λ/2
9. In a Poisson distribution, the mean and variance are equal
   1. **True**
   2. False
10. In a Poisson distribution, if the mean λ = e, then P(X) is
11. Poisson distribution is applied for
    1. Continuous Random Variable
    2. **Discrete Random Variable**
    3. Irregular Random Variable
    4. Uncertain Random Variable
12. If λ is the mean of Poisson distribution, then P(0) is
    1. e
13. In a Poisson distribution, the mean and standard deviation are equal
    1. True
    2. **False**
14. For a Poisson distribution, if the mean λ = 1, then P(1) is
    1. **1/e**
    2. e
    3. e/2
    4. Indeterminate
15. If calls arrive at a help desk such that the time of arrival of any call is independent of the time of arrival of earlier or future calls, the probability distribution function of the total number of calls in a fixed time interval will be
    1. **Poisson**
    2. Gaussian
    3. Exponential
    4. Gamma
16. Suppose “p” is the number of cars per minute passing through a certain road junction between 5PM and 6PM and “p” has a Poisson distribution with mean 3. What is the probability of observing fewer than 3 cars during any given minute in this interval?
    1. 8/(2e3)
    2. 9/(2e3)
    3. **17/(2e3)**
    4. 26/(2e3)
17. Suppose that a book of 600 pages contains 40 printing mistakes. Assume that these errors are randomly distributed throughout the book and “x”, the number of errors per page has a Poisson distribution. What is the probability that 10 pages selected at random will be free of errors?
18. Ten percent of screws produced in a certain factory turn out to be defective. Find the probability that in a sample of 10 screws chosen at random, exactly two will be defective
    1. **0.2**
    2. 0.25
    3. 0.8
    4. 0.3
19. Cycle tyres are supplied in lots of 10 and there is a chance of 1 in 500 tyres to be defective. Using Poisson distribution, the approximate number of lots containing “no defective tyres” in a consignment of 10000 lots will be: (Note: = 0.9802)
    1. 9.802
    2. 98.02
    3. **9802**
    4. 9800