National Testing Agency

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AGRICULTURAL STATISTICS

Group Number :	1
Group Id :	55317223
Group Maximum Duration :	0
Group Minimum Duration :	180
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Group Marks:	800

Part A : General Knowledge

Section Id :	55317231
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	80
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	55317253
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 5531723715 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

There is a parliamentary system of Government in India because the

(1) Lok Sabha is elected directly by the people.

(2) Parliament can amend the Constitution.

(3) Rajya Sabha cannot be dissolved.

(4) Council of the ministers are responsible to the Lok Sabha.

Options :

55317214801. 1

55317214802. 2

55317214803. 3

55317214804. 4

Question Number : 2 Question Id : 5531723716 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Gilt – edged market refers to

(1) Bullion market
(2) Market of Govt. Securities
(3) Market of guns
(4) Market of pure metals

Options :

55317214805. 1

55317214806. 2

55317214807. 3

55317214808. 4

Question Number : 3 Question Id : 5531723717 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following is known as the 'Coffee Port' of the world?

(1) Sao Paulo
(2) Santos
(3) Rio de Janeiro
(4) Buenos Aires

Options :

55317214809. 1

55317214810. 2

55317214811. 3

55317214812. 4

Question Number : 4 Question Id : 5531723718 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For increasing milk production, which state launched Rs.215 crore project
'Milk Mission' in July, 2018?

(1) Meghalaya
(2) Assam
(3) Tripura
(4) Nagaland

Options :

55317214813. 1

55317214814. 2

55317214815. 3

55317214816. 4

Question Number : 5 Question Id : 5531723719 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is the main characteristic of mixed farming?

(1) Cultivation of both cash crops and food crops.
(2) Cultivation of two or more crops in the same field.
(3) Cultivation of crops and rearing of animals together.
(4) Cultivation of fruits and vegetables.

Options :

55317214817. 1

55317214818. 2

55317214819. 3

55317214820. 4

Question Number : 6 Question Id : 5531723720 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

When you travel in certain parts of India, you will notice red soils. What is the main reason for this colour?

(1) Abundance of magnesium
(2) Accumulated humus
(3) Presence of ferric oxides
(4) Abundance of phosphates

Options :

55317214821. 1

55317214822. 2

55317214823. 3

55317214824. 4

Question Number : 7 Question Id : 5531723721 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following sets of elements were primarily responsible for the origin of life on the earth?

(1) Carbon, Hydrogen, Nitrogen
(2) Hydrogen, Oxygen, Sodium
(3) Oxygen, Calcium, Phosphorous
(4) Carbon, Hydrogen, Potassium

Options :

55317214825. 1

55317214826. 2

55317214827. 3

55317214828. 4

Question Number : 8 Question Id : 5531723722 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following statement is NOT true?

(1) Khaira is a disease found in paddy.
(2) False smut is a disease found in barley.
(3) Rust disease is found in wheat.
(4) Early blight is a disease found in potato.

Question Number : 9 Question Id : 5531723723 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Golden rice variety has been developed to combat the deficiency of

    (1) Iron

    (2) Vitamin C

    (3) Calcium

    (4) Vitamin A

Question Number : 10 Question Id : 5531723724 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A person of mixed European and Indian blood in Latin America is called a

    (1) Mulato

    (2) Mestizo

    (3) Meiji

    (4) Mau Mau

Question Number : 11 Question Id : 5531723725 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In the context of International Trade 'Early Harvest Package' refers to

    (1) A precursor to a free trade agreement between two trading partners.

    (2) A clause related to the agreement on agriculture under the WTO.

    (3) A subsidy mechanism given to the developing countries for trade in agriculture.

    (4) A transportation agreement signed between countries for the movement of goods.

Question Number : 12 Question Id : 5531723726 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The nitrogen present in atmosphere is

(1) of no use to plants
(2) injurious to plants
(3) directly utilized by the plants
(4) utilized through micro organism

Options :

55317214845. 1

55317214846. 2

55317214847. 3

55317214848. 4

Question Number : 13 Question Id : 5531723727 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Agricultural Scientist M.S. Swaminathan received an honorary medallion from India for his contribution towards the development of agricultural practices from which country?

(1) Canada
(2) Australia
(3) New Zealand
(4) Mexico

Options :

55317214849. 1

55317214850. 2

55317214851. 3

55317214852. 4

Question Number : 14 Question Id : 5531723728 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

ICAR, New Delhi has identified three BT cotton varieties for cultivation in Punjab, Haryana and Rajasthan; which were developed by Punjab Agricultural University (PAU), Ludhiana recently. Which one of the following is NOT among those three?

(1) PAU BT - 1
(2) BT -1861
(3) F - 1861
(4) RS – 2013

Options :

55317214853. 1

55317214854. 2

55317214855. 3

55317214856. 4

Question Number : 15 Question Id : 5531723729 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Most abundant Carbohydrate in the world is

(1) Pectin
(2) Rubisco
(3) Hemicellulose
(4) Cellulose

Options :

55317214857. 1

55317214858. 2

55317214859. 3

55317214860. 4

Question Number : 16 Question Id : 5531723730 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following is known as queen of spices?

(1) Clove
(2) Pepper
(3) Nutmeg
(4) Cardamom

Options :

55317214861. 1

55317214862. 2

55317214863. 3

55317214864. 4

Question Number : 17 Question Id : 5531723731 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In which city has NABARD launched South East Asia's first centre for 'Climate Change'?

(1) Jaipur
(2) Patna
(3) Lucknow
(4) Chennai

Options :

55317214865. 1

55317214866. 2

55317214867. 3

55317214868. 4

Question Number : 18 Question Id : 5531723732 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

World Bank assisted project SMART was launched in

(1) Rajasthan
(2) Gujarat
(3) Maharashtra
(4) Punjab

Options :

55317214869. 1

55317214870. 2

55317214871. 3

55317214872. 4

Question Number : 19 Question Id : 5531723733 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

National Research Centre for grapes is located at

(1) Nashik

(2) Pune

(3) Muzaffarpur

(4) Lucknow

Options :

55317214873. 1

55317214874. 2

55317214875. 3

55317214876. 4

Question Number : 20 Question Id : 5531723734 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The National Milk Day which marks the birth anniversary of father of White Revolution Dr. Verghese Kurien is celebrated on

(1) November 23

(2) November 24

(3) November 25

(4) November 26

Options :

55317214877. 1

55317214878. 2

55317214879. 3

55317214880. 4

Part B : AGRICULTURAL STATISTICS

Section Id :	55317232
Section Number :	2
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	180
Number of Questions to be attempted:	180
Section Marks:	720
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	55317254
Question Shuffling Allowed :	Yes

Question Number : 21 Question Id : 5531723735 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Data reveals that 10% plants die due to a particular disease. It is found that the first nine plants have survived. What is the probability that tenth plant would survive?

1) 0.9
2) 0.1
3) 0.5
4) 1.0

Options :

55317214881. 1

55317214882. 2

55317214883. 3

55317214884. 4

Question Number : 22 Question Id : 5531723736 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For Poisson Distribution:

1) Mean > Variance
2) Mean < Variance
3) Mean = Variance
4) Mean = $(Variance)^{1/2}$

Options :

55317214885. 1

55317214886. 2

55317214887. 3

55317214888. 4

Question Number : 23 Question Id : 5531723737 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For the standard normal curve, area to the left of the point $Z = 1.96$ is

1) 97.5%
2) 95%
3) 5%
4) 2.5%

Options :

55317214889. 1

55317214890. 2

55317214891. 3

55317214892. 4

Question Number : 24 Question Id : 5531723738 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given $P(A) = 1/3$, $P(B) = 3/4$, $P(A \cup B) = 11/12$. Then what is the value of $P(B \mid A)$?

1) 0
2) 1/6
3) 4/9
4) 1/2

Options :

55317214893. 1

55317214894. 2

55317214895. 3

55317214896. 4

Question Number : 25 Question Id : 5531723739 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

An unbiased coin is tossed n times. Then what is the probability of getting 'Head' an even number of times?

1) $1/2^n$
2) $(1/2)^n$
3) $1/2$
4) 1

Options :

55317214897. 1

55317214898. 2

55317214899. 3

55317214900. 4

Question Number : 26 Question Id : 5531723740 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a binomial distribution, mean is 6 and variance is 4; then what is the probability of failure?

1) 0
2) 1/3
3) 1/2
4) 2/3

Options :

55317214901. 1

55317214902. 2

55317214903. 3

55317214904. 4

Question Number : 27 Question Id : 5531723741 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If X and Y are two independent random variables following normal distributions N (2, 1) and N (3, 4) respectively, then what is the variance of the random variable

$Z = 3 X + 2 Y$?

1) 11
2) 12
3) 25
4) 30

Options :

55317214905. 1

55317214906. 2

55317214907. 3

55317214908. 4

Question Number : 28 Question Id : 5531723742 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

What are the appropriate degrees of freedom of t - test for testing the equality of means of two independent normal populations based on random samples of sizes 15 and 13 respectively?

1) 26
2) 28
3) 30
4) 168

Options :

55317214909. 1

55317214910. 2

55317214911. 3

55317214912. 4

Question Number : 29 Question Id : 5531723743 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

What is the range of chi – square distribution?

1) -1 to $+1$
2) 0 to 1
3) 0 to ∞
4) $-\infty$ to ∞

Options :

55317214913. 1

55317214914. 2

55317214915. 3

55317214916. 4

Question Number : 30 Question Id : 5531723744 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If a random variable X follows rectangular distribution over the interval [3, 5], then variance of X is

1) 1 / 4
2) 1 / 3
3) 2
4) 4

Options :

55317214917. 1

55317214918. 2

55317214919. 3

55317214920. 4

Question Number : 31 Question Id : 5531723745 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let X and Y follow independent gamma distributions $\gamma(m)$ and $\gamma(n)$ respectively. Then what is the distribution of X / (X + Y)?

1) $\gamma\,(m + n)$
2) $\beta_1\,(n, m)$
3) $\beta_1\,(m, n)$
4) $\beta_2\,(m, n)$

Options :

55317214921. 1

55317214922. 2

55317214923. 3

55317214924. 4

Question Number : 32 Question Id : 5531723746 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a positively skewed distribution, the extreme values generally lie in the:

1) middle
2) right tail
3) left tail
4) anywhere

Options :

55317214925. 1

55317214926. 2

55317214927. 3

55317214928. 4

Question Number : 33 Question Id : 5531723747 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If 't' is a consistent estimator of θ, then

1) t is consistent for θ
2) t^2 is consistent for θ
3) t^2 is consistent for θ^2
4) $(t + t^2)$ is consistent for θ^2

Options :

55317214929. 1

55317214930. 2

55317214931. 3

55317214932. 4

Question Number : 34 Question Id : 5531723748 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Type II error is defined as

1) Accept H_0 | H_0 is false
2) Accept H_0 | H_0 is true
3) Reject H_0 | H_0 is false
4) Reject H_0 | H_0 is true

Options :

55317214933. 1

55317214934. 2

55317214935. 3

55317214936. 4

Question Number : 35 Question Id : 5531723749 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Rao - Blackwell theorem enables us to obtain Minimum Variance Unbiased Estimator through

1) Biased estimator
2) Complete statistic
3) Efficient statistic
4) Sufficient statistic

Options :

55317214937. 1

55317214938. 2

55317214939. 3

55317214940. 4

Question Number : 36 Question Id : 5531723750 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The degrees of freedom for chi square test in case of contingency table of order (4 x 3) is

1) 6
2) 8
3) 9
4) 12

Options :

55317214941. 1

55317214942. 2

55317214943. 3

55317214944. 4

Question Number : 37 Question Id : 5531723751 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For the random sample having 6 observations as 1, 3, 4, 6, 7, 9 from a rectangular population R [0, θ], $\theta \geq 0$, the maximum likelihood estimate of θ is

1) 1
2) 5
3) 9
4) 30

Options :

55317214945. 1

55317214946. 2

55317214947. 3

55317214948. 4

Question Number : 38 Question Id : 5531723752 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which distribution is used for computing confidence interval for the ratio of variances of two independent normal populations?

1) Z
2) χ^2
3) t
4) F

Options :

55317214949. 1

55317214950. 2

55317214951. 3

55317214952. 4

Question Number : 39 Question Id : 5531723753 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let $x \geq 1$ be the critical region for testing $\theta = 1$ against $\theta = 2$ on the basis of a single observation from the population $f(x, \theta) = \theta\, e^{-\theta x}$, $x \geq 0$. What is the probability of Type I error?

1) e
2) e^{-1}
3) e^2
4) e^{-2}

Options :

55317214953. 1

55317214954. 2

55317214955. 3

55317214956. 4

Question Number : 40 Question Id : 5531723754 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Whether a test is one-tailed or two-tailed depends on:

1) Simple hypothesis
2) Composite hypothesis
3) Null hypothesis
4) Alternative hypothesis

Options :

55317214957. 1

55317214958. 2

55317214959. 3

55317214960. 4

Question Number : 41 Question Id : 5531723755 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The range of correlation coefficient is

1) 0 to 1
2) 0 to ∞
3) -1 to 1
4) $-\infty$ to ∞

Options :

55317214961. 1

55317214962. 2

55317214963. 3

55317214964. 4

Question Number : 42 Question Id : 5531723756 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

What is the correlation coefficient between X and Y when the two lines of regression are: $4x - 5y + 3 = 0$ and $20x - 9y + 7 = 0$?

1) 0
2) $3/5$
3) $-3/5$
4) 1

Options :

55317214965. 1

55317214966. 2

55317214967. 3

55317214968. 4

Question Number : 43 Question Id : 5531723757 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The multiple correlation coefficient R $_{1.23}$ is always

1) $\geq r_{12}$
2) $< r_{12}$
3) $r_{12}\, r_{13}$
4) $r^2{}_{12}\, r^2{}_{13}$

Options :

55317214969. 1

55317214970. 2

55317214971. 3

55317214972. 4

Question Number : 44 Question Id : 5531723758 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The decision criteria in Sequential Probability Ratio test depend on probabilities of

1) Type I error only
2) Type II error only
3) Type I error but not Type II error
4) Both Type I and Type II errors

Options :

55317214973. 1

55317214974. 2

55317214975. 3

55317214976. 4

Question Number : 45 Question Id : 5531723759 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which distribution does the Sign test utilize?

1) Binomial
2) Poisson
3) Negative Binomial
4) Hypergeometric

Options :

55317214977. 1

55317214978. 2

55317214979. 3

55317214980. 4

Question Number : 46 Question Id : 5531723760 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The ratio of T^2 / D^2 of Hotelling's T^2 to Mahalanobis' D^2 is

1) $N_1 N_2$
2) $N_1 + N_2$
3) $N_1 N_2 / (N_1 + N_2)$
4) $(N_1 + N_2) / (N_1 N_2)$

Options :

55317214981. 1

55317214982. 2

55317214983. 3

55317214984. 4

Question Number : 47 Question Id : 5531723761 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Factor analysis can be considered as an extension of

1) Cluster analysis
2) Principal component analysis
3) Canonical correlation analysis
4) Discriminant analysis

Options :

55317214985. 1

55317214986. 2

55317214987. 3

55317214988. 4

Question Number : 48 Question Id : 5531723762 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If $\underset{\sim}{X} \sim N_p (\mu, \Sigma)$, then $\underset{\sim}{Y} = A \underset{\sim}{X} + B$ follows

1) $N_p (\mu, \Sigma)$
2) $N_p (A \mu + B, \Sigma)$
3) $N_p (A \mu, A \Sigma A')$
4) $N_p (A \mu + B, A \Sigma A')$

Options :

55317214989. 1

55317214990. 2

55317214991. 3

55317214992. 4

Question Number : 49 Question Id : 5531723763 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let p denote the dimension of multivariate normal distribution and n the size of a random sample. What is the distribution of Hotelling's T^2 for testing $H_0: \underset{\sim}{\mu} = \underset{\sim}{\mu}_0$ when p and n are large?

1) χ^2_p
2) χ^2_{n-p}
3) t_{n-p}
4) $F_{n, p}$

Options :

55317214993. 1

55317214994. 2

55317214995. 3

55317214996. 4

Question Number : 50 Question Id : 5531723764 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The characteristic roots of $\begin{bmatrix} 1 & a \\ a & 1 \end{bmatrix}$ are

1) -1 and $+1$
2) $1 + \sqrt{a}$ and $1 - \sqrt{a}$
3) $1 + a$ and $1 - a$
4) a and $-a$

Options :

55317214997. 1

55317214998. 2

55317214999. 3

55317215000. 4

Question Number : 51 Question Id : 5531723765 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let $x_1, x_2, x_3, \ldots x_5$ be a random sample of size 5 from $N_{10}(0, \Sigma)$.

What is the distribution of $\sum_{i=1}^{5} x_i x_i'$?

1) $W_5(\Sigma, 5)$
2) $W_5(\Sigma, 10)$
3) $W_{10}(\Sigma, 5)$
4) $W_{10}(\Sigma, 10)$

Options :

55317215001. 1

55317215002. 2

55317215003. 3

55317215004. 4

Question Number : 52 Question Id : 5531723766 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

What is the mean of statistic U in Run test for large samples of sizes m and n?

1) $2 m / (m + n)$
2) $2 n / (m + n)$
3) $2 m n / (m + n)$
4) $2 m n (m + n) + 1$

Options :

55317215005. 1

55317215006. 2

55317215007. 3

55317215008. 4

Question Number : 53 Question Id : 5531723767 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

What is the probability of extinction in a simple birth - death
stochastic process with equal birth and death rates?

1) 1 / 2
2) 3 / 4
3) 1
4) 0

Options :

55317215009. 1

55317215010. 2

55317215011. 3

55317215012. 4

**Question Number : 54 Question Id : 5531723768 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 4 Wrong Marks : 1

With how many degrees of freedom does Kruskal Wallis test statistic
for k treatments and b blocks follow approximately chi square
distribution?

1) $k - 1$
2) $n - 1$
3) $(k - 1)(n - 1)$
4) $k\, n$

Options :

55317215013. 1

55317215014. 2

55317215015. 3

55317215016. 4

**Question Number : 55 Question Id : 5531723769 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 4 Wrong Marks : 1

With how many degrees of freedom does the Friedman's F statistic
based on k treatments and r blocks follow chi square distribution?

1) $r - 1$
2) $k - 1$
3) $r(k - 1)$
4) $k(r - 1)$

Options :

55317215017. 1

55317215018. 2

55317215019. 3

55317215020. 4

**Question Number : 56 Question Id : 5531723770 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 4 Wrong Marks : 1

The range of rank correlation coefficient is

1) 0 to 1
2) 0 to ∞
3) - ∞ to + ∞
4) − 1 to + 1

Options :

55317215021. 1

55317215022. 2

55317215023. 3

55317215024. 4

Question Number : 57 Question Id : 5531723771 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

What should be the minimum number of observations for application

of Cochran's test?

1) 10
2) 20
3) 24
4) 25

Options :

55317215025. 1

55317215026. 2

55317215027. 3

55317215028. 4

Question Number : 58 Question Id : 5531723772 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which test is used for testing randomness of residuals?

1) Sign
2) Run
3) Wilcoxon
4) Krushkal - Wallis

Options :

55317215029. 1

55317215030. 2

55317215031. 3

55317215032. 4

Question Number : 59 Question Id : 5531723773 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If $r_{12} = r_{23} = r_{31} = 0.5$, what is the value of $r_{31.2}$?

1) 1 / 3
2) 1 / 2
3) 2 / 3
4) 1

Options :

55317215033. 1

55317215034. 2

55317215035. 3

55317215036. 4

Question Number : 60 Question Id : 5531723774 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Following are the ranks awarded to 5 debators by two judges:

Debators	A	B	C	D	E
Judge 1	3	2	1	4	5
Judge 2	1	3	2	5	4

What is the rank correlation coefficient?

1) 1 / 5
2) 2 / 5
3) 3 / 5
4) 4 / 5

Options :

55317215037. 1

55317215038. 2

55317215039. 3

55317215040. 4

Question Number : 61 Question Id : 5531723775 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The genetic correlation between single first cousins in a completely random mating population is

1) 1 / 2
2) 1 / 4
3) 1 / 8
4) 1 / 16

Options :

55317215041. 1

55317215042. 2

55317215043. 3

55317215044. 4

Question Number : 62 Question Id : 5531723776 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Suppose genotypic variance is 12 and phenotypic variance is 15, then the broad sense heritability is

1) 144 / 225
2) 0.8
3) 1.25
4) 225 / 144

Options :

55317215045. 1

55317215046. 2

55317215047. 3

55317215048. 4

Question Number : 63 Question Id : 5531723777 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Correlation coefficient between breeding value and dominance deviation is

1) 0
2) 0.5
3) 1
4) -1

Options :

55317215049. 1

55317215050. 2

55317215051. 3

55317215052. 4

Question Number : 64 Question Id : 5531723778 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The most extreme form of genetic assortative mating is

1) Brother – sister mating
2) Parents – offspring mating
3) Selfing
4) Double first cousin mating

Options :

55317215053. 1

55317215054. 2

55317215055. 3

55317215056. 4

Question Number : 65 Question Id : 5531723779 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following statements is true?

(1) Heterosis is another name for inbreeding depression
(2) Selective breeding is not advantageous when general combining ability is high
(3) Mutation causes more frequency change than selection
(4) Pleiotropy is one important reason for genetic correlation

Options :

55317215057. 1

55317215058. 2

55317215059. 3

55317215060. 4

Question Number : 66 Question Id : 5531723780 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is not an equilibrium population?

1) $(1, 1, \frac{1}{4})$
2) $(25, 10, 1)$
3) $(1, 14/3, 49/9)$
4) $(4/9, 2/3, 1)$

Options :

55317215061. 1

55317215062. 2

55317215063. 3

55317215064. 4

Question Number : 67 Question Id : 5531723781 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The genetic arrays of males and females with respect to sex – linked factor are 0.4A + 0.6a and 0.3AA + 0.5 Aa + 0.2 aa respectively. The equilibrium frequencies for this population will be

1) $p = 1/3, q = 2/3$
2) $p = q = 1/2$
3) $p = 2/3, q = 1/3$
4) $p = 2/5, q = 3/5$

Options :

55317215065. 1

55317215066. 2

55317215067. 3

55317215068. 4

Question Number : 68 Question Id : 5531723782 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Proportion of AB gametes produced by double heterozygote AaBb is $(1 - p)/2$, where 'p' is the recombinant fraction. Then $(1 - p)$ is

1) Marginal probability
2) Conditional probability
3) Joint probability
4) Not a probability

Options :

55317215069. 1

55317215070. 2

55317215071. 3

55317215072. 4

Question Number : 69 Question Id : 5531723783 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Continuous inbreeding reduces the proportion of

1) Heterozygosity only
2) Homozygosity only
3) Both Heterozygosity and Homozygosity
4) Neither Heterozygosity nor Homozygosity

Options :

55317215073. 1

55317215074. 2

55317215075. 3

55317215076. 4

Question Number : 70 Question Id : 5531723784 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following pairs pertains to Mendelian inheritance?
1) Segregation and dominance
2) Linkage and dominance
3) Segregation and linkage
4) Segregation and independent assortment

Options :

55317215077. 1

55317215078. 2

55317215079. 3

55317215080. 4

Question Number : 71 Question Id : 5531723785 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In double back cross (AaBb x aabb), if each of the two factors are segregating according to Mendelian expectation and if no linkage is observed, the expectation of $\mu_1, \mu_2, \mu_3, \mu_4$ will be

1) $\mu_1 = \mu_2 = \mu_3 = \mu_4 = 1/4$
2) $\mu_1 = \mu_2 = \mu_3 = \mu_4 = 1/2$
3) $\mu_1 = \mu_2 = \mu_3 = \mu_4 = 1/16$
4) $\mu_1 = \mu_2 = \mu_3 = \mu_4 = 1/8$

Options :

55317215081. 1

55317215082. 2

55317215083. 3

55317215084. 4

Question Number : 72 Question Id : 5531723786 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The fundamental theorem of natural selection was given by
1) J Neyman
2) Sewell Wright
3) A Wald
4) R A Fisher

Options :

55317215085. 1

55317215086. 2

55317215087. 3

55317215088. 4

Question Number : 73 Question Id : 5531723787 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The intraclass correlation coefficient among the repeated expressions of a given trait is called

1) Repeatability
2) Genetic correlation
3) Heritability
4) Inbreeding

Options :

55317215089. 1

55317215090. 2

55317215091. 3

55317215092. 4

Question Number : 74 Question Id : 5531723788 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is true under usual notations?

1) $0 \leq r \leq h^2 \leq H^2$
2) $0 \leq h^2 \leq H^2 \leq r$
3) $0 \leq H^2 \leq h^2 \leq r$
4) $0 \leq r \leq H^2 \leq h^2$

Options :

55317215093. 1

55317215094. 2

55317215095. 3

55317215096. 4

Question Number : 75 Question Id : 5531723789 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is not a mating design?

1) Line x Tester
2) North Carolina – I
3) Diallel crosses
4) Lattice Design

Options :

55317215097. 1

55317215098. 2

55317215099. 3

55317215100. 4

Question Number : 76 Question Id : 5531723790 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For testing independent segregation ratios involving n $F_2 -$
populations under complete dominance, the degrees of freedom for
association chi – square will be

1) k
2) k – 1
3) 3 (k – 1)
4) 4 (k – 1)

Options :

55317215101. 1

55317215102. 2

55317215103. 3

55317215104. 4

Question Number : 77 Question Id : 5531723791 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If a_1, a_2, a_3 and a_4 are the observed frequencies of four classes and n =
$a_1 + a_2 + a_3 + a_4$, the maximum likelihood estimator of linkage of
parameter 'p' for double back cross population in coupling phase is
given by

1) $\hat{p} = (a_1 + a_2) / n$
2) $\hat{p} = (a_2 + a_3) / n$
3) $\hat{p} = (a_1 + a_4) / n$
4) $\hat{p} = (a_1 + a_3) / n$

Options :

55317215105. 1

55317215106. 2

55317215107. 3

55317215108. 4

Question Number : 78 Question Id : 5531723792 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The disease hemophilia is governed by a recessive sex-linked gene. If
H_m and H_f are the Hardy Weinberg frequencies of its occurrence in
males and females respectively, then

1) $H_m < H_f$
2) $H_m > H_f$
3) $H_m = H_f$
4) None of these

Options :

55317215109. 1

55317215110. 2

55317215111. 3

55317215112. 4

Question Number : 79 Question Id : 5531723793 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A pure breeding male black mouse is mated to a female brown mouse and they produce a litter of 8. The allele for black fur is dominant over brown fur. The expected distribution of color and sex will be

1) 4 brown males and 4 black males
2) 8 black males
3) 6 black and 2 brown males
4) 4 brown males and 4 black males

Options :

55317215113. 1

55317215114. 2

55317215115. 3

55317215116. 4

Question Number : 80 Question Id : 5531723794 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a Hardy - Weinberg population, there are 4 alleles at a locus. The maximum frequency of heterozygotes will be

1) 0.90
2) 0.80
3) 0.75
4) 0.50

Options :

55317215117. 1

55317215118. 2

55317215119. 3

55317215120. 4

Question Number : 81 Question Id : 5531723795 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is mating design?

1) NC Design I
2) Lattice Design
3) BIBD
4) RBD

Options :

55317215121. 1

55317215122. 2

55317215123. 3

55317215124. 4

Question Number : 82 Question Id : 5531723796 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is NOT true?

1) Path coefficient behaves as a correlation coefficient
2) Path coefficient is a standardized regression coefficient
3) Path coefficient is dimensionless
4) Path coefficient is regression coefficient of additive over phenotypic value

Options :

55317215125. 1

55317215126. 2

55317215127. 3

55317215128. 4

Question Number : 83 Question Id : 5531723797 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is NOT true in case of sex - linked genes?

1) Female is homogametic sex
2) Male is heterogametic sex
3) Female transmits X - chromosome to its offspring regardless of sex
4) Male transmits X - chromosome to sons

Options :

55317215129. 1

55317215130. 2

55317215131. 3

55317215132. 4

Question Number : 84 Question Id : 5531723798 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In an F_2 of a cross of two pure lines (AAbbCC x aabbcc), total number of phenotypic classes is

1) 3
2) 4
3) 8
4) 27

Options :

55317215133. 1

55317215134. 2

55317215135. 3

55317215136. 4

Question Number : 85 Question Id : 5531723799 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a double back - cross population, the formula for χ^2 for testing the presence of linkage is

1) $(a_1 + a_2 + a_3 + a_4)^2 / n$
2) $(a_1 + a_2 - a_3 - a_4)^2 / n$
3) $(a_1 - a_2 - a_3 + a_4)^2 / n$
4) $(a_1 + a_2 - a_3 + a_4)^2 / n$

Options :

55317215137. 1

55317215138. 2

55317215139. 3

55317215140. 4

Question Number : 86 Question Id : 5531723800 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Two brown eyed parents each is heterozygous for a recessive blue gene. The probability that the two children produced by them will be both brown eyed is

1) 9 / 16
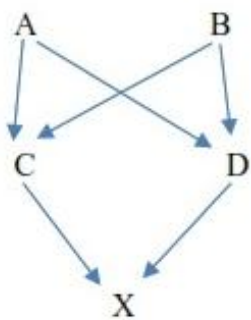2) 1 / 2
3) 1 / 16
4) 1 / 12

Options :

55317215141. 1

55317215142. 2

55317215143. 3

55317215144. 4

Question Number : 87 Question Id : 5531723801 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In the figure below,

if $F_A = F_B = 0$, then inbreeding coefficient of X is

1) 1 / 4
2) 1 / 2
3) 3 / 4
4) 1 / 8

Options :

55317215145. 1

55317215146. 2

55317215147. 3

55317215148. 4

Question Number : 88 Question Id : 5531723802 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Which of the following statements is TRUE in case of selection?

1) Selection is most effective in case of rare allele
2) Selection is most effective when frequency of dominant allele is
   1 / 3
3) Gene can be eliminated through selection
4) Selection leads to homozygosity

Options :

55317215149. 1

55317215150. 2

55317215151. 3

55317215152. 4

Question Number : 89 Question Id : 5531723803 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

The square of correlation coefficient between additive and phenotypic
component is known as

1) Repeatability
2) Inbreeding coefficient
3) Genetic correlation
4) Heritability

Options :

55317215153. 1

55317215154. 2

55317215155. 3

55317215156. 4

Question Number : 90 Question Id : 5531723804 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

If there are 9% recessives in a population segregating for single gene,
the proportion of heterozygotes will be

1) 0.49
2) 0.09
3) 0.42
4) 0.21

Options :

55317215157. 1

55317215158. 2

55317215159. 3

55317215160. 4

Question Number : 91 Question Id : 5531723805 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Which of the following cannot be estimated through the analysis of diallel crosses?

1) Epistasis
2) Specific combining ability
3) Dominance variance
4) Additive variance

Options :

55317215161. 1

55317215162. 2

55317215163. 3

55317215164. 4

Question Number : 92 Question Id : 5531723806 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If the reciprocal effects are assumed to be absent, the appropriate method used in complete diallel crosses should be

1) Method I and Method II
2) Method I and Method III
3) Method II and Method III
4) Method II and Method IV

Options :

55317215165. 1

55317215166. 2

55317215167. 3

55317215168. 4

Question Number : 93 Question Id : 5531723807 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The average performance of a genotype in hybrid combinations is termed as

1) General combining ability
2) Specific combining ability
3) Breeding value
4) Heterosis

Options :

55317215169. 1

55317215170. 2

55317215171. 3

55317215172. 4

Question Number : 94 Question Id : 5531723808 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given an F$_2$ – population

AA	Aa	aa
0.25	0.50	0.25

After two generations of selfing, the proportion of homozygotes will be

1) 50%
2) 75%
3) 87.5%
4) 100%

Options :

55317215173. 1

55317215174. 2

55317215175. 3

55317215176. 4

Question Number : 95 Question Id : 5531723809 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Under the usual notations, which of the following is true?

1) Covariance (full sibs) = $1 / 4\ \sigma_A{}^2 + 1 / 2\ \sigma_D{}^2$
2) Covariance (half sibs) = $1 / 2\ \sigma_A{}^2$
3) Covariance (OP) = $1 / 2\ \sigma_A{}^2$
4) Covariance (OM) = $1 / 4\ \sigma_A{}^2$

Options :

55317215177. 1

55317215178. 2

55317215179. 3

55317215180. 4

Question Number : 96 Question Id : 5531723810 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is termed as a double back-cross?

1) AaBb x AaBb
2) AaBb x aabb
3) AABB x aabb
4) AaBb x Aabb

Options :

55317215181. 1

55317215182. 2

55317215183. 3

55317215184. 4

Question Number : 97 Question Id : 5531723811 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

AABB and aabb have plant heights 50 cms and 30 cms, respectively. Suppose the pair of genes act additively, then F_2 frequency of 40 cms plants will be

1) 75%
2) 50%
3) 37.5%
4) 25%

Options :

55317215185. 1

55317215186. 2

55317215187. 3

55317215188. 4

Question Number : 98 Question Id : 5531723812 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

D, H and R denote the number of dominants, heterozygotes and recessives respectively. Then the test for equilibrium population is

1) $H^2 = 4\,D\,R$
2) $H^2 = 2\,D\,R$
3) $H^2 = D\,R$
4) $D^2 = 4\,H\,R$

Options :

55317215189. 1

55317215190. 2

55317215191. 3

55317215192. 4

Question Number : 99 Question Id : 5531723813 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If there is no dominance,

1) Breeding value is greater than genotypic value
2) Breeding value is less than genotypic value
3) Breeding value is same as genotypic value
4) Breeding value is zero

Options :

55317215193. 1

55317215194. 2

55317215195. 3

55317215196. 4

Question Number : 100 Question Id : 5531723814 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The intraclass correlation coefficient among the repeated expression of a given trait for an individual is called

1) Genetic correlation
2) Repeatability
3) Selection
4) Heritability

Options :

55317215197. 1

55317215198. 2

55317215199. 3

55317215200. 4

Question Number : 101 Question Id : 5531723815 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The principle of randomization

1) Reduces the error variance
2) Provides an estimate of the error variance
3) Ensures independence of the observations
4) Increases the accuracy of the estimates of the treatment effects

Options :

55317215201. 1

55317215202. 2

55317215203. 3

55317215204. 4

Question Number : 102 Question Id : 5531723816 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Statistical method of controlling heterogeneity in the experiment is

1) Analysis of variance
2) Local control
3) Analysis of covariance
4) Replication

Options :

55317215205. 1

55317215206. 2

55317215207. 3

55317215208. 4

Question Number : 103 Question Id : 5531723817 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In uniformity trials to determine the optimum plot size, maximum curvature method involves plotting of

1) Mean values of the plots against the plot sizes
2) Standard deviation of the plots against the plot sizes
3) Sum totals of the plots against the plot sizes
4) Coefficient of variation of the plots against the plot sizes

Options :

55317215209. 1

55317215210. 2

55317215211. 3

55317215212. 4

Question Number : 104 Question Id : 5531723818 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A complete block design is always

1) Connected and balanced but non – orthogonal
2) Connected, balanced and orthogonal
3) Connected and orthogonal but not balanced
4) Balanced and orthogonal but not connected

Options :

55317215213. 1

55317215214. 2

55317215215. 3

55317215216. 4

Question Number : 105 Question Id : 5531723819 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let x_1, x_2, x_3, and x_4 be four observations, then which of the following is a contrast:

1) $\frac{1}{2} x_1 - \frac{1}{2} x_2 + \frac{1}{2} x_3 - \frac{1}{2} x_4$
2) $\frac{1}{2} x_1 - x_2 + x_3 - \frac{2}{3} x_4$
3) $\frac{1}{2} x_1 - \frac{1}{2} x_2 - \frac{1}{2} x_3 - \frac{1}{2} x_4$
4) $\frac{1}{2} x_1 - \frac{2}{3} x_2 + x_3 - x_4$

Options :

55317215217. 1

55317215218. 2

55317215219. 3

55317215220. 4

Question Number : 106 Question Id : 5531723820 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a Randomized Complete Block Design with 5 treatments, the mean sum of squares due to error is 4 and the F value for testing the significance of treatment differences is 12.5, then the treatment of sum of squares will be

1) 50
2) 100
3) 200
4) 250

Options :

55317215221. 1

55317215222. 2

55317215223. 3

55317215224. 4

Question Number : 107 Question Id : 5531723821 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

An experiment is conducted using a Latin Square Design of order 5.
During the experimentation, the first row was destroyed and so all the
observations from that row are lost. The error degrees of freedom of
the resulting design will be

1) 7
2) 8
3) 9
4) 12

Options :

55317215225. 1

55317215226. 2

55317215227. 3

55317215228. 4

Question Number : 108 Question Id : 5531723822 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

An experiment was conducted using a BIB design with parameters $v =$
5, b = 10, r = 6, k = 3, λ = 3. In the analysis of variance table, value of
F for testing the equality of all treatment effects was obtained as
16.83. it was later observed that while recording all the observations
were multiplied by 10. Thus, the actual value of F after correction will
be

1) 0.1683
2) 1.683
3) 16.83
4) 168.3

Options :

55317215229. 1

55317215230. 2

55317215231. 3

55317215232. 4

Question Number : 109 Question Id : 5531723823 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

In case of 2^5 factorial experiment, the total number of second and third
order interactions are

1) 20
2) 15
3) 10
4) 5

Options :

55317215233. 1

55317215234. 2

55317215235. 3

55317215236. 4

Question Number : 110 Question Id : 5531723824 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

In a 2^3 factorial experiment conducted in blocks of size 2, the contents
of one of the blocks is [a, bc]. Which of the following set of effects are
confounded in the design?

1) A, C, AC
2) A, B, AB
3) C, AB, ABC
4) AC, BC, AB

Options :

55317215237. 1

55317215238. 2

55317215239. 3

55317215240. 4

Question Number : 111 Question Id : 5531723825 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Which of the following is false in a BIB design?

1) The design is equi-replicated
2) The design is proper
3) The design is variance balanced
4) Any two blocks have same number of treatments in common

Options :

55317215241. 1

55317215242. 2

55317215243. 3

55317215244. 4

Question Number : 112 Question Id : 5531723826 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

In case of a split-plot design with 4 replications, if 3 levels of the main
plot treatment are increased, then the degrees of freedom for main plot
error will increase by

1) 3
2) 6
3) 9
4) 12

Options :

55317215245. 1

55317215246. 2

55317215247. 3

55317215248. 4

Question Number : 113 Question Id : 5531723827 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given a BIB design with parameters v, b, r, k, λ the block size of the design obtained by taking its complement will be

1) v – k
2) b – k
3) k
4) r

Options :

55317215249. 1

55317215250. 2

55317215251. 3

55317215252. 4

Question Number : 114 Question Id : 5531723828 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Following is an array of 12 treatments arranged in 4 rows and 3 columns:

1	2	3
4	5	6
7	8	9
10	11	12

If the above arrangement follows a Group divisible association scheme, then the second associates of treatment number 3 are

1) 1, 2, 4, 5, 6
2) 1, 2, 6, 9, 12
3) 4, 5, 7, 8, 10, 11
4) 4, 5, 6, 7, 8, 9, 10, 11, 12

Options :

55317215253. 1

55317215254. 2

55317215255. 3

55317215256. 4

Question Number : 115 Question Id : 5531723829 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A block design with v treatments and b blocks is said to be connected if and only if rank of the information matrix for estimating treatment effects is

1) v – 1
2) b – 1
3) less than v – 1
4) less than b – 1

Options :

55317215257. 1

55317215258. 2

55317215259. 3

55317215260. 4

Question Number : 116 Question Id : 5531723830 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

An experimenter wishes to conduct an experiment with two factors and the interest is in estimating interaction effects with more precision. The factors are such that both require large plot sizes for the operational convenience. Which of the following is the most appropriate design?

1) Factorial RCBD
2) Strip plot design
3) Split plot design
4) Latin square design

Options :

55317215261. 1

55317215262. 2

55317215263. 3

55317215264. 4

Question Number : 117 Question Id : 5531723831 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In an experiment, the experimenter observes proportion of plants affected by a disease in each of the plots by examining a random sample of plants within each plot. If 'p' is the observed proportion, then the appropriate variance stabilizing transformation in this case will be

1) $\sqrt{p}$
2) $\sin^{-1}p$
3) $\log_e p$
4) $\sin^{-1}\sqrt{p}$

Options :

55317215265. 1

55317215266. 2

55317215267. 3

55317215268. 4

Question Number : 118 Question Id : 5531723832 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Balanced lattice design is also known as

1) Cubic Lattice design
2) Rectangular Lattice design
3) BIB design
4) Circular Lattice design

Options :

55317215269. 1

55317215270. 2

55317215271. 3

55317215272. 4

Question Number : 119 Question Id : 5531723833 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a $(3^5, 3^2)$ factorial experiment, the total number of interactions confounded are

1) 3
2) 10
3) 13
4) 26

Options :

55317215273. 1

55317215274. 2

55317215275. 3

55317215276. 4

Question Number : 120 Question Id : 5531723834 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a BIB (v, b, r, k, λ) design, if each treatment is replaced by a group of treatments (the groups being disjoint and of the same size), the resultant design will be

1) Singular group divisible design
2) Semi - regular group divisible design
3) Regular group divisible design
4) BIB design

Options :

55317215277. 1

55317215278. 2

55317215279. 3

55317215280. 4

Question Number : 121 Question Id : 5531723835 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a resolution III design in fractional factorial, which of the following effects are estimated?

1) Mean only
2) Main effects only
3) Mean and main effects
4) Mean, main effects and interaction effects

Options :

55317215281. 1

55317215282. 2

55317215283. 3

55317215284. 4

Question Number : 122 Question Id : 5531723836 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Following is the incidence matrix of a block design

$$N = \begin{bmatrix} 2 & 0 & 0 & 0 & 1 & 1 & 1 & 0 \\ 0 & 2 & 0 & 0 & 1 & 1 & 0 & 1 \\ 0 & 0 & 2 & 0 & 1 & 0 & 1 & 1 \\ 0 & 0 & 0 & 2 & 0 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 0 & 0 & 0 & 0 \end{bmatrix}$$

Which of the following is not true?

1) The design is proper
2) The design is equi – replicated
3) The design is non – binary
4) The design is non – orthogonal

Options :

55317215285. 1

55317215286. 2

55317215287. 3

55317215288. 4

Question Number : 123 Question Id : 5531723837 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For a Group divisible association scheme with $v = 6$ (m = 2, n = 3), if treatments in the same row are first associated then p^1_{11} will take the value

1) 0
2) 1
3) 2
4) 3

Options :

55317215289. 1

55317215290. 2

55317215291. 3

55317215292. 4

Question Number : 124 Question Id : 5531723838 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

An experiment was conducted in randomized complete block design with 5 treatments each replicated 3 times. For each of the experimental plots, 10 observations are collected. The degrees of freedom associated with sampling error is

1) 72
2) 120
3) 135
4) 149

Options :

55317215293. 1

55317215294. 2

55317215295. 3

55317215296. 4

Question Number : 125 Question Id : 5531723839 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In the asymmetrical factorial $2^2 \times 3$ with block size 4, the level of factor of asymmetry is

1) 0
2) 1
3) 2
4) 3

Options :

55317215297. 1

55317215298. 2

55317215299. 3

55317215300. 4

Question Number : 126 Question Id : 5531723840 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The first order design used for screening purpose is

1) Plackett – Burman Design
2) Central Composite Design
3) Box – Behnken Design
4) Small Composite Design

Options :

55317215301. 1

55317215302. 2

55317215303. 3

55317215304. 4

Question Number : 127 Question Id : 5531723841 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The levels of the factors in a Central Composite Design for fitting second - order response surface model are

1) 2
2) 3
3) 4
4) 5

Options :

55317215305. 1

55317215306. 2

55317215307. 3

55317215308. 4

Question Number : 128 Question Id : 5531723842 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is not correct in case of PBIB design?

1) Binary equi – replicate and variance balanced
2) Binary equi – replicate and blocks incomplete
3) Proper, equi – replicate and blocks incomplete
4) Binary, proper and blocks incomplete

Options :

55317215309. 1

55317215310. 2

55317215311. 3

55317215312. 4

Question Number : 129 Question Id : 5531723843 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In inter – block analysis of BIB design which of the following assumption is true for the model of analysis:

1) Only treatment effects are random
2) Only block effects are random
3) Both treatment and block effects are random
4) Both treatment and block effects are not random

Options :

55317215313. 1

55317215314. 2

55317215315. 3

55317215316. 4

Question Number : 130 Question Id : 5531723844 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a BIB design with parameters $v = 5$, $b = 10$, $r = 6$, $k = 3$ and $\lambda = 3$, under the intra block model, the variance of an estimate of elementary contrast is

1) $1/5 \sigma^2$
2) $2/5 \sigma^2$
3) $3/5 \sigma^2$
4) $4/5 \sigma^2$

Options :

55317215317. 1

55317215318. 2

55317215319. 3

55317215320. 4

Question Number : 131 Question Id : 5531723845 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a 2 x 3^2 factorial, the total number of two factor interactions are

1) 4
2) 6
3) 8
4) 10

Options :

55317215321. 1

55317215322. 2

55317215323. 3

55317215324. 4

Question Number : 132 Question Id : 5531723846 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a 2^2 x 3 factorial with blocks of size 6, the number of real factors and pseudo factors are

1) One real and one pseudo - factor
2) One real and two pseudo - factors
3) Two real and one pseudo - factor
4) Two real and two pseudo - factors

Options :

55317215325. 1

55317215326. 2

55317215327. 3

55317215328. 4

Question Number : 133 Question Id : 5531723847 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a (2^5, 2^3) factorial, the number of replications required to achieve balance for second and third order interactions is:

1) 2
2) 3
3) 5
4) 6

Options :

55317215329. 1

55317215330. 2

55317215331. 3

55317215332. 4

Question Number : 134 Question Id : 5531723848 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In an experiment involving 6 treatments conducted at 5 places with 10 fields per place, the degrees of freedom for fields within places will be

1) 25
2) 45
3) 49
4) 54

Options :

55317215333. 1

55317215334. 2

55317215335. 3

55317215336. 4

Question Number : 135 Question Id : 5531723849 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The total number of associates in an association scheme defined on v symbols is

1) $v - 1$
2) v
3) $v + 1$
4) v^2

Options :

55317215337. 1

55317215338. 2

55317215339. 3

55317215340. 4

Question Number : 136 Question Id : 5531723850 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For a resolvable Semi – Regular Group Divisible Design

1) $v \geq b - m + r$
2) $b \geq v - m + r$
3) $b \geq v - m - r$
4) $v \geq b - m - r$

Options :

55317215341. 1

55317215342. 2

55317215343. 3

55317215344. 4

Question Number : 137 Question Id : 5531723851 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The number of parameters in a second - order response surface model for 3 factors/variables are

1) 6
2) 7
3) 9
4) 10

Options :

55317215345. 1

55317215346. 2

55317215347. 3

55317215348. 4

Question Number : 138 Question Id : 5531723852 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is false in case of Central Composite Design:

1) The design is rotatable
2) The levels of the factors are 5
3) Allows blocking of experimental units
4) Used for any number of factors

Options :

55317215349. 1

55317215350. 2

55317215351. 3

55317215352. 4

Question Number : 139 Question Id : 5531723853 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

$2T_1 - T_2 - 2T_3 - T_4 + 2T_5$ is a contrast of treatment effects. Its sum of squares will be

1) $(2T_1 - T_2 - 2T_3 - T_4 + 2T_5)^2 / 5$
2) $(2T_1 - T_2 - 2T_3 - T_4 + 2T_5)^2 / 8$
3) $(2T_1 - T_2 - 2T_3 - T_4 + 2T_5)^2 / 12$
4) $(2T_1 - T_2 - 2T_3 - T_4 + 2T_5)^2 / 14$

Options :

55317215353. 1

55317215354. 2

55317215355. 3

55317215356. 4

Question Number : 140 Question Id : 5531723854 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is false in case of Youden Square design?

1) The number of rows is equal to the number of columns
2) It is Latin-square design with one row deleted
3) It is a BIB design generated from initial block
4) The rows form a randomized complete block design

Options :

55317215357. 1

55317215358. 2

55317215359. 3

55317215360. 4

Question Number : 141 Question Id : 5531723855 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following statements is false about complete enumeration and sample surveys?

1) There is no sampling error in complete enumerations
2) Non - sampling error is less in case of sample surveys
3) Sampling and non-sampling errors are least in case of complete enumeration
4) Both 2 and 3 above

Options :

55317215361. 1

55317215362. 2

55317215363. 3

55317215364. 4

Question Number : 142 Question Id : 5531723856 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following statements is true?

1. Population mean ($\bar{Y}$) increases with the increase in sample size (n)
2. Population mean ($\bar{Y}$) decreases with the increase in sample size (n)
3. Population mean ($\bar{Y}$) decreases with the decrease in sample size (n)
4. Population mean ($\bar{Y}$) has no effect of sample size (n)

Options :

55317215365. 1

55317215366. 2

55317215367. 3

55317215368. 4

Question Number : 143 Question Id : 5531723857 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In Simple Random Sampling with Replacement (SRSWR), the probability of selecting any unit at any draw is

1) $1/N$
2) n/N
3) $1/n$
4) N/n

Options :

55317215369. 1

55317215370. 2

55317215371. 3

55317215372. 4

Question Number : 144 Question Id : 5531723858 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In Simple Random Sampling with Replacement (SRSWR), total number of possible samples of size n from a population of size N is

1) N
2) N^n
3) $^{N}C_n$
4) $N-n$

Options :

55317215373. 1

55317215374. 2

55317215375. 3

55317215376. 4

Question Number : 145 Question Id : 5531723859 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In Simple Random Sampling with Replacement (SRSWR), the inclusion probability of a unit in a sample of size n from population of size N is

1) $1/N$
2) n/N
3) N/n
4) None of the above

Options :

55317215377. 1

55317215378. 2

55317215379. 3

55317215380. 4

Question Number : 146 Question Id : 5531723860 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In Simple Random Sampling with Replacement (SRSWR) of sample size n from a population size N, standard error for estimating population mean SE ($\bar{y}$) is

1) SE ($\bar{y}$) α n
2) SE ($\bar{y}$) α 1 / n
3) SE ($\bar{y}$) α 1 / $\sqrt{n}$
4) SE ($\bar{y}$) α $\sqrt{n}$

Options :

55317215381. 1

55317215382. 2

55317215383. 3

55317215384. 4

Question Number : 147 Question Id : 5531723861 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which sampling design is presently employed in India for estimation of yields for various crops?

1) Simple random sampling
2) Systematic sampling
3) Inverse sampling
4) Stratified multi – stage random sampling

Options :

55317215385. 1

55317215386. 2

55317215387. 3

55317215388. 4

Question Number : 148 Question Id : 5531723862 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Sampling design is

1) Sampling frame along with probability of selection of each unit in the sample
2) Sampling frame along with estimation procedure
3) List of sampling units along with its identification particular
4) List of sampling units along with its estimation procedure

Options :

55317215389. 1

55317215390. 2

55317215391. 3

55317215392. 4

Question Number : 149 Question Id : 5531723863 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In case of stratified sampling when sample is selected for estimation of population mean using Simple Random Sampling without Replacement in each strata, proportion allocation is

1) Always better than simple random sampling
2) Sometimes better than simple random sampling
3) Always better or equal to simple random sampling
4) Never better than simple random sampling

Options :

55317215393. 1

55317215394. 2

55317215395. 3

55317215396. 4

Question Number : 150 Question Id : 5531723864 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In case of stratified random sampling, the sample size is allocated to different strata following Neyman allocation considering

1) Size of each stratum
2) Size and variability within each stratum
3) Variability within each stratum
4) Size, variability and cost of selecting units in each stratum

Options :

55317215397. 1

55317215398. 2

55317215399. 3

55317215400. 4

Question Number : 151 Question Id : 5531723865 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let $\bar{y}$ and $\bar{x}$ denote sample means of character under study and auxiliary character respectively. The bias of $\bar{y}_r = \bar{y} / \bar{x} . \bar{X}$, where $\bar{X}$ is population mean of auxiliary character is

1) $- \text{cov} (\bar{y}, \bar{x})$
2) $- \text{cov} (\bar{y} / \bar{x}, \bar{x})$
3) $- \text{cov} (\bar{y}_r, \bar{x})$
4) $- \text{cov} (\bar{x} / \bar{y}, \bar{x})$

Options :

55317215401. 1

55317215402. 2

55317215403. 3

55317215404. 4

Question Number : 152 Question Id : 5531723866 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let X be an auxiliary variable. In case of sample survey, X can be used for

1) Both selection and estimation
2) Both stratification and estimation
3) Either selection, estimation or stratification
4) Selection, stratification and estimation

Options :

55317215405. 1

55317215406. 2

55317215407. 3

55317215408. 4

Question Number : 153 Question Id : 5531723867 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In case relationship between Y and X is linear and passing through origin, then ratio estimator is _____ than regression estimator. Choose one of the below

1) more efficient
2) less efficient
3) equally efficient
4) either more or less efficient depending on correlation between X and Y

Options :

55317215409. 1

55317215410. 2

55317215411. 3

55317215412. 4

Question Number : 154 Question Id : 5531723868 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In case of two stage sampling, let m be number of SSU's selected by Simple Random Sampling without Replacement from each PSU's of size m. Let ρ_c denote intra - class correlation coefficient within each PSU's. The relative efficiency of two - stage sampling with respect to simple random sampling of size nm is approximately

1) $1 / (1 + \rho_c (m - 1))$
2) $1 / (1 + \rho_c (n - 1))$
3) $1 / (1 + \rho_c (m - 1))$
4) $1 / (1 + \rho_c (mn - 1))$

Options :

55317215413. 1

55317215414. 2

55317215415. 3

55317215416. 4

Question Number : 155 Question Id : 5531723869 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Suppose in systematic sampling, $N = nk$ is total number of population units, k is sampling interval and n is sample size. Let ρ_c denote intra class correlation coefficient, then systematic sampling is more efficient than sample mean when

1) $\rho_c > -1 / (kn - 1)$
2) $\rho_c > -1 / (k - 1)$
3) $\rho_c > -1 / (n - 1)$
4) None of the above

Options :

55317215417. 1

55317215418. 2

55317215419. 3

55317215420. 4

Question Number : 156 Question Id : 5531723870 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let a population have N units and X_i denote value of auxiliary character of ith unit, i = 1,2, 3,...N. Let (i , j) denote a pair of random numbers where $1 \leq i \leq N$ and $1 \leq j \leq M$, where M is maximum sizes of N units in the population. Then in case of Lahiri's method of selection of PPS sample, i^{th} unit is selected when

1) $1 \leq i \leq N, j \leq X_i$
2) $1 \leq i \leq N, j \leq M$
3) $1 \leq i \leq M, j \leq N$
4) None of the above

Options :

55317215421. 1

55317215422. 2

55317215423. 3

55317215424. 4

Question Number : 157 Question Id : 5531723871 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In case of PPS with replacement sampling, the variance expression of unbiased estimator of population mean $\bar{Y}$ is given by _____ , where P_i, i = 1, 2, 3...N is probability of selection of ith unit from population of size N and n is sample size

1) $1 / n \sum_{i=1}^{N} P_i (Y_i / P_i - \bar{Y})^2$
2) $1 / n \sum_{i=1}^{N} P_i (Y_i / N P_i - \bar{Y})^2$
3) $1 / N \sum_{i=1}^{N} P_i (Y_i / P_i - \bar{Y})^2$
4) $1 / n \sum_{i=1}^{N} (Y_i / ((N P_i) - \bar{Y})^2$

Options :

55317215425. 1

55317215426. 2

55317215427. 3

55317215428. 4

Question Number : 158 Question Id : 5531723872 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For estimation of population mean, the Horvitz – Thompson estimator is

1) Biased and has uniformly minimum variance
2) Unbiased and has uniformly minimum variance
3) Unbiased and has non - uniformly minimum variance
4) Biased and has non - uniformly minimum variance

Options :

55317215429. 1

55317215430. 2

55317215431. 3

55317215432. 4

Question Number : 159 Question Id : 5531723873 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

A population consist of N units out of which a sample of n units is selected by following Midzuno system of sampling. This procedure becomes πps, when initial probability of selection P_i satisfies one of the conditions given below

1) $P_i > (n – 1) / [n (N – 1)]$
2) $P_i < (n – 1) / [n (N – 1)]$
3) $P_i > (N – 1) / [N (n – 1)]$
4) $P_i < (N – 1) / [N (n – 1)]$

Options :

55317215433. 1

55317215434. 2

55317215435. 3

55317215436. 4

Question Number : 160 Question Id : 5531723874 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

The unbiased ratio type estimator proposed by Hart and Ross (1954) is equally efficient than usual ratio estimator, if _____ ,where $\bar{Z} = 1 / N$ $\sum_{i=1}^{N} Y_i / X_i$ and

$R = \bar{Y}/\bar{X}$, Y is character under study and X is auxiliary character

1) $\bar{Z} > R$
2) $\bar{Z} \geq R$
3) $\bar{Z} = R$
4) $\bar{Z} \neq R$

Options :

55317215437. 1

55317215438. 2

55317215439. 3

55317215440. 4

Question Number : 161 Question Id : 5531723875 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In case of double sampling, sampling units _____ in different phases

1) remain same sometimes
2) always remain same
3) not remain same
4) same as two stage sampling

Options :

55317215441. 1

55317215442. 2

55317215443. 3

55317215444. 4

Question Number : 162 Question Id : 5531723876 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In successive sampling, in order to get the estimate for current occasion, it is best to

1) retain the same sample on all occasions
2) estimate the average over all occasions by drawing new sample
3) estimate base on recent sample
4) partially replace the sample at different occasions

Options :

55317215445. 1

55317215446. 2

55317215447. 3

55317215448. 4

Question Number : 163 Question Id : 5531723877 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In case of inverse sampling from a population of size N, units with rare attributes are NP, where P is proportion of units having rare attributes in the population, m is units in the sample possessing rare attributes which is pre – determined. Then P can be estimated unbiasedly by

1) m / n
2) $m / (n - 1)$
3) $(m - 1) / (n - 1)$
4) $(m - 1) / n$

Options :

55317215449. 1

55317215450. 2

55317215451. 3

55317215452. 4

Question Number : 164 Question Id : 5531723878 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In case of random response errors, the estimator for population mean
$\bar{Y}$ is _____ than sample mean, when there is no response error

1) biased and more efficient
2) unbiased and more efficient
3) unbiased and less efficient
4) biased and less efficient

Options :

55317215453. 1

55317215454. 2

55317215455. 3

55317215456. 4

Question Number : 165 Question Id : 5531723879 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Hansen and Hurwitz technique and Politz and Simmons techniques to
handle non-response are basically techniques respectively

1) Call back and no call back
2) No call back and call back
3) Call back and unbiased
4) No call back and unbiased

Options :

55317215457. 1

55317215458. 2

55317215459. 3

55317215460. 4

Question Number : 166 Question Id : 5531723880 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Warner's method of taking interview is used when attribute under
study is

1) Rare in the population
2) Sensitive in nature
3) Both rare and sensitive
4) None of these

Options :

55317215461. 1

55317215462. 2

55317215463. 3

55317215464. 4

Question Number : 167 Question Id : 5531723881 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For time series data, it is recommended to use _____ imputation technique

1) Zero substitution
2) Random substitution
3) Average of succeeding and preceding observations
4) No

Options :

55317215465. 1

55317215466. 2

55317215467. 3

55317215468. 4

Question Number : 168 Question Id : 5531723882 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In India, CSO stands for _____

1) Census Statistical Office
2) Census Statistical Organization
3) Central Statistical Organization
4) Central Statistical Office

Options :

55317215469. 1

55317215470. 2

55317215471. 3

55317215472. 4

Question Number : 169 Question Id : 5531723883 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In India, permanently settled states in terms of land revenue are

1) West Bengal, Kerala, Odisha
2) West Bengal, Uttar Pradesh, Bihar
3) West Bengal, Odisha, Bihar
4) West Bengal, Karnataka, Tamil Nadu

Options :

55317215473. 1

55317215474. 2

55317215475. 3

55317215476. 4

Question Number : 170 Question Id : 5531723884 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In India, for randomly selected plots in farmers' fields for crop cutting experiment under General Crop Estimation Surveys, first we have to choose _____ corner of the field

1) North - East
2) South - East
3) North - West
4) South - West

Options :

55317215477. 1

55317215478. 2

55317215479. 3

55317215480. 4

Question Number : 171 Question Id : 5531723885 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

One disadvantage of RAM is that it is:
1) Slow
2) Volatile
3) Inaccurate
4) Bulky

Options :

55317215481. 1

55317215482. 2

55317215483. 3

55317215484. 4

Question Number : 172 Question Id : 5531723886 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Using the HDD as an extension of RAM is a feature of

1) Virtual memory
2) Cache
3) Direct Memory Access (DMA)
4) Virtual Reality

Options :

55317215485. 1

55317215486. 2

55317215487. 3

55317215488. 4

Question Number : 173 Question Id : 5531723887 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Laser Printer resolution is measured by the number of _____

1) Characters per second (cps)
2) Dots per inch (dpi)
3) Pages per minute (ppm)
4) Spots per centimeter (spc)

Question Number : 174 Question Id : 5531723888 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following number is equal to the decimal number 5000?

1) 1386 in hexadecimal
2) 1001110001010 in binary
3) 1388 in hexadecimal
4) 11510 in octal

Question Number : 175 Question Id : 5531723889 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Each byte of main memory in a computer is addressed using a unique number. Reference variables actually store the address of a memory location. If the storage size of a reference variable is 4 bytes, what is the maximum amount of memory the computer can have?

1) 1024 megabytes
2) 10^4 bytes
3) 4 gigabytes
4) $(2^4)^4$ bytes

Question Number : 176 Question Id : 5531723890 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

What happens when a value larger than the maximum possible integer is assigned to an *int* variable in C?

1) The program terminates
2) An overflow error is indicated
3) The value becomes a negative value
4) The value becomes a maximum possible integer, that is MAX_INT.

55317215502. 2

55317215503. 3

55317215504. 4

Question Number : 177 Question Id : 5531723891 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In object-oriented programming, polymorphism is achieved using:

1) Method overloading
2) Method passing
3) Method aliasing
4) Method constructors

Options :

55317215505. 1

55317215506. 2

55317215507. 3

55317215508. 4

Question Number : 178 Question Id : 5531723892 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Java is a _____ language.

1) strongly typed
2) dynamically typed
3) loosely typed
4) object oriented

Options :

55317215509. 1

55317215510. 2

55317215511. 3

55317215512. 4

Question Number : 179 Question Id : 5531723893 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Consider the following function in 'C':

void F(unsigned int n)

{ do{

putchar('0' + (n % 10));

} while (n /= 10);

putchar('\n');

What is the output of F(837)?

1) 387
2) 738
3) 800
4) 700

Options :

55317215513. 1

55317215514. 2

55317215515. 3

55317215516. 4

Question Number : 180 Question Id : 5531723894 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The major goal of object-oriented programming is

1) Speed
2) User interfaces
3) Reuse
4) Top down program development

Options :

55317215517. 1

55317215518. 2

55317215519. 3

55317215520. 4

Question Number : 181 Question Id : 5531723895 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In C ++, a base class's _____ members can be accessed only on the

base – class definition or in derived – class definitions

1) public
2) private
3) protected
4) static

Options :

55317215521. 1

55317215522. 2

55317215523. 3

55317215524. 4

Question Number : 182 Question Id : 5531723896 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is a TRUE statement regarding a constructor in an object-oriented programming?

1) It has no return type
2) Its return type changes based on how it is written
3) Its return type is *void*
4) Its return type is *int*

Options :

55317215525. 1

55317215526. 2

55317215527. 3

55317215528. 4

Question Number : 183 Question Id : 5531723897 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following C – declarations can be used to construct a linked list data structure?

1) struct node {int element; node * next;};
2) struct node {int element; node next;};
3) struct node {int element; *node next;};
4) struct node {int element; int *next;};

Options :

55317215529. 1

55317215530. 2

55317215531. 3

55317215532. 4

Question Number : 184 Question Id : 5531723898 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

You are given 10 rings numbered 1 to 10, and 3 pegs labeled A, B and C. Initially, all rings are on peg A, arranged from top to bottom in ascending order of their numbers. The goal is to move all the rings to peg B in the minimum number of moves obeying the following constraints:
a) In one move, only one ring can be moved
b) A ring can only be moved from the top of its peg to the top of a new peg
c) At no point can a ring be placed on top of another ring with a lower number
How many moves are required?
1) 501
2) 1023
3) 2011
4) 10079

Options :

55317215533. 1

55317215534. 2

55317215535. 3

55317215536. 4

Question Number : 185 Question Id : 5531723899 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

The five items: P, Q, R, S and T are pushed in a stack, one after the other starting from P. The stack is popped four times and each element is inserted in a queue. Then two elements are deleted from the queue and pushed back on the stack. Now one item is popped from the stack. The popped item is:

1) P
2) Q
3) R
4) S

Options :

55317215537. 1

55317215538. 2

55317215539. 3

55317215540. 4

Question Number : 186 Question Id : 5531723900 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1
In relational databases, the constraint that no key attribute (column) may be null is referred to as

1) Referential integrity
2) Multi - valued dependency
3) Entity integrity
4) Functional dependency

Options :

55317215541. 1

55317215542. 2

55317215543. 3

55317215544. 4

Question Number : 187 Question Id : 5531723901 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Given the basic ER and relational models, which of the following is NOT TRUE?

1) An attribute of an entity can have more than one value
2) An attribute of an entity can be composite
3) In a row of a relational table, an attribute can have more than one value
4) In a row of relational table, an attribute can have exactly one value or a NULL value

Options :

55317215545. 1

55317215546. 2

55317215547. 3

55317215548. 4

Question Number : 188 Question Id : 5531723902 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Data which improves the performance and accessibility of the database are called:

1) Indexes
2) User data
3) Application metadata
4) Metadata

Options :

55317215549. 1

55317215550. 2

55317215551. 3

55317215552. 4

Question Number : 189 Question Id : 5531723903 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Consider a database table T with attributes X and Y. Which of the following SQL queries is illegal?

1) select X from T
2) select X, count (*) from T
3) select X, count (*) from T group by X
4) select X, count (*) from T group by X, Y

Options :

55317215553. 1

55317215554. 2

55317215555. 3

55317215556. 4

Question Number : 190 Question Id : 5531723904 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Choose the most appropriate statement with respect to data
independence in RDBMS.

1) Data independence means data is defined separately and not
included in programs
2) Hierarchical and network DBMS's do not support any kind of data
independence as no arbitrary changes in the structure are supported
3) Data independence means that the application programs are
resilient to changes in data – its structure and storage organization
4) In RDBMS, both physical and logical data independence is
guaranteed

Options :
55317215557. 1
55317215558. 2
55317215559. 3
55317215560. 4

Question Number : 191 Question Id : 5531723905 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

A hierarchical schema is different from a network schema, for, it
allows:

1) One parent – one child
2) Many parents – many children
3) One parent – many children
4) One child - many parents

Options :
55317215561. 1
55317215562. 2
55317215563. 3
55317215564. 4

Question Number : 192 Question Id : 5531723906 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

What does TCP/IP stand for?

1) Transmission Control Protocol / Internet Protocol
2) Transport Capture Protocol / Inside Packet
3) Transmission Control Protocol / Internet Packet
4) Telecommunication Connection Protocol / Internet Partitions

Options :
55317215565. 1
55317215566. 2
55317215567. 3
55317215568. 4

Question Number : 193 Question Id : 5531723907 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The standard rules that email clients use to handle outgoing mail messages is:

1) SMTP
2) STMP
3) MIME
4) POP 3 email

Options :

55317215569. 1

55317215570. 2

55317215571. 3

55317215572. 4

Question Number : 194 Question Id : 5531723908 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A fully connected network topology is a network topology in which there is a direct link between all pairs of nodes. Give a fully connected network with n nodes, express the number of direct links as a function of n

1) $n(n+1)/2$
2) $(n+1)/2$
3) $n/2$
4) $n(n-1)/2$

Options :

55317215573. 1

55317215574. 2

55317215575. 3

55317215576. 4

Question Number : 195 Question Id : 5531723909 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A weblog is:

1) A personalized webpage where there may be calendars, news item, etc selected by a user and when reloaded, it may be automatically updated
2) A site that allows downloads of free software
3) A site that typically provides multiple search engines for users to search the internet
4) A site used by many users for postings

Options :

55317215577. 1

55317215578. 2

55317215579. 3

55317215580. 4

Question Number : 196 Question Id : 5531723910 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following HTML code will affect the vertical alignment of the table content?

1) <td style= "vertical–align: middle"> Text goes here.</td>
2) <td valign= "center">Text goes here. </td>
3) <td style= "text–align: center"> Text goes here. </td>
4) <td align= "middle"> Text goes here. </td>

Options :

55317215581. 1

55317215582. 2

55317215583. 3

55317215584. 4

Question Number : 197 Question Id : 5531723911 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Starting with an initial guess of $x_o = 2$, one iteration of Newton-Raphson method to compute $\sqrt[3]{9}$ (the cube root of 9) gives x_1 as:

1) 25 / 12
2) 26 / 12
3) 27 / 12
4) 28 / 12

Options :

55317215585. 1

55317215586. 2

55317215587. 3

55317215588. 4

Question Number : 198 Question Id : 5531723912 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Shadow price in a Linear Programming Problem represents the:

1) Value of one additional unit of a basic variable of the problem
2) Value of one unit less of a basic variable
3) Value of one unit less of a specific resource
4) Value of one additional unit of a specific resource

Options :

55317215589. 1

55317215590. 2

55317215591. 3

55317215592. 4

Question Number : 199 Question Id : 5531723913 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following statements is NOT true of simulation?
1) Simulation models the behavior of a system
2) A simulation model cannot prescribe what should be done about a problem
3) Simulation models can be used to study alternative solutions to a problem
4) The equations describing the operating characteristics of the system is known

Options :

55317215593. 1

55317215594. 2

55317215595. 3

55317215596. 4

Question Number : 200 Question Id : 5531723914 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In applying Vogel's approximation method to a profit maximization problem, row and column penalties are determined by:

1) Finding the largest unit cost in each row or column
2) Finding the smallest unit cost in each row or column
3) Finding the difference between the two lowest unit costs in each row and column
4) Finding the difference between the two highest unit costs in each row and column

Options :

55317215597. 1

55317215598. 2

55317215599. 3

55317215600. 4