Seat No.	

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Total No. of Pages : 28

P. G. Re-Entrance Examination, 2024
M. Sc. (Statistics/Applied Statistics and Informatics)
Subject Code : 58715

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Day and Date : Friday, 28-06-2024 **Total Marks : 100**

Time : 10.30 a.m. to 12.00 p.m.

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Instructions :

1) All questions are compulsory.
2) Each question carries 1 mark.
3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
4) Follow the instructions given on OMR sheet.
5) Rough work shall be done on the sheet provided at the end of question paper.

.....

1) The arithmetic mean and geometric mean of two observations are 10 and 8 respectively, then its H.M. is.....

   A) 6.4 B) 0.8

   C) 1.25 D) 4

2) Half of the interquartile range is.....

   A) Inter quartile range

   B) Coefficient of range

   C) Quartile deviation

   D) None of these

3) For positively skewed distribution, the correct relation between mean, median and mode is....

A) Mean < Median < Mode

B) Median < Mean < Mode

C) Median > Mean > mode

D) Mode < Median < Mean

4) Symbolic notation of non-occurrence of both the events A and B is

A) $(A \cap B)^C$ B) $(A \cup B)^C$

C) $(A \cap B)$ D) $1 - (A \cup B)^C$

5) For two mutually exclusive events A and B defined on sample space 2, P(A\BC)

A) $\frac{P(A)}{1-P(B)}$ (B) $\frac{P(A)}{P(B)}$

C) $\frac{P(A)}{P(B^C)}$ D) $\frac{P(A \cap B)}{P(B^C)}$

6) Cov (aX + b, cY + d) = ...

A) *ac Cov (X, Y) + bd* B) *ac Cov(X, Y)*

C) *Cov(X,Y)* D) *ac Cov(X, Y) - bd*

7) Regression coefficients are independent of change of.....

A) origin B) scale

C) Both origin and scale D) shape

8) Which of the following index number satisfied the factor reversal test?

A) Fisher index number B) simple GM of price relative

C) Marshall-Edgeworth index D) None of these

9) If X and Y are two independent binomial variates with parameters (*n1,p1*) and (*n2,p2*) respectively then X + Y.....

A) Follows Binomial distribution with parameter $(n_1 + n_2, p_1 + p_2)$

B) does not follow binomial distribution

C) follows Binomial with parameter $(n_1 + n_2, p_1 + p_2)$

D) Hypergeometric distribution

10) The conditional mean E(X | Y=y) is a function of .....

A) y B) X

C) x+y D) None of these

11) If X and Y are two i. i. d. exponential variates with mean 9, then distribution of X + Y is .....

A) E (2θ) B) E(2 /θ)

C) G (2,θ) D) G(2,1 / 8)

12) If all four components of time series operate independently then we can use .....

A) additive model B) multiplicative model

C) exponential model D) any one of these

13) Level of significance is .....

A) accepting H. when it is false

B) rejecting Ho when it is true

C) Probability of accepting Ho when it is false

D) probability of rejecting H. when it is true

14) The causes leading to extra large variation in quality of product are due to.....

A) randomness in process B) removable causes

C) non-traceable causes D) all of these

15) If X and Y are two independent x2 variates with m and n degrees of freedom respectively, then $\frac{x}{y}$ has .....distribution

A) Normal B) Chi square

C) gamma D) beta

16) For trivariate data on variables X_1, X_2 and X_3 measured from their respective means, If $r_{12} = 0$, $r_{13} = 0$ then $R^2_{1.2.3} =$ .....

A) 0 B) 1

C) -1 D) r_{23}

17) For the part of a population .....is calculated as measure of death rate.

A) crude death rate B) Standardised death rate

C) specific death rate D) Vital index

18) In SRSWOR, the probability of specific unit is selected in a sample of size 'n' from population of 'N' units is

A) $\binom{N}{n}$ B) $\frac{1}{\binom{N}{n}}$

C) $\frac{n}{N}$ D) $\frac{N}{n}$

19) The standardization property of m. g. f. says that $M_x(0)$ = ...

A) 0 B) 0 1

C) -1 D) ∞

20) ..... distribution has lack of memory property

A) exponential

B) geometric

C) both exponential and geometric

D) none of these

21) If X follows Laplace distribution with location parameter u and rate parameter 2 then S.D. (X) is.....

A) $\lambda/\sqrt{2}$ B) $\sqrt{2}/\lambda$

C) $\sqrt{2}/\lambda$ D) $\frac{\sqrt{2}\lambda}{\lambda/2}$

22) If a r.v. X has log-normal distribution with parameters and o' then median of Y=log(X) is.....

A) 0 B) μ

C) e^{μ} D) 1

23) If X ~ $C(\mu, \lambda)$then Q.D. ithen Q.D. is.....

A) μ B) $(\mu+\lambda)$

C) $(\mu-\lambda)$ D) λ

24) If X follows Weibull distribution with parameter (1,1) then cdf of X is .....

A) e^{-x} B) $1- e^{-x}$

C) $1 + e^{x}$ D) $1 - e^{x}$

25) If X follows logistic distribution with mode 8, then the mean of X is.

A) 16 B) 8

C) 4 D) 0

26) If X has Pareto distribution with parameters a and *B* then value of Karl person coefficient of skewness is.....

A) $\sqrt{\frac{\alpha-2}{\alpha}}$ B) $\sqrt{\frac{2-\alpha}{\alpha}}$

C) $\sqrt{\frac{\alpha-1}{\alpha}}$ D) $\sqrt{\frac{1-\alpha}{\alpha}}$

27) Which of the following distributions can be expressed in terms of power series ?

A) Binomial

B) Pareto

C) Logistic

D) Continuous Uniform

28) With usual notations mgf of Multinomial distribution is .....

A) $(p_1e^{t1} + p_2e^{t2} + ... + p_ke^{tk})^n$

B) $(p_1e^{t1} + p_2e^{t2} + ... + p_ke^{tk})^1$

C) $(p_1e^{t1} + p_2e^{t2} + ... + p_ke^{tk})^{-n}$

D) $(p_1e^{t1} + p_2e^{t2} + ... + p_ke^{tk})^{-1}$

29) If X follows left truncated Poisson distribution with parameter A and truncated at X=0, then E(X) =

A) $\frac{\lambda}{1-e^{-\lambda}}$

B) $\frac{1}{1-e^{-\lambda}}$

C) $\frac{\lambda^2}{1-e^{-\lambda}}$

D) $\frac{\lambda}{(1-e^{-\lambda})^2}$

30) If (X,Y) ~BN(1,2,9,16,0.5) then covariance between X and Y is .....

A) 6 B) 72

C) 30 D) 12

31) The MLE of parameter o^a based on sample size taken 10 from N(5,o^2) population is .....

A) $\frac{\sum_{i=1}^{10}(X_i - \bar{X})^2}{9}$ B) $\frac{\sum_{i=1}^{10}(X_i - 5)^2}{9}$

C) $\frac{\sum_{i=1}^{10}(X_i - \bar{X})^2}{10}$ D) $\frac{\sum_{i=1}^{10}(X_i - 5)^2}{10}$

32) Likelihood is a function of.....

A) Parameters for given sample

B) Random sample for given parameters

C) Estimator with given sample

D) Statistic for given parameters

33) If T is sufficient for θ then $\frac{\partial logL}{\partial \theta}$ is function of ---.

A) Tonly B) θ only

C) both θ and T D) constant

34) MSE of an estimator T for parameter & is expressed as,

A) $V(T) + bias(T,\theta)_2$ B) $V(T) + bias(1,\theta)$

C) $V(T^2) + bias(T,\theta)_2$ D) $V(T^2) + bias(T,\theta)$

35) An unbiased estimator with its variance tend to zero and n co then it is

A) Unbiased B) Consistence

C) Efficient D) Biased

36) $T_1 = \frac{X_1+X_2}{2}, T_2 = \frac{2X_1+3X_2}{5}$ be two unbiased estimators of population mean. Then

A) T_1 is more efficient than T_2

B) T_1 is less efficient than T_2

C) T_1 and T_2 are equally efficient.

D) T_2 is more efficient than T_1

37) The standard error of the mean of a sample of size 36 taken from N(10,144) is .....

A) 12 B) 1/3

C) 4 D) 2

38) Let $X_1, X_2, \ldots\ldots X_n$ be a random sample of size n taken from hypergeometric distribution with parameters (n, N, M). what is moment estimator of M if n = 6,N = 20.

A) $\frac{\bar{X}}{6}$ B) $\frac{20\bar{X}}{6}$

C) $\frac{6\bar{X}}{20}$ D) $\frac{\bar{X}}{20}$

39) The sufficient statistic of the parameter λ of Poisson distribution based on a sample X_1,X_2,X_3 is given by .....

A) $X_1 + X_2 + X_3$ B) X1+2X+X

C) 2X+X+X3 D) X1+X+2X3

40) Which of the following statement is true?

A) If T is the MLE of θ then T^2 is the MLE θ^2

B) If T is unbiased for θ then T^2 is unbiased for θ^2

C) If T is sufficient for θ then T^2 is sufficient for θ

D) If 'T is consistent estimator for 0 then T^2 is consistent estimator of θ

41) Missing observation in a completely randomized block design is to be ....

A) estimated B) deleted

C) guessed D) none of the above

42) A randomized block design has .....

A) one way classification B) two way classification.

C) three way classification D) no way classification

43) In Latin square design, number of rows, columns and treatments are .....

A) always equal B) all different

C) not necessarily equal D) none of the above

44) CRD are most suitable in the situations when .....

A) all experimental units are homogeneous experimentation

B) the units are likely to be destroyed during the analysis

C) some units are likely to fail to response

D) all of the above

45) With usual notation, the formula for estimating one missing value in a randomized block design having b blocks and k treatments is .....

A) $\frac{bT'+kB'-G'}{(b-1)(k-1)}$ B) $\frac{bB'+bT'-G'}{(b-1)(k-1)}$

C) $\frac{kT'+bB'-G'}{(b-1)(k-1)}$ D) $\frac{bT'+kB'-G}{(b-1)(k-1)}$

46) The additional effect gained due to combined effect of two or more factors is known as .....

A) main effect B) interaction effect

C) Either of (A) or (B) D) neither of (A) nor (B)

47) If different effects are confounded in different blocks, it is said to be ....

A) complete confounding

B) partial confounding

C) balanced confounding

D) none of the above

48) The interaction of Factor A with factor B is .....

A) $\frac{1}{2}(a-1)(b-1)$

B) $\frac{1}{2}(a+1)(b-1)$

C) $\frac{1}{2}(a-1)(b+1)$

D) $\frac{1}{2}(a+1)(b+1)$

49) Efficiency of LSD over RBD considering columns as blocks is .....

A) $\frac{S_C^2+mS_E^2}{(m+1)S_E^2}$

B) $\frac{S_B^2+mS_E^2}{(m+1)S_E^2}$

C) $\frac{S_R^2+mS_E^2}{(m+1)S_E^2}$

D) $\frac{S_R^2+mS_E^2}{(m-1)S_E^2}$

50) Statistical error of the difference between two treatment means in case of mx m Latin square design with mean error sum square SE will be .....

A) $\frac{\sqrt{2}\times S_E^2}{m}$

B) $\frac{2\times S_E^2}{m}$

C) $\frac{S_E^2}{(m+1)}$

D) None of these

51) What would be the output of the following code?

x= c ("a", "b", "c", "c", "d", "a");

x [x="a" I x! = "a"]

A) TRUE FALSE FALSE FALSE FALSE TRUE

B) FALSE TRUE TRUE TRUE TRUE FALSE

C) TRUE TRUE TRUE TRUE TRUE TRUE

D) "a" "b" "c" "c" "d" "a"

52) What would be the output of the following R-code?

x1-x2-x3=c (1,2,3)

sum (x 1 + x 2) + x 3

A) 6

B) 4 5 6

C) 13 14 15

D) 3 6 9

53) Let X ~ B(10,0.3). The R-command to compute P(X > 4) is.....

A) pbinom (4,10,0.3) B) pbinom (6,10,0.3)

C) 1-pbinom (4,10,0.3) D) 1-pbinom (5,10,0.3)

54) The output of the following R program is

```
x = c(45,20,35,10)
y-c (4,1)
t-1
for(i in y) {
if ( x [i] < 40 )  t = t + i
}
t
```

A) 2 B) 3

C) 4 D) 5

55) The output of the following R program is.....

```
x = c (10, 25, 35, 37)
s1 = 0 ; s2 = 0
for (i in 1:2) {
while (sl< = 10) {
sl = sl + x [i]
2-2+x[i]  /5
}
c (s1, s2)
```

A) 10 2 B) 20 4

C) 30 7 D) 65 14

56) ..... is helpful in searching the root-cause of a problem.

A) Flow chart B) Control chart

C) Check sheet D) Fishbone diagram

57) ..... popularized the PDCA cycle.

A) Shewhart B) Deming

C) Montgomery D) Fisher

58) Which phase of the DMAIC methodology focuses on identifying the root causes of defects?

A) Define B) Measure

C) Analyze D) Improve

59) What is the advantage of using a CUSUM control chart over a Shewhart control chart?

A) It requires less computational effort.

B) It can detect small shifts in the process mean more quickly.

C) It is easier to understand for non-statisticians.

D) It provides more detailed information about individual data points.

60) What does AOQ represent in attribute acceptance sampling?

A) Average Outgoing Quality

B) Average Outgoing Quantity

C) Average Operational Quality

D) Average Operational Quantity

61) Let X_1 , X_2 .....X_n IS order statistic of size n from U (0,1) then mean of range is.....

A) $\frac{n-1}{n+1}$

B) $\frac{1}{n+1}$

C) $\frac{n}{n+1}$

D) $\frac{n+1}{n-1}$

62) If X_1, X_2 .....X_n is r.s form standard exponential distribution then probability distribution of min {X_1, X_2 .....X_n} is .....

A) exponential with mean one

B) exponential with mean n

C) exponential with mean 1/n

D) None of these

63) If $X_n \xrightarrow{P} x$, then .....

A) $X_n + c \xrightarrow{P} x$

B) $X_n + c \xrightarrow{P} cx$

C) $X_n + c \xrightarrow{P} x + c$

D) $X_n + c \xrightarrow{P} c$

64) A sequence of random variables (x_n, n ≥ 1} is said to converges in distribution function to x if,

A) $\lim_{n\to\infty} f_n(x) = 1$

B) $\lim_{n\to\infty} f(x) = 0$

C) $\lim_{n\to\infty} f_n(x) = 0$

D) None of the above

65) Chebyshev's inequality is used to obtain .....

A) Lower bound for probability

B) Lower bound for variance

C) Upper bound for Variance

D) Both B and C are true

66) Central limit theorem gives Convergence in distribution of a Sample mean it says that sample mean (X_n) converges in distribution to.....

A) Population Mean

B) Normal distribution

C) Both a & b

D) None of the above

67) Structure function can take values.....

A) Only 1 B) Only 0

C) 0 and 1 D) 2

68) Structure function $\varphi(\underline{X})$ for series system of n independent components is given by .....

A) $\varphi(\underline{X}) = \text{Max}\{x_1, x_2, ..., x_i, ... x_n)$

B) $\varphi(\underline{X}) = \prod_{i=1}^{n} xi$

C) $\varphi(\underline{X}) = 1 - \prod_{i=1}^{n} x_i$

D) $\varphi(\underline{X}) = \prod(1 - x_i)$

69) Which of the following option is correct for reliability function or survival function at time t?

A) P [T >]

B) 1-F (t)

C) 1-P [T ≤ t]

D) All the above

70) A component has hazard rate 2 then value of survival function is.....

A) e^{-2t}

B) $2e^{-2t}$

C) 1- e^{-2t}

D) None of the above

71) Which of the following statements about SPRT is/are true?

Statement-I: Sample size (n) is Not fixed

Statement-II: P (Type I error) = *a* is minimized for fixed

P (Type II error) = β

Statement-III: P(Type II error) = β is minimized for fixed *a.*

A) Only statements (1) and (II) are true.

B) Only statement (1) is true.

C) Only statement (11) is true

D) All statements (1), (II) and (III) are true

72) Let X_1, X_2,..... X_n is a random sample of size $N(\mu, \sigma^2)$ with known σ^2. Then Which of the following is not pivotal quantity?

A) $\bar{X} - \mu$

B) $\frac{\sqrt{n}(\bar{X}-\mu)}{\sigma}$

C) $X_1 - \mu$

D) $X_1 + X_2 - \mu$

73) Which of the following factors does not affect the width of a confidence interval?

A) Sample size B) Confidence Level

C) Variability of the population D) None of these

74) Which of the following is not true?

A) Confidence interval is subset of sample space

B) Confidence Interval is subset of parameter space

C) As sample size increases width of confidence interval decreases

D) Confidence interval guarantees that the population parameter falls within the interval with some assurance.

75) Power curve is a curve obtained by plotting $\theta_1 \in \Theta_1$, verses....

A) 1-Probablity of Type I error

B) Probability of Type II error

C) Probability of rejecting the null hypothesis at 8,

D) Probability of accepting the null hypothesis at 01

76) Let X_1, X_2, X_3, ... X_n be a random sample of size n taken from Exp (mean θ) population. Then critical region for UMP test for H_0 against H_1: $\theta > \theta_0$ is

A) $\sum X_i > k$ B) $\sum X_i < k1$ or $\sum X_i > k2$

C) $\sum X_i < k1$ D) $k1 < \sum X_i < k2$

$N(\mu_i, \sigma^2)$, where σ^2 is known.

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77) Let X_1, X_2,..... X_n, and Y_1, Y_2, Yn be two independent random samples of sizes n_1 and n_2 respectively from normal populations $N(\mu_i, \sigma^2)$, where σ^2 is known. Then the LRT for testing Ho: 1 = μ2 against H112

A) Rejects H_0 if $|\bar{X} - \bar{Y}| > \sigma\sqrt{\frac{1}{n_1} + \frac{1}{n_2}} Z_{\frac{\alpha}{2}}$

B) Rejects H_0 if $\frac{\bar{X}-\bar{Y}}{\sigma\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}} > Z_{\frac{\alpha}{2}}$

C) Rejects H_0 if $\frac{\bar{X}-\bar{Y}}{\sigma\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}} < Z_{\frac{\alpha}{2}}$

D) Rejects H_0 if $-Z_{\frac{\alpha}{2}} < \frac{\bar{X}-\bar{Y}}{\sigma\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}} < Z_{\frac{\alpha}{2}}$

78) The Sign test is primarily used for :

A) Comparing means of two independent samples

B) Testing the equality of variances in two independent samples

C) Analyzing differences between two related samples

D) Assessing the randomness of a sequence of observations

79) Which one of the following tests can be used as a one sample goodness of fit test for continuous distribution?

A) Mann Whitney Test B) KS-Test

C) Sign-test D) Student's t-Test

80) What is the null hypothesis in the run test for randomness?

A) The data follows a specific distribution

B) There is no pattern or structure in the sequence of observations

C) The mean of the observations is equal to a specified value

D) The observations are independent and identically distributed

81) In SRSWR, an estimate of the coefficient of variation of an estimator of population mean is ..... .

A) $\sigma/(\sqrt{n}\ \bar{y})$ B) $s/(\sqrt{n}\ \bar{y})$

C) $s/(\sqrt{N}\ \bar{y})$ D) None of the above

82) A simple random sample (without replacement) of size n is drawn form a finite population of size N($\geq$ 7). What is the probability that the 4th population unit and the 6th population unit are not included in the sample?

A) $\frac{n(n-1)}{N(N-1)}$

B) $\frac{N(N-1)-n(n-1)}{N(N-1)}$

C) $\frac{(n-1)(N-n+1)}{N(N-1)}$

D) $\frac{n}{N}$

83) A simple random sample of size a will be drawn from a class of 125 students, and the mean mathematics score of the sample will be computed. If the varaince of the sample mean for "with replacement sampling" is twice as much as the varaince of the sample mean for "without replacement sampling, the value of n is

A) 36 B) 63

C) 49 D) 94

84) Suppose there are k strata of $N = kM$ units each with size of size n_1 with replacement from i^{th} stratum and denote $\bar{y}_i$ as the sample mean of the study variable selected in the i^{th} stratum, $i = 1, 2, ..., k$. Define $\bar{y}_{s1} = \frac{1}{k}\sum_{i=1}^{k}\bar{y}_i$ and $\bar{y}_{s2} = \frac{\sum_{i=1}^{k} n_i\bar{y}_i}{n}$. Which of the following is necessarily true?

A) $\bar{y}_{s1}$ is unbiased but $\bar{y}_{s2}$ is not unbiased for the population mean

B) $\bar{y}_{s1}$ is not unbiased but $\bar{y}_{s2}$ is unbiased for the population mean

C) Both $\bar{y}_{s1}$ and $\bar{y}_{s2}$ are unbiased for the population mean

D) Neither $\bar{y}_{s1}$ nor $\bar{y}_{s2}$ is unbiased for the population mean

85) Under SRSWOR, what is the required sample size to draw inference about the population for large N with $S = 20$, coefficient of variation of the estimator 2 and 95% confidence coefficient?

A) 19 B) 384

C) 16 D) 365

86) Under stratified sampling which of the following is not true?

A) $\bar{y} = \frac{\sum_{i=1}^{k} n_i\bar{y}_i}{n}$ is biased estimators of population mean $\bar{Y}$.

B) If $k = \frac{N}{N_i}$ then $\bar{y} = \frac{\sum_{i=1}^{k}\bar{y}_i}{k}$ is a biased estimator of population mean $\bar{Y}$

C) $\bar{y} = \frac{\sum_{i=1}^{k} N_i\bar{y}_i}{N}$ is unbiased estimator of population mean $\bar{Y}$.

D) $\bar{y} = \frac{\sum_{i=1}^{k} N_i\bar{y}_i}{N}$ is unbiased estimator of population mean $\bar{Y}$.

87) Consider a finite population of Nnk units, where n (≥ 2), k (≥2) are integers. A linear systematic sample of n units is drawn from the population which of the following is false?

A) The probability that the ith units is included in the sample is 1/k, i= 1,2,..., N.

B) I If π_{ij} denotes the probability of inclusion of the units i and in the sample, $i \neq j, i, j$ = 1,2,..., N, then U_{ij} is zero for some pairs *(i, j).*

C) An unbiased estimator of the population mean of a study variable is the sample mean.

D) If π_{ij} denotes the probability of inclusion of the units *i* and *j* in the sample, $i \neq j, i, j = 1, 2, \ldots, N$, then π_{ij} is non zero for all pairs *(i, j).*

88) A researcher uses systematic random sampling from directory that has 900 employees listed in alphabetical order. If the desired sample size is 30, and the first name to be selected is number 362, which of the following will not be selected?

A) 62

B) 512

C) 2

D) 428

89) Which of the following is an advantage of cluster sampling?

A) It eliminates the possibility of sampling bias.

B) It allows for easy identification of population segments.

C) It is cost-effective and less time-consuming compared to other sampling methods.

D) It ensures every member of the population has an equal chance of being selected.

90) What is the purpose of regression estimation method in sampling?

A) To estimate the population parameters without using auxiliary information

B) To improve the precision of estimates by utilizing the relationship between auxiliary and

C) study variables To reduce sampling error by selecting a representative sample

D) To eliminate the need for stratification in sampling

91) The set of decision variable which satisfies all the constraints of the LPP is called as .....

A) Solution B) Basic Solution

C) Feasible solution D) Optimal solution

92) If, when we are using a Simplex table to solve a maximization problem, we find that the ratios for determining the pivot row are all negative, then we know that the solution is

A) Unbounded. B) Infeasible

C) Degenerate. D) Optimal.

93) When the allocations of a transportation problem satisfy the rim condition (m+n-1) the solution is called solution.

A) Degenerate B) Infeasible

C) Unbounded D) Non-Degenerate

94) One disadvantage of using North-West Corner Rule to find initial solution to the transportation problem is that

A) It Is Complicated To Use

B) It Does Not Take Into Account Cost Of Transportation

C) It Leads To Degenerate Initial Solution

D) All Of The Above

95) The occurrence of degeneracy while solving a transportation problem means that

A) Total Supply Equals Total Demand

B) The Solution So Obtained Is Not Feasible

C) The Few Allocations Become Negative

D) All Of The Above

96) When does an unbalanced assignment problem occur?

A) When the number of tasks is equal to the number of agents/persons

B) When the number of tasks exceeds the number of agents/persons

C) When the number of tasks is less than the number of agents/persons

D) When the number of tasks is irrelevant

97) What is the goal of computations of elapsed time and idle times?

A) Maximizing machine utilization

B) Minimizing total completion time

C) Identifying bottleneck machines.

D) Analyzing machine scheduling efficiency

98) In queuing theory, what does the steady state of a system refer to?

A) The initial period when the system is adjusting to changes

B) The period when the system has reached a stable condition

C) The period when the system is shutting down

D) The period when the system is experiencing high variability

99) Which of the following are the properties of random numbers?

A) Uniform and Dependent

B) Uniform and independent

C) Non-uniform and independent

D) Non-uniform and dependent

100) To generate the random number from exponential with parameter θ, with U~U[0,1]

A) 1-exp(- θ U)

B) exp(-θ U)

C) (-1 / θ) log (1-U)

D) (1 / θ) log (1-U)

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- Rough Work - **ENT - 40**