A

23731 **120 MINUTES**

1. Which of the following is **not** a property of distribution function F(x)?
   A) F(x) is non-decreasing
   B) F(x) is right continuous
   C) The number of discontinuities of F(x) is at most countable
   D) F(0) = 0

2. The probability density function of a random variable X is f(x) = k x (1-x) ; $0 \leq x \leq 1$. What is the value of k?
   A) $\frac{1}{6}$ B) 6 C) 2 D) $\frac{1}{2}$

3. Which of the following statements is /are true?
   1. The speed with which a randomly selected car runs is a discrete random variable.
   2. The number of leaves in a randomly selected tree is a discrete random variable.

   A) 1 only B) 2 only C) Both 1 & 2 D) Neither 1 nor 2

4. An ambulance service team receives calls at the rate of 48 per day. Assume that calls from a Poisson process. From the beginning of a day, how long the ambulance team is expected to wait until they get the first call?
   A) 30 minutes B) 48 minutes C) 60 minutes D) 120 minutes

5. Which of the following statement is/are true?
   1. If E_i is an absorbing state and E_j is any other state of a Markov Chain, and p_{ij} is the probability that a transition occurs between E_i and E_j, then $p_{ii} = 0$.
   2. Probability of a first return is not certain for a persistent state.

   A) 1 only B) 2 only C) Both 1 & 2 D) Neither 1 nor 2

6. If P is a stochastic matrix, then which of the following is true?
   A) P^2 is a stochastic matrix B) P^3 is a stochastic matrix
   C) P^4 is a stochastic matrix D) All the above

7. In an M/M/1 queue having infinite capacity, if the arrival rate is 2 per unit time and service rate is 3 per unit time, then the probability that queue is non empty is:
   A) 0 B) 1/3 C) 4/9 D) 2/3

8. Which of the following statement/s is/are **wrong**?
   1. Lockdowns cause cyclic variations in time series.
   2. Method of moving averages is a method to measure trend of a time series.
   3. Random component of time series can be eliminated by adopting suitable measures.

   A) 1 & 3 only B) 2 & 3 only C) 2 only D) 1 only

9. Choose the correct statement:
   A) There is no relation with depression and cyclical variation of a time series.
   B) Secular trend is a short-term variation.
   C) Ratio to moving average method is used for determining trend.
   D) The period of cyclical components is usually more than a year.

10. Consider the following statements about index numbers.
   1. Laspeyre's index number suffers from downward bias.
   2. Paasche's index number suffers from upward bias.
   3. Fisher's ideal index number satisfies circular test.

   Which among these statements is/are true?

   A) None of these statements are true.
   B) 3 only is true.
   C) 1, 2 & 3are true.
   D) 1 & 2 only are true.

11. Choose the correct statement.
   A) Fisher's ideal index number is the geometric mean of Laspeyre's and Kelly's index numbers.
   B) The arithmetic means of Laspeyre's and Paasche's index numbers is known as Drobish – Bowley's price index number.
   C) For computing Marshall and Edgeworth price index numbers, we use the arithmetic mean of the base and current year prices.
   D) Walsh price index number is also known as fixed weight aggregative index.

12. Let X_1 and X_2 be two independent random variables having pdf

$$f(x) = \begin{cases} \frac{1}{2}; 0 < x < 2 \\ 0; \ otherwise \end{cases}$$

Then $P[X_{(1)} \leq 1]$= -----.

A) $\frac{1}{2}$ B) $\frac{1}{4}$ C) $\frac{3}{4}$ D) $\frac{1}{8}$

13. Which of the following is a Cauchy sequence?

A) $\{\sin \frac{n\pi}{2}\}$ B) $\{\cos n\pi\}$ C) $\{\sin n\pi\}$ D) $\{(1+\frac{1}{n})\cos n\pi\}$

14. For the function

$$f(x) = \begin{cases} x, if\ x\ is\ rational \\ -x, if\ x\ is\ irrational \end{cases}$$

Which of the following statement is true?
   A) Discontinuous for every real
   B) Continuous only at $x = 0$
   C) Continuous at every real x
   D) Discontinuous at $x = 0$

15. If $[x]$ denotes the greatest integer **not** greater than x, then $\int_0^3 [x]\,dx$ is:

A) 3 B) 4 C) 5 D) 6

16. The limit point of the set $\left\{\frac{1}{n}, n \in N\right\}$ is:

A) 0 B) 1 C) 2 D) None of these

17. Let S be a compact subset of a metric space M. Then which of the following is true?

A) S is always open
B) S is closed and bounded
C) S is closed and unbounded
D) None of these

18. If A is an open set and B is a closed set, then which of the following is true?

A) A-B is open, B-A is closed
B) A-B is open, B-A is open
C) A-B is closed, B-A is closed
D) A-B is closed, B-A is open

19. If A and B are unitary matrices, then which of the following statements is / are true?

1. A^T & B^T are unitary
2. A^{-1} & B^{-1} are unitary
3. AB is unitary

A) 1 only B) 1 & 3 only C) 1 & 2 only D) 1, 2 & 3

20. For any two matrices A and B of order n:

A) rank (A)=trace (A)
B) rank (AB) ≤ Min {rank (A), rank (B)}
C) rank (AB) ≤ rank (A) + rank (B) – n
D) All the above

21. If A is a square matrix of order 5, and I_n denotes identity matrix of order n, then

A) $|\text{adj (A)}| = |A|^4$

B) A adj (A) = $|A| I_4$

C) $|\text{adj (A)}| = |A|^5$

D) $|\text{adj (A)}| = |A|^4$ only if A is non-singular

22. Consider the following statements. Here ρ denotes the rank of a matrix.
1. If G is a generalized inverse of the matrix A, then $\rho(G) \leq \rho(A)$
2. If G is a generalized inverse of the matrix A, then AG and GA are Hermitian matrices.
3. Let G be the Moore-Penrose inverse of A. Then $\rho(G) = \text{trace}(GA)$

Which of these statements is/are true?

A) 1 only B) 2 & 3 only C) 1 & 3 only D) 1, 2 & 3

23. Which of the following statement is true?
A) All characteristic roots of an idempotent matrix are equal to 1.
B) The characteristic roots of an orthogonal matrix are either 0 or 1
C) If A and B are two square matrices of same order, then AB and BA have the same characteristic roots.
D) All the above statements are true.

24. Let A and B be two subspaces of a vector space V. Then which of the following statements is correct?
A) $A \cap B$ is not always a subspace of V.
B) $A \cup B$ is always a subspace of V.
C) $A \cap B$ is always a subspace of V.
D) None of the above statements are correct.

25. Let U be a vector space with dimension m (finite) and V be a subspace of U with dimension n. Then
A) $U = V \Longrightarrow m = n$ B) $m = n \Longrightarrow U = V$
C) Both (A) and (B) D) Neither (A) nor (B)

26. Consider a system of non-homogeneous equations in n unknowns A X = B. Let rank (A) = r_1 and rank (A | B) = r_2. Then the true statement among the following is:

A) If $r_1 \neq r_2$, then the system has infinite solutions
B) If $r_1 = r_2 = n$, then the system is inconsistent
C) If $r_1 = r_2 < n$, the system has a unique solution
D) None of the above statements are correct

27. An urn contains red balls and blue balls. A sample of 2 balls is drawn without replacement. If the total number of balls is 10 and the difference between the number of red balls and the number of blue balls is 2, the probability that both the balls drawn are of the same colour is:
A) $\frac{1}{2}$ B) $> \frac{1}{2}$ C) $< \frac{1}{2}$ D) $\frac{3}{4}$

28. A box contains 4 white balls and 6 blue balls. A ball is drawn at random and thrown away without noticing its colour. Then a ball is drawn at random. What is the probability of getting a white ball in the second draw?

A) $\frac{17}{45}$ B) $\frac{8}{225}$ C) $\frac{17}{225}$ D) $\frac{2}{5}$

29. Which of the following statements is/are true?

1. In a sequential probability ratio test, the number of observations required to reject or accept H_0 is fixed before starting the test procedure.
2. In a sequential probability ratio test, the function that gives the probability of accepting H_0 for different values of the parameter is known as the ASN function.
3. The sequential probability ratio test terminates with probability 1

A) 3 only B) 1 only C) 1 & 3 only D) 2 & 3 only

30. $X_1, X_2, \ldots, X_n$ are independently and identically distributed as N (μ, 3^2). If a 95% confidence interval for μ is ($\bar{X}$- 0.98, $\bar{X}$ + 0.98), then n = ----.

A) 17 B) 6 C) 37 D) 36

31. A 98% confidence interval for population proportion P is (0.128, 0.272). The value of sample proportion is:

A) 0.20 B) 0.40 C) 0.10 D) 0.15

32. Which of the following statement about confidence interval for population mean is correct?

A) If the confidence coefficient is 0.95, we are 95% confident that the population mean will lie between the confidence limits
B) Larger the value of population standard deviation narrower will be the confidence interval
C) Larger the value of n, wider will be the confidence interval
D) A 95% confidence interval will be narrower than a 90% confidence interval

33. Choose the correct statement:

A) The magnitude of sampling errors depends on the size of the sample
B) The difference between the parametric value and its estimate derived from a sample cannot be regarded as a sampling error
C) Lack of proper training to the interviewers is a cause of sampling errors
D) Non sampling errors are usually absent in sample surveys

34. Which principle(s) of field experimentation is/are used in a completely randomized design?

1. Local Control 2. Replication 3. Randomization

A) 1 only B) Both 1 & 2 C) Both 2 & 3 D) 1, 2 & 3

35. Choose the **wrong** statement:
    A) Systematic sampling is said to be a type of restricted sampling.
    B) In stratified sampling, we have within homogeneous strata
    C) Cluster sampling is ideal in case the data are widely scattered
    D) In a simple random sampling without replacement from a population with N units, the probability that a certain unit will be selected in the samples of size n is $\frac{n}{N}$

36. A hypothesis test in which the alternative hypothesis is more than 15% of a population are smokers was conducted. The p-value was found to be 0.18. Which of the following statements is correct?
    A) We cannot conclude that more than 15% of the population are smokers.
    B) We can conclude that more than 18% of the population are smokers.
    C) We can conclude that exactly 18% of the population are smokers.
    D) We can conclude that more than 15% of the population are smokers.

37. The non-parametric test equivalent to independent samples t-test is -----.
    A) Wilcoxon signed rank test B) Sign test
    C) Kruskal Wallis test D) Mann-Whitney U test

38. Which of the following is **not** an assumption of Gauss-Markov theorem?
    A) The error term has constant variance
    B) The regression relies on random sampling for collection of data
    C) There is a linear relation among the independent variables.
    D) The expected value of error term is zero.

39. In a randomized block design with one factor having 6 levels and another factor having 4 levels, the degrees of freedom for the error sum of squares are equal to:
    A) 16 B) 15 C) 14 D) 18

40. Which of the following statement/s is/are correct?
    1. In a simple random sampling to draw a sample of size 10 from a population of size 100, the finite population correction is 0.10.
    2. In the case of simple random sampling with replacement, the sample mean is a biased estimator of the population mean.
    3. In simple random sampling with replacement, the variance of the sample mean is more than the variance of the sample mean in the case of simple random sampling without replacement.

    A) 1 & 2 only B) 2 & 3 only C) 3 only D) 1, 2 & 3

41. For a symmetric balanced incomplete block design:
    A) Number of treatments = number of blocks
    B) Number of replications = block size
    C) Both A and B
    D) None of these.

42. If a 2^3 factorial experiment is carried out as a randomized block design with 5 blocks the number of degrees of freedom for error sum of squares is:

A) 28 B) 29 C) 27 D) 25

43. The degrees of freedom for error sum of squares in a Latin Square design is 12. What is the order of the design?

A) 5x5 B) 3x3 C) 4x4 D) 6x6

44. The probability that a student passes an examination is 0.10. The probability that a student passes the examination with more than 80% marks is 0.22. What is the probability that a student gets more than 80% marks if it is given that he passes the examination?

A) $\frac{2}{10}$ B) $\frac{2}{90}$ C) $\frac{1}{20}$ D) $\frac{1}{2}$

45. Let A and B be independent events such that the odds in favour of A is 1:2 and the odds in favour of B is 2:5. What is the probability that exactly one of the events occur?

A) $\frac{1}{2}$ B) $\frac{2}{5}$ C) $\frac{3}{7}$ D) $\frac{8}{15}$

46. Let A and B be two events such that P (A) = $\frac{1}{5}$ and P (B) = $\frac{2}{5}$. Then which of the following statement/s is/are **wrong**?

1. P (A U B) $\geq \frac{3}{5}$ 2. P ($\bar{A}\,\bar{B}$) $\leq \frac{2}{5}$

3. If A & B are independent P (A U B) = $\frac{13}{25}$

A) 1 & 2 only B) 2 only C) 1 only D) 3 only

47. Raju goes to school by bus or by foot. The probability that he goes by bus is 0.6 and by foot is 0.4. The probability that he will be late when he goes by bus is 0.25 and when he goes by foot is 0.30. One day he is late. What is the probability that he goes by foot?

A) $\frac{2}{9}$ B) $\frac{6}{11}$ C) $\frac{1}{9}$ D) None of these

48. In a factory which produces steel screws, there are three machines A, B and C. A produces 30%, B produces 30% and C produces 40% of the total daily output. 2% of the screws produced by machine A, 5% of the screws produced by machine B and 1% of the screws produced by machine C are defective. If one screw is randomly taken out from a day's output, what is the probability that it is defective?

A) 0.00001 B) 0.025 C) 0.25 D) 0.08

49. Suppose that the characteristic function of a random variable X is $\varphi_X(t) = \frac{1}{1+t^2}$. Then the 6^{th} raw moment of X is:

A) 0 B) 6 C) 36 D) 720

50. Which among the following statements is/are true?

1. The mean and standard deviation of an exponential distribution are equal.
2. The sum of independent Cauchy variates is necessarily Cauchy.
3. If X is distributed as exponential with mean $\frac{1}{2}$, then its third raw moment is $\frac{3}{4}$.

A) 1 only B) 1 & 3 only C) 2 & 3 only D) 2 only

51. The moment generating function of a random variable X is given by $M_x(t) = e^{\frac{5}{4}t^2}$. Which of the following is the probability distribution of X?

A) Exponential with mean $\frac{4}{5}$ B) Exponential with mean $\frac{5}{4}$

C) $N\left(0, \left(\sqrt{\frac{5}{2}}\right)^2\right)$ D) $N\left(0, \left(\frac{\sqrt{5}}{2}\right)^2\right)$

52. Which of the following statements is/are **false** about convergence of random variables?

1. $X_n \xrightarrow{L} X \Longrightarrow X_n \xrightarrow{P} X$ 2. $X_n \xrightarrow{L} C$ (constant) $\Longrightarrow X_n \xrightarrow{P} C$

3. $X_n \xrightarrow{a.s} X \Longrightarrow X_n \xrightarrow{P} X$

A) 2 only B) 1 & 3 only C) 2 & 3 only D) 1 only

53. Let $X_1, X_2 \ldots, X_{64}$ be independent and identically distributed random variables each with expected value 3 and variance 16. What is $P[X_1+X_2+\cdots+X_{64} \geq 256]$?

A) 0.0228 B) 0.0456 C) 0.01 D) 0.005

54. If X is a binomial random variable with $\mu_1' = 18$, $\mu_2' = 330$, then the distribution is:

A) Positively skewed B) Negatively skewed
C) Symmetric D) Cannot say with the given information

55. Which of the following statements is/are true?

1. Maximum likelihood estimators are unbiased
2. Maximum likelihood estimators are consistent
3. Maximum likelihood estimators are asymptotically normally distributed

A) 1, 2 & 3 B) 3 only C) 2 & 3 only D) 1 & 3 only

56. Let $X_1, X_2 \ldots . X_n$ be a random sample taken from a population with pdf

$$f(x) = \begin{cases} \theta e^{-\theta x}; x > 0, \ \theta > 0 \\ 0; elsewhere \end{cases}$$

If $\bar{X} = \frac{\sum_{i=1}^{n} X_i}{n}$, then the moment estimator of θ is ---.

A) 2 B) $\frac{1}{\bar{X}}$ C) $\frac{2}{\bar{X}}$ D) $\frac{\bar{X}}{2}$

57. The Cramer-Rao lower bound for the variance of any unbiased estimator of θ based on a sample of size 10 from a population having probability density function

$$f(x) = \begin{cases} \theta e^{-\theta x}; x > 0, \ \theta > 0 \\ 0; elsewhere \end{cases}$$

is …..

A) $\frac{\theta}{10}$ B) $\frac{\theta^2}{10}$ C) $\frac{\theta}{9}$ D) $\frac{\theta^2}{9}$

58. If $X_1, X_2, \ldots, X_n$ is a random sample from a population with pdf $N(\mu, \sigma^2)$, which of the following statements is/are true?

1. $s^2 = \frac{1}{n}\sum_{i=1}^{n}(X_i - \bar{X})^2$ is the maximum likelihood estimator of σ^2
2. $s^2 = \frac{1}{n-1}\sum_{i=1}^{n}(X_i - \bar{X})^2$ is a consistent but biased estimator of σ^2
3. $s^2 = \frac{1}{n}\sum_{i=1}^{n}(X_i - \bar{X})^2$ is a consistent but unbiased estimator of σ^2

A) 2 only B) 1 only C) 3 only D) 1 & 3 only

59. Let $X_1, X_2, \ldots, X_6$ be a random sample from a population having normal distribution $N(10, \sigma^2)$ then,

A) $\sum_{i=1}^{6}(X_i - \bar{X})^2$ is a sufficient statistic for σ^2

B) $\sum_{i=1}^{6}(X_i - 10)^2$ is not a sufficient statistic for σ^2

C) $\frac{6(\bar{X}-10)^2}{\sigma^2} \sim \chi^2$ distribution with 6 degrees of freedom.

D) $\frac{6(\bar{X}-10)^2}{\sigma^2} \sim \chi^2$ distribution with 1 degree of freedom.

60. Suppose that we want to test $H_0: \lambda \leq \lambda_0$ against $H_1: :\lambda > \lambda_0$ based on a random sample $X_1, X_2, \ldots, X_n$ from a population with probability mass function $f(x,\lambda) = \frac{e^{-\lambda}\lambda^x}{x!}$; $x = 0, 1, 2, \ldots; \lambda > 0$. The critical region of the UMP test has the form

A) $\sum_{i=1}^{n} X_i < K$ B) $\sum_{i=1}^{n} X_i > K$ C) $\prod_{i=1}^{n} X_i < K$ D) $\prod_{i=1}^{n} X_i > K$

61. Which of the following distribution does **not** have monotone likelihood ratio property?

A) Binomial B) Cauchy $(1, \theta)$

C) Poisson D) Uniform $[0, \theta]$

62. Choose the **wrong** statement:

A) Kolmogorov – Smirnov one sample test is used for testing goodness of fit.

B) Friedman's test is a non-parametric test equivalent to one-way ANOVA

C) Kolmogorov – Smirnov two sample test is used for testing the hypothesis that two distributions are equal.

D) Wald- Wolfowitz Run test is used for testing the hypothesis that two distributions are equal.

63. Let X_1, X_2, X_3 be independently distributed as N (0,1), N (2,1) and N (10, 1). Let Y = $X_1 - 2X_2 + 3X_3$. What is P (Y$\leq$ 26)?

A) 0.3413 B) 0.6826 C) 0.5 D) 0.9544

64. Let X~ U(0,1), if V = $-2\ log_e$ X and P (V $\geq M$) = $\frac{1}{2}$, then M = --- .

A) 12 B) $log_e \frac{1}{2}$ C) 2 D) $log_e 4$

65. Let F ~ $F_{4,6}$ then

A) X= $(1+\frac{2}{3}F)^{-1}$ ~ beta distribution with parameters (3,2)

B) X= $(1+\frac{2}{3}F)^{-1}$ ~ beta distribution with parameters (2,3)

C) X= $(1+\frac{2}{3}F)$ ~ beta distribution with parameters (3,2)

D) X= $(1+\frac{2}{3}F)$ ~ beta distribution with parameters (2,3)

66. Let (X, Y) ~ bivariate normal (2,3,1,1,0.5) and Z = X+2Y. Which of the following statements is/are **wrong**?

1. P(Z < 8) = 0.5
2. Variance of Z = 7
3. P(Z > 8) = 0.5
4. Variance of Z = 6

A) 1 & 3 only B) 1 & 2 only C) 2 & 3 only D) 4 only

67. Which of the following statement/s is/are correct?

1. If X~ type II beta, then Y = $\frac{1}{1+x}$~ type I beta.
2. If U and V are independent gamma variates, W = $\frac{U}{V}$ is type I beta.

A) 1 only B) 2 only C) Both 1 & 2 D) Neither 1 nor 2

68. Let there be two random variables X and Y having distribution functions F(x) and G(y) respectively, and let H(x,y) be their joint distribution function. Assume that E(X), E(Y) and E(XY) exist. Which of the following statements is/are true?

1. H(x,y) = F(x) G(y) $\Longrightarrow$ X and Y are independent.
2. X and Y are independent $\Longrightarrow$ H(x,y) = F(x) G(y).
3. E(XY) = E(X) E(Y) $\Longrightarrow$ X and Y are independent.

A) 1, 2 & 3 B) 1 & 3 only C) 2 & 3 only D) 1 & 2 only

69. Which of the following statement(s) regarding characteristic function $\varphi_X(t)$ is/are true?
1. t = 0 $\Longrightarrow \varphi_X(t) = 1$ 2. $\varphi_X(t)=1 \Longrightarrow$ t=0 3. $|\varphi_X(t)| \leq 1$

A) 1 & 2 only B) 1 & 3 only C) 2 & 3 only D) 1, 2 & 3

70. If the probability generating functions of a random variable X is given by P(s) =$e^{-\lambda(1-s)}$, $|s| \leq 1$, the variance of X is:

A) $e^{-\lambda}$ B) $e^{-2\lambda}$ C) λ^2 D) λ

71. In how many directions local control is applied in a Latin square design?
A) 2
B) 3
C) Depends on the order of Latin
D) Local control is not applied in Latin square design.

72. A fair die is thrown 1800 times. The lower bound for the probability of getting 250 to 350 ones is:
A) 0.1 B) 0.05 C) 0.9 D) 0.2

73. Let X be a three-dimensional random vector. If the correlation matrix of its components is:

$$\begin{bmatrix} 1 & 0.25 & 0.5 \\ 0.25 & 1 & 0.75 \\ 0.5 & 0.75 & 1 \end{bmatrix}$$

the value of the multiple correlation coefficient $\rho_{2.13}$ is ---.

A) $\sqrt{\frac{3}{7}}$ B) $\sqrt{\frac{2}{3}}$ C) $\sqrt{\frac{2}{7}}$ D) $\sqrt{\frac{7}{12}}$

74. The characteristic function of a 5 variate normal random vector is e^{10i-20}. The characteristic function of mean of a random sample of size N is e^{10i-5}. What is the value of N?
A) 5 B) 4 C) 10 D) 8

75. Pick up the **wrong** statement:

1. If X is distributed as multivariate normal, every linear combination of components of X is univariate normal.
2. If every linear combination of a random vector X is univariate normal, X is multivariate normal.
3. If X is multivariate normal, the marginal distributions of the components of X are univariate normal.

A) 1 & 2 only B) 1 & 3 only C) 1, 2 &3 D) None of these

76. Let T^2 and D^2 respectively denote the Hotelling's T^2 and Mahalanobis D^2 statistic obtained in the testing of equality of mean vectors of two multivariate normal populations based on samples of size 10 and 15. If P $(T^2 \geq \frac{1}{2})$= 0.2 and P $(D^2 \geq U)$ = 0.2 then U= ----.

A) 3 B) 12 C) $\frac{1}{12}$ D) $\frac{1}{3}$

77. Let X_1, X_2, X_3, X_4 be a random sample of size 4 from N_4 (μ, Σ) and let $\overline{X} = \frac{1}{4}\sum_{i=1}^{4} X_i$. Which of the following statements is/are true?

1. $\bar{X}$ is the maximum likelihood estimator of μ

2. $\frac{1}{4}\sum_{i=1}^{4}(X_i - \bar{X})\,(X_i - \bar{X})^T$ is the maximum likelihood estimator of Σ.

3. $\frac{4}{3}\sum_{i=1}^{4}(X_i - \bar{X})\,(X_i - \bar{X})^T$ is the maximum likelihood estimator of Σ.

A) 1 only B) 2 only C) 1 & 2 only D) 1 & 3 only

78. Suppose that X_1, X_2, X_3, X_4 are independent and identically distributed random vectors each having N_2 (μ, Σ) distribution, where Σ is non-singular. Let $\bar{X} = \frac{1}{4}\sum_{i=1}^{4} X_i$ and U = $\frac{1}{1+(\bar{X}-\mu)^T\Sigma^{-1}(\bar{X}-\mu)}$ .Then the value of $-log_e$P (U ≤ $\frac{1}{5}$) is ---.

A) -2 B) $\frac{1}{8}$ C) 8 D) -8

79. Which of the following statements regarding Durbin Watson statistic is true?

1. It's value ranges between 0 and 4.
2. It is used for testing multicollinearity.

A) 1 only B) 2 only C) Both 1 & 2 D) Neither 1 nor 2

80. Let 0, 0.3, 0.7, 0.65, 1.28, 2.83, 1.25, 0.50 be a random sample from U(0, θ). What will be the maximum likelihood estimate of θ ?

A) 0 B) 2.83 C) 0.5 D) 1.28
