

National Testing Agency

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Agricultural Statistics

Group Number :	1
Group Id :	71087073
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	480
Is this Group for Examiner? :	No

Part A General Knowledge

Section Id :	710870217
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 :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	710870217
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 7108708701 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Which one of the following crops is a commercial crop in Punjab and Haryana but is a subsistence crop in Orissa?

1. Tea
2. Cotton
3. Rubber
4. Rice

Options :

71087034801. 1
71087034802. 2
71087034803. 3
71087034804. 4

Question Number : 2 Question Id : 7108708702 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Which of the following are the two most important wheat-growing zones of the country?

- A. Ganga-Satluj plains in the north-west
- B. Deltaic regions
- C. Black soil region of the Deccan
- D. Plains of north-east

Choose the **correct** answer from the options below:

- 1. Only A and B
- 2. Only B and C
- 3. Only C and D
- 4. Only A and C

Options :

- 71087034805. 1
- 71087034806. 2
- 71087034807. 3
- 71087034808. 4

Question Number : 3 Question Id : 7108708703 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Indian agriculture is typically characterized as

- 1. Land surplus, labour scarce economy
- 2. Land surplus, labour surplus economy
- 3. Land scarce, labour surplus economy
- 4. Land scarce, labour scarce economy

Options :

- 71087034809. 1

71087034810. 2

71087034811. 3

71087034812. 4

Question Number : 4 Question Id : 7108708704 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following countries is the main rival of India in tea export?

1. China
2. Japan
3. Germany
4. Sri Lanka

Options :

71087034813. 1

71087034814. 2

71087034815. 3

71087034816. 4

Question Number : 5 Question Id : 7108708705 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement A: MSP is declared by the government every year to provide incentives to the farmers for raising the production of crops.

Statement B: Buffer stock is created to distribute food grains in the deficit areas and among the poorer strata of the society at the lower price than the market price.

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement A and Statement B are correct
2. Both Statement A and Statement B are incorrect
3. Statement A is correct but Statement B is incorrect
4. Statement A is incorrect but Statement B is correct

Options :

71087034817. 1

71087034818. 2

71087034819. 3

71087034820. 4

Question Number : 6 Question Id : 7108708706 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following is a global association of nations of the world to help cooperation in international law, security, economic development and social equity?

1. United Nations Organization
2. International Monetary Fund
3. World Bank
4. World Health Organization

Options :

- 71087034821. 1
- 71087034822. 2
- 71087034823. 3
- 71087034824. 4

Question Number : 7 Question Id : 7108708707 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Under the Ganga Action Plan Phase II, pollution abatement works are being taken up in how many towns?

- 1. 57
- 2. 65
- 3. 52
- 4. 69

Options :

- 71087034825. 1
- 71087034826. 2
- 71087034827. 3
- 71087034828. 4

Question Number : 8 Question Id : 7108708708 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following statements is **incorrect**?

- 1. The highest number of pigs in the world are found in India
- 2. Uttar Pradesh provides largest amount of pork
- 3. Assam has the largest number of pork producing pigs
- 4. Pork constitutes about 7.6% of the total meat produced in India

Options :

71087034829. 1
71087034830. 2
71087034831. 3
71087034832. 4

Question Number : 9 Question Id : 7108708709 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

Which type of N-fertilizer is suitable for water-logged soils?

1. Zinc Phosphate
2. Ammonium Sulphate
3. Calcium
4. Potassium Nitrate

Options :

71087034833. 1
71087034834. 2
71087034835. 3
71087034836. 4

Question Number : 10 Question Id : 7108708710 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1

The famous Bailadila range of hills in the Bastar district of Chhattisgarh is famous for its

1. Bauxite deposits
2. Manganese deposits
3. Copper deposits
4. High-grade haematite deposits

Options :

71087034837. 1

71087034838. 2

71087034839. 3

71087034840. 4

Question Number : 11 Question Id : 7108708711 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

A farmer wishes to start a 100 sq. m rectangular vegetable garden. Since he has only 30m barbed wire, he fences three sides of the garden letting his house compound wall act as the fourth side fencing. What is the dimension of the garden?

1. 15 m x 6.67m
2. 20 m x 5 m
3. 30 m x 3.33 m
4. 40 m x 2.5 m

Options :

71087034841. 1

71087034842. 2

71087034843. 3

71087034844. 4

Question Number : 12 Question Id : 7108708712 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In which one of the following industries, the consumption of natural rubber is the largest?

1. Auto tyres and tubes
2. Footwear
3. Dipped goods
4. Latex foam

Options :

71087034845. 1
71087034846. 2
71087034847. 3
71087034848. 4

Question Number : 13 Question Id : 7108708713 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following countries was the partner country of 34th Surajkund International Crafts Fair held in Haryana?

1. China
2. Nepal
3. Bhutan
4. Uzbekistan

Options :

71087034849. 1
71087034850. 2
71087034851. 3
71087034852. 4

Question Number : 14 Question Id : 7108708714 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Nobel laureate Abhijit Vinayak Banerjee was conferred the honorary Doctor of Letters (D. Litt.) by which University?

1. University of Delhi
2. University of Kolkata
3. University of Mumbai
4. University of Hyderabad

Options :

- 71087034853. 1
- 71087034854. 2
- 71087034855. 3
- 71087034856. 4

Question Number : 15 Question Id : 7108708715 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Where is the headquarters of European Union?

- 1. Geneva, Switzerland
- 2. Washington D.C., USA
- 3. New York, US
- 4. Brussels, Belgium

Options :

- 71087034857. 1
- 71087034858. 2
- 71087034859. 3
- 71087034860. 4

Question Number : 16 Question Id : 7108708716 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following would be deficient if one finds high somatic cell count in the cow's milk?

- 1. Butterfat
- 2. Whey protein
- 3. Casein
- 4. Trace minerals

Options :

- 71087034861. 1
- 71087034862. 2
- 71087034863. 3
- 71087034864. 4

Question Number : 17 Question Id : 7108708717 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Who was the first administrator-statesman to attempt planning as a means for economic development?

- 1. C. Rajagopalachari
- 2. V. T. Krishnamachari
- 3. M. Viswesvarayya
- 4. Sir C. P. Ramaswami Aiyar

Options :

- 71087034865. 1
- 71087034866. 2
- 71087034867. 3
- 71087034868. 4

Question Number : 18 Question Id : 7108708718 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Amazon rainforest span over nine countries. In August 2019, in which country did a deadly fire broke out in the Amazon forest?

- 1. Brazil
- 2. Venezuela
- 3. Colombia
- 4. Argentina

Options :

- 71087034869. 1
- 71087034870. 2
- 71087034871. 3
- 71087034872. 4

Question Number : 19 Question Id : 7108708719 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Economic liberalization in India started with

- 1. Sustainable changes in industrial licensing policy
- 2. The convertibility of the Indian Rupee
- 3. Significant reduction of tax rates
- 4. Changes in procedural formalities for FDI

Options :

- 71087034873. 1
- 71087034874. 2
- 71087034875. 3
- 71087034876. 4

Question Number : 20 Question Id : 7108708720 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The term 'Delimitation' which was in news recently is associated with which process?

- 1. Fixing the limit of Income tax
- 2. Fixing limits of Affordable housing
- 3. Fixing limits of Territorial constituencies
- 4. Fixing limits of Chairpersons salary

Options :

- 71087034877. 1

71087034878. 2
71087034879. 3
71087034880. 4

Part B Core Agricultural Statistics

Section Id :	710870218
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	200
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	710870218
Question Shuffling Allowed :	Yes

**Question Number : 21 Question Id : 7108708721 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 4 Wrong Marks : 1**

A user is receiving a legitimate email. On opening the email, the user is asked to supply some personal details or click on given link. This type of email is called

1. War driving
2. Pharming
3. Spyware
4. Phishing

Options :

71087034881. 1

71087034882. 2

71087034883. 3

71087034884. 4

Question Number : 22 Question Id : 7108708722 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Virtual memory is a hierarchy of two memory systems - main memory and secondary memory. The two systems are managed by a software system in such a way that it appears that the main memory is of a bigger size. The secondary memory in this case is

1. Faster, Costlier and Larger
2. Slower, Cheaper and Smaller
3. Slower, Cheaper and Larger
4. None of the above

Options :

71087034885. 1

71087034886. 2

71087034887. 3

71087034888. 4

Question Number : 23 Question Id : 7108708723 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In binary arithmetic, negative numbers may be represented using either a sign-magnitude or a complement representation. In the case of sign-magnitude representation, which of the following is correct?

1. 1 is used to represent positive sign and 0 to represent negative sign
2. 1 is used to represent negative sign and 0 to represent positive sign
3. Either Option 1 or Option 2 above can be used
4. None of the above

Options :

- 71087034889. 1
- 71087034890. 2
- 71087034891. 3
- 71087034892. 4

Question Number : 24 Question Id : 7108708724 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A commonly used controlled switch is a transistor which is fabricated using Silicon. One useful component is MOSFET. What is its full form?

- 1. Magnesium Oxide Silicon Field Effect Transistor
- 2. Mineral Oxide Silicon Field Effect Transistor
- 3. Metal Oxide Silicon Field Effect Transistor
- 4. None of the above

Options :

- 71087034893. 1
- 71087034894. 2
- 71087034895. 3
- 71087034896. 4

Question Number : 25 Question Id : 7108708725 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In Object-oriented programming, the constructors are used to

- 1. Call a method
- 2. Initialize the variables of class
- 3. Save the memory
- 4. Call multiple methods together

Options :

71087034897. 1
71087034898. 2
71087034899. 3
71087034900. 4

Question Number : 26 Question Id : 7108708726 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In DBMS, the number of additions/deletions made to a file over a period of time is called

1. File activity ratio
2. Inquiry capability
3. File volatility
4. Response time

Options :

71087034901. 1
71087034902. 2
71087034903. 3
71087034904. 4

Question Number : 27 Question Id : 7108708727 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In Computer Networking, what is NOT true in case of packet switching?

- A. Packets are despatched by a sender to a receiver. Each packet travels independently from source to the specified destination
- B. It improves the utilization of communication networks and also provides fault tolerance
- C. Each packet may follow a different route to reach a receiver
- D. Files of data to be transmitted are broken into packets, with 1 Kbytes of data in each packet
- E. Each packet has a serial number, IP addresses of sender and receiver and error control bits

Choose the correct answer from the options given below

- 1. A and B only
- 2. A, B and C only
- 3. B and C only
- 4. All - A, B, C, D and E

Options :

- 71087034905. 1
- 71087034906. 2
- 71087034907. 3
- 71087034908. 4

Question Number : 28 Question Id : 7108708728 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following statements are true in case of "view" in DBMS?

- A. It is a logical window to see the results of operations on one or more tables or views
- B. It is a virtual table
- C. Views are derived from stored data structures and computed again for each query referring to them
- D. An example of a SQL statement for creating a view is "CREATE VIEW AS SELECT ECODE, ENAME FROM EMP"

Choose the correct answer from the options given below:

- 1. A and C only
- 2. B and C only
- 3. A, B, C and D only
- 4. B, C and D only

Options :

- 71087034909. 1
- 71087034910. 2
- 71087034911. 3
- 71087034912. 4

Question Number : 29 Question Id : 7108708729 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In the case of Boolean Algebra, which of the following statements is true?

A. $X + \bar{X} = 1$

B. $X \cdot \bar{X} = 0$

C. $X \cdot Y = Y \cdot X$

D. $X \cdot 1 = X$

E. $X + 0 = X$

Choose the correct answer from the options given below

1. A, B, C and D only
2. B, C, D and E only
3. C, D and E only
4. All - A, B, C, D and E

Options :

71087034913. 1

71087034914. 2

71087034915. 3

71087034916. 4

Question Number : 30 Question Id : 7108708730 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In order to make the user-defined data types so that it gets the ability to provide the operators with a special meaning is called

- A. Method overloading
- B. Method overriding
- C. Constructor overloading
- D. Operator overloading

Choose the correct answer from the options given below

- 1. A only
- 2. B only
- 3. C only
- 4. D only

Options :

- 71087034917. 1
- 71087034918. 2
- 71087034919. 3
- 71087034920. 4

Question Number : 31 Question Id : 7108708731 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following are INCORRECT statements in the case of firewalls?

- A. To prevent unauthorized access to an organization's network, a barrier is called firewalls
- B. Packet filter firewalls block suspicious incoming packets from unknown IP addresses
- C. There is no firewall software available these days
- D. Application firewalls filter viruses, unwanted emails and application programs which are not authorized

Choose the correct answer from the options given below:

- 1. A only
- 2. B only
- 3. C only
- 4. D only

Options :

- 71087034921. 1
- 71087034922. 2
- 71087034923. 3
- 71087034924. 4

Question Number : 32 Question Id : 7108708732 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I	List II
A. Selective or total information hiding	I. Abstraction
B. Object's characteristics broken into manageable chunks as defined in the class description	II. Inheritance
C. Initialize variables of the class	III. Encapsulation
D. An effective method of code reuse	IV. Constructor

Chose the correct answer from the options given below:

1. A - III, B - I, C - IV, D - II
2. A - II, B - III, C - I, D - IV
3. A - II, B - III, C - IV, D - I
4. A-III, B-IV, C-I, D-II

Options :

71087034925. 1
71087034926. 2
71087034927. 3
71087034928. 4

Question Number : 33 Question Id : 7108708733 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: Internet is growing so fast that the 32-bits for IPV₄ would be insufficient, therefore 128-bit address IPV₆ has been standardized

Statement II: IPV₆ also has provision to prioritize data packets and built-in security

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statements I and Statement II are correct
2. Both Statements I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

Options :

71087034929. 1

71087034930. 2

71087034931. 3

71087034932. 4

Question Number : 34 Question Id : 7108708734 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: Tools for lexical analysis and syntax analysis are LEX and YACC

Statement II: YACC identifies tokens

In light of the above statements, choose the ***most appropriate*** answer from the options given below:

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

Options :

71087034933. 1

71087034934. 2

71087034935. 3

71087034936. 4

Question Number : 35 Question Id : 7108708735 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: Unshielded twisted pair (UTP) of wires is an inexpensive medium used in voice-grade telephone lines

Statement II: Fiber optic cables are plastic or glass fibers and provide higher quality transmission signals

In light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are correct
2. Both Statement I and Statement II are incorrect
3. Statement I is correct but Statement II is incorrect
4. Statement I is incorrect but Statement II is correct

Options :

71087034937. 1

71087034938. 2

71087034939. 3

71087034940. 4

Question Number : 36 Question Id : 7108708736 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Level of significance is equal to

1. Probability of committing Type I error
2. Probability of committing Type II error
3. Probability of correct decision
4. Probability of not making correct decision

Options :

71087034941. 1

71087034942. 2

71087034943. 3

71087034944. 4

Question Number : 37 Question Id : 7108708737 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A bivariate normal distribution is considered. A hypothesis would be simple if the number of specified parameters is

1. 2
2. 3
3. 4
4. 5

Options :

71087034945. 1

71087034946. 2

71087034947. 3

71087034948. 4

Question Number : 38 Question Id : 7108708738 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Fairfield Smith Index is related to

1. Number of plots in an experiment
2. Shape and size of plots in an experiment
3. Corrections for moments
4. χ^2 - test for homogeneity

Options :

71087034949. 1

71087034950. 2

71087034951. 3

71087034952. 4

Question Number : 39 Question Id : 7108708739 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In an experiment, some of the treatment effects are mixed up with block effects. What is the name of such experiments?

1. Missing plot technique
2. Confounded design
3. Non-orthogonal design
4. Orthogonal design

Options :

71087034953. 1
71087034954. 2
71087034955. 3
71087034956. 4

Question Number : 40 Question Id : 7108708740 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

How many mutually orthogonal Latin squares are available for strength 6?

1. 7
2. 2
3. 5
4. 1

Options :

71087034957. 1
71087034958. 2
71087034959. 3
71087034960. 4

Question Number : 41 Question Id : 7108708741 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The efficiency factor of BIB design (v, b, r, k, λ) will be

1. $r k / \lambda v$
2. $\lambda v / r k$
3. $r \lambda / v k$
4. $\lambda r / b k$

Options :

71087034961. 1
71087034962. 2
71087034963. 3
71087034964. 4

Question Number : 42 Question Id : 7108708742 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Who is (are) the author of the book "Design and Analysis of Experiments"?

1. M.N. Das and N.C. Giri
2. D. Raghav Rao
3. Aloke Dey and Ashis Das
4. P.K Sahu and A.K. Das

Options :

71087034965. 1
71087034966. 2
71087034967. 3
71087034968. 4

Question Number : 43 Question Id : 7108708743 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A pilot survey is conducted for studying

1. Only the sampling errors
2. The bias due to personal prejudice of the investigator
3. Data collected on income or opinion
4. The magnitude of problems that might be encountered

Options :

71087034969. 1

71087034970. 2

71087034971. 3

71087034972. 4

Question Number : 44 Question Id : 7108708744 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A population of 108 persons is divided into three strata whose sizes are 24, 36 and 48 respectively. In proportional allocation, the number of persons selected from the second stratum when the sample size is 18 will be

1. 4
2. 6
3. 8
4. 10

Options :

71087034973. 1

71087034974. 2

71087034975. 3

71087034976. 4

Question Number : 45 Question Id : 7108708745 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let there be a population of size 50 with zero variance. The minimum sample size required to estimate the correct population mean is

1. 50
2. 25
3. 2
4. 1

Options :

71087034977. 1

71087034978. 2

71087034979. 3

71087034980. 4

Question Number : 46 Question Id : 7108708746 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A border check post stops every passenger van. Which one of the following procedures is applied?

1. Simple random sampling
2. Stratified random sampling
3. Cluster sampling
4. Complete enumeration

Options :

71087034981. 1

71087034982. 2

71087034983. 3

71087034984. 4

Question Number : 47 Question Id : 7108708747 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If $X_i \sim N(\mu, \sigma^2)$, where σ^2 is known, then the 95 % confidence interval for μ based on sample size n is

1. $\bar{x} \pm 1.00 \frac{\sigma}{\sqrt{n}}$
2. $\bar{x} \pm 1.96 \frac{\sigma}{\sqrt{n}}$
3. $\bar{x} \pm 2.00 \frac{\sigma}{\sqrt{n}}$
4. $\bar{x} \pm 2.58 \frac{\sigma}{\sqrt{n}}$

Options :

71087034985. 1

71087034986. 2

71087034987. 3

71087034988. 4

Question Number : 48 Question Id : 7108708748 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If two regression lines are $Y = 2X$ and $8X = Y$ then the correlation coefficient between X and Y is

1. $\frac{1}{2}$
2. $-\frac{1}{2}$
3. $\frac{1}{4}$
4. $-\frac{1}{4}$

Options :

71087034989. 1

71087034990. 2

71087034991. 3

71087034992. 4

Question Number : 49 Question Id : 7108708749 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In order to reduce the standard error of mean to 25% of its present value, the sample size n should be increased to

1. $2n$

2. $4n$

3. $8n$

4. $16n$

Options :

71087034993. 1

71087034994. 2

71087034995. 3

71087034996. 4

Question Number : 50 Question Id : 7108708750 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The intra-class correlation coefficient, computed for k groups, each having n units lie between

1. -1 and 1

2. $-\frac{1}{n-1}$ and 1

3. $\frac{1}{n-1}$ and 1

4. $-\frac{1}{n-1}$ and $\frac{1}{n-1}$

Options :

71087034997. 1

71087034998. 2

71087034999. 3

71087035000. 4

Question Number : 51 Question Id : 7108708751 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The marks obtained by 10 students in a test are 70, 65, 68, 70, 75, 73, 80, 70, 83, 86. The mode is

1. 70
2. 73
3. 86
4. 71.5

Options :

71087035001. 1

71087035002. 2

71087035003. 3

71087035004. 4

Question Number : 52 Question Id : 7108708752 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The variance of a binomial distribution with $n = 10$ and $p = \frac{1}{3}$ is

1. $\frac{10}{3}$
2. $\frac{10}{9}$
3. $\frac{20}{3}$
4. $\frac{20}{9}$

Options :

71087035005. 1

71087035006. 2

71087035007. 3

71087035008. 4

Question Number : 53 Question Id : 7108708753 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Two events A and B are mutually exclusive. Then $P(AB)$

1. $P(A) \cdot P(B)$
2. $P(A) + P(B)$
3. $P(A)$
4. Zero

Options :

71087035009. 1

71087035010. 2

71087035011. 3

71087035012. 4

Question Number : 54 Question Id : 7108708754 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

For testing the goodness of fit, which test is used?

1. χ^2 - test
2. t - test
3. F - test
4. Z - test

Options :

71087035013. 1

71087035014. 2

71087035015. 3

71087035016. 4

Question Number : 55 Question Id : 7108708755 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If the geometric and harmonic means of two numbers are 28 and 16 respectively, then their arithmetic mean would be

1. 22
2. 28
3. 16
4. 49

Options :

71087035017. 1
71087035018. 2
71087035019. 3
71087035020. 4

Question Number : 56 Question Id : 7108708756 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The enzyme involved in cDNA library construction is

1. Reverse transcriptase
2. Reverse trivertase
3. Reverse helicase
4. Reverse ligase

Options :

71087035021. 1
71087035022. 2
71087035023. 3
71087035024. 4

Question Number : 57 Question Id : 7108708757 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The unit of measurement between two genes in linkage map is

1. Centimeter
2. Millimeter
3. Number of bases
4. Centi-Morgan

Options :

71087035025. 1
71087035026. 2
71087035027. 3
71087035028. 4

Question Number : 58 Question Id : 7108708758 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The technology used to modify the browning in mushroom for commercial use

1. Gene sequence
2. Gene editing
3. Gene addition
4. Genetic transformation

Options :

71087035029. 1
71087035030. 2
71087035031. 3
71087035032. 4

Question Number : 59 Question Id : 7108708759 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Examples for primary nucleotide sequence database - I. Genebank; II. EMBL; III. FASTA; IV. PROSITE

1. I and II
2. I and III
3. II and III
4. II and IV

Options :

71087035033. 1
71087035034. 2
71087035035. 3
71087035036. 4

Question Number : 60 Question Id : 7108708760 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The term bioinformatics was coined by

1. Robert Ledley, 1978
2. David W Mount, 1977
3. Paulien Hogweg, 1979
4. Jonathan Pevsner, 1965

Options :

71087035037. 1
71087035038. 2
71087035039. 3
71087035040. 4

Question Number : 61 Question Id : 7108708761 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Genome size of rice is

1. 120 Mb
2. 130 Mb
3. 450 Mb
4. 350 Mb

Options :

71087035041. 1
71087035042. 2
71087035043. 3
71087035044. 4

Question Number : 62 Question Id : 7108708762 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Phred score is related to

1. Base calling program
2. Pair wise alignment
3. Scaffolds
4. Contigs

Options :

71087035045. 1
71087035046. 2
71087035047. 3
71087035048. 4

Question Number : 63 Question Id : 7108708763 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Transition occurs usually between

1. A to G
2. A to C
3. G to C
4. G to T

Options :

71087035049. 1
71087035050. 2
71087035051. 3
71087035052. 4

Question Number : 64 Question Id : 7108708764 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The algorithm used to calculate positive and negative selection across individual branches of tree

1. Kimura
2. Maximum likelihood
3. PAUP
4. Neighbour joining

Options :

71087035053. 1
71087035054. 2
71087035055. 3
71087035056. 4

Question Number : 65 Question Id : 7108708765 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Scaffolds are also called

1. Reads
2. Contigs
3. DNA Fragments
4. Super Contigs

Options :

71087035057. 1
71087035058. 2
71087035059. 3
71087035060. 4

Question Number : 66 Question Id : 7108708766 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following search tools is used to align long genomic sequences of a variety of organisms?

1. Blast P
2. Blast-n
3. tblast-n
4. Blast-Z

Options :

71087035061. 1
71087035062. 2
71087035063. 3
71087035064. 4

Question Number : 67 Question Id : 7108708767 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following statements is true?

1. Protein sequences are preferable to DNA sequences because they are more conserved
2. DNA sequences are preferable to protein sequences because they are more conserved
3. Proteins sequences are less preferable to DNA sequences because they are less conserved
4. DNA sequences are preferable to protein sequences because they are less conserved

Options :

71087035065. 1

71087035066. 2

71087035067. 3

71087035068. 4

Question Number : 68 Question Id : 7108708768 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The database related to diabetes is

1. SGD
2. TiD Base
3. Human
4. Pancreas

Options :

71087035069. 1

71087035070. 2

71087035071. 3

71087035072. 4

Question Number : 69 Question Id : 7108708769 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Identify the correct order of SCOP hierarchy for structural classification of protein

1. Class, Fold, Family, Super-family
2. Super-family, Family, Fold, Class
3. Class, Fold, Super-family, Family
4. Family, Super-family, Fold, Class

Options :

71087035073. 1

71087035074. 2

71087035075. 3

71087035076. 4

Question Number : 70 Question Id : 7108708770 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Tool to identify the sequence of homology in rat, humans, rice and fungi

1. Rasmol
2. Clustal W
3. Blast n
4. Chime

Options :

71087035077. 1

71087035078. 2

71087035079. 3

71087035080. 4

Part C Agricultural Statistics

Section Id :

710870219

Section Number :

3

Section type :

Online

Mandatory or Optional :	Mandatory
Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	200
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	710870219
Question Shuffling Allowed :	Yes

Question Number : 71 Question Id : 7108708771 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

If $\bar{X}$ is the mean of a random sample of size n from the normal population $N(\mu, 9)$, then the value of n such that $P_r(\bar{X} - 1 < \mu < \bar{X} + 1) = 0.95$ is

1. 25
2. 16
3. 35
4. 49

Options :

71087035081. 1
71087035082. 2
71087035083. 3
71087035084. 4

Question Number : 72 Question Id : 7108708772 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

X is a random variable with $EX = 3$ and $EX^2 = 13$. If Q be the probability of the event: $-2 \leq X \leq 8$; then which one of the following statements follows from Chebychev's inequality?

1. $Q \geq 0.84$
2. $Q \leq 0.84$
3. $Q \geq 0.36$
4. $Q \leq 0.16$

Options :

71087035085. 1
71087035086. 2
71087035087. 3
71087035088. 4

Question Number : 73 Question Id : 7108708773 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The large sample efficiency of the median relative to the mean of a normal population is

1. $\frac{1}{\pi}$
2. $\frac{2}{\pi}$
3. $\frac{\pi}{2}$
4. π

Options :

71087035089. 1
71087035090. 2
71087035091. 3
71087035092. 4

Question Number : 74 Question Id : 7108708774 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

A box contains 10 green balls, 6 black balls, and 14 red balls. Two balls are selected at random without replacement from the box. Then the probability that the first ball is red given that the second is red is

1. $\frac{13}{29}$
2. $\frac{16}{30}$
3. $\frac{91}{435}$
4. $\frac{151}{435}$

Options :

71087035093. 1
71087035094. 2
71087035095. 3
71087035096. 4

Question Number : 75 Question Id : 7108708775 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

X and Y are independent variables with the same distribution, which has a finite variance. If $Z_1 = X + Y$ and $Z_2 = X - Y$ are independent, then all random variables, X, Y, Z_1 and Z_2 are distributed

1. Exponentially
2. As a gamma variable
3. As a beta variable
4. Normally

Options :

71087035097. 1
71087035098. 2
71087035099. 3
71087035100. 4

Question Number : 76 Question Id : 7108708776 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

About 30 percent of people do not recognize the bitter taste of phenyl-thio-carbamate. The inability to taste it is due to a single autosomal recessive gene. What is the frequency of the non-tasting gene, assuming the population to be in Hardy-Weinberg equilibrium?

1. 0.10
2. 0.30
3. 0.55
4. 0.85

Options :

71087035101. 1
71087035102. 2
71087035103. 3
71087035104. 4

Question Number : 77 Question Id : 7108708777 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Non-random differential reproduction of genotype is caused by

1. Mutation
2. Migration
3. Selection
4. Random mating

Options :

71087035105. 1
71087035106. 2
71087035107. 3
71087035108. 4

Question Number : 78 Question Id : 7108708778 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If an allele, A, mutates to 'a' with a frequency of 1 in 10,000 and back-mutates with a frequency of 1 in 100,000 and if the three genotypes have equal fitness, what will be the frequency of genotype 'aa' at equilibrium in a random mating population?

1. 0.01
2. 0.16
3. 0.46
4. 0.83

Options :

71087035109. 1
71087035110. 2
71087035111. 3
71087035112. 4

Question Number : 79 Question Id : 7108708779 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Perfect linkage (complete linkage) is observed when the recombination fraction is

1. Equal to one
2. Equal to half
3. Equal to zero
4. More than one

Options :

71087035113. 1
71087035114. 2
71087035115. 3
71087035116. 4

Question Number : 80 Question Id : 7108708780 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The standardized partial regression coefficient of cause on effect is

1. Coefficient of determination
2. Inbreeding coefficient
3. Path coefficient
4. Coefficient of parentage

Options :

71087035117. 1
71087035118. 2
71087035119. 3
71087035120. 4

Question Number : 81 Question Id : 7108708781 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Correlation between double first cousins will be

1. $-\frac{1}{2}$
2. $\frac{1}{4}$
3. $-\frac{1}{8}$
4. $-\frac{1}{4}$

Options :

71087035121. 1
71087035122. 2
71087035123. 3
71087035124. 4

Question Number : 82 Question Id : 7108708782 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Consider a simple random sampling of n units from a population containing N units without replacement. Let V_1 be the variance of the sample mean and V_2 , the large sample variance of the classical regression estimator based on a single auxiliary variable. If $\frac{V_1}{V_2} = \frac{4}{3}$, then the square of the correlation coefficient between the study and auxiliary variables is

1. $\frac{1}{3}$
2. $\frac{2}{3}$
3. $\frac{1}{4}$
4. $\frac{1}{2}$

Options :

71087035125. 1
71087035126. 2
71087035127. 3
71087035128. 4

Question Number : 83 Question Id : 7108708783 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In two-stage sampling, let n be the number of first stage units in the sample and let m be the number of second-stage units selected from each number of second stage units selected from each first stage unit sampled. Then, the variance component due to the second stage will decrease with

1. Increase in n and decrease in m
2. Decrease in n and increase in m
3. Increase in n and m
4. Decrease in n and m

Options :

71087035129. 1
71087035130. 2
71087035131. 3
71087035132. 4

Question Number : 84 Question Id : 7108708784 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In simple random sampling, the bias of the ratio estimator $\hat{R} = \frac{\bar{y}}{\bar{x}}$ is given by

1. $\frac{1}{E(\bar{x})} cov(\bar{y}, \bar{x})$
2. $-\frac{cov(\hat{R}, \bar{x})}{E(\bar{x})}$
3. $\frac{cov(\hat{R}, \bar{y})}{E(\bar{y})}$
4. $-\frac{cov(\hat{R}, \bar{y})}{E(\bar{y})}$

Options :

71087035133. 1
71087035134. 2
71087035135. 3
71087035136. 4

Question Number : 85 Question Id : 7108708785 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

If from a population of N units, one unit is selected with varying probabilities of selection p_i for the i^{th} unit, then an unbiased estimate of population mean (with usual notation) is

1. $\frac{NY_1}{p_1}$
2. $\frac{Y_1}{Np_1}$
3. $\frac{p_1 Y_1}{N}$
4. NY_1

Options :

71087035137. 1
71087035138. 2
71087035139. 3
71087035140. 4

Question Number : 86 Question Id : 7108708786 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements: one is labelled as **Assertion A** and the other is labelled as **Reason R**

Assertion A: When samples are selected from a population, it is necessary to subdivide the population into a finite number of distinct and identifiable units called sampling units

Reason R: List of sampling units is called frame and we cannot sample well without a frame

In the light of the above statements, choose the **correct** answer from the options given below

1. Both **A** and **R** are correct and **R** is the correct explanation of **A**
2. Both **A** and **R** are correct but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

Options :

- 71087035141. 1
- 71087035142. 2
- 71087035143. 3
- 71087035144. 4

Question Number : 87 Question Id : 7108708787 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

For two strata $N_1 = 200$, $S_1^2 = 9$ and $N_2 = 300$, $S_2^2 = 4$, the variance of sample mean of sample of size 100, under proportional allocation is

1. 0.048
2. 0.056
3. 0.240
4. 0.084

Options :

- 71087035145. 1
- 71087035146. 2

71087035147. 3

71087035148. 4

Question Number : 88 Question Id : 7108708788 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A simple random sample of size 3 is drawn from a population of size N with replacement, then the probability that the sample contains two different units are

1. $\frac{1}{N^2}$

2. $\frac{3(N-1)}{N^2}$

3. $\frac{(N-1)(N-2)}{N^2}$

4. $\frac{(N-1)}{N^2}$

Options :

71087035149. 1

71087035150. 2

71087035151. 3

71087035152. 4

Question Number : 89 Question Id : 7108708789 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I	List II
A. Use of auxiliary information at the estimation stage	I. Sample mean based on a simple random sample
B. Use of auxiliary information at the sample selection stage	II. Ratio estimator based on simple random sampling
C. Use of auxiliary information at the stratification stage	III. Probability proportional to size sampling
D. No use of the auxiliary information at any stage	IV. Stratified random sampling

Choose the correct answer from the options given below:

1. A - II, B - IV, C - III, D - I
2. A - I, B - III, C - IV, D - II
3. A - II, B - III, C - IV, D - I
4. A - I, B - IV, C - III, D - II

Options :

71087035153. 1

71087035154. 2

71087035155. 3

71087035156. 4

Question Number : 90 Question Id : 7108708790 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following is true for a census (complete enumeration)?

1. Non-sampling error is zero
2. Sampling error is zero
3. Both sampling and non-sampling errors are non-zero
4. None of the above

Options :

71087035157. 1

71087035158. 2

71087035159. 3

71087035160. 4

Question Number : 91 Question Id : 7108708791 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If a simple random sample of size n is drawn without replacement from a finite population of size N with mean μ and variance σ^2 , the covariance between any two members of the sample is

1. $\frac{\sigma^2}{N-2}$
2. $-\frac{\sigma^2}{N-2}$
3. $\frac{\sigma^2}{N-1}$
4. $-\frac{\sigma^2}{N-1}$

Options :

71087035161. 1

71087035162. 2

71087035163. 3

71087035164. 4

Question Number : 92 Question Id : 7108708792 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If a block design is variance balanced and efficiency balanced, then the design is

1. Equireplicated
2. Non-equireplicated
3. Proper
4. Non-proper

Options :

71087035165. 1

71087035166. 2

71087035167. 3

71087035168. 4

Question Number : 93 Question Id : 7108708793 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If an incomplete block design (v, b, r, k) , the blocks can be grouped in r number of sets, each set containing b / r blocks, such that every treatment appears in each set precisely once and any two blocks of two different sets have a constant number of treatments in common, then the design is

1. Resolvable
2. Affine resolvable
3. A - optimal
4. D - optimal

Options :

71087035169. 1

71087035170. 2

71087035171. 3

71087035172. 4

Question Number : 94 Question Id : 7108708794 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In a split split plot factorial experiment with r^o replications, the factor A, B and C have m, n and p levels respectively. Suppose A is applied in the main plot, B is applied in subplot and C is applied in sub-sub plot. Write down the degrees of freedom for Error (b) and Error (c)

1. $p(r-1)(n-1)$ and $pn(m-1)(r-1)$
2. $m(r-1)(n-1)$ and $mn(p-1)(r-1)$
3. $m(n-1)(p-1)$ and $mn(p-1)(r-1)$
4. $m(r-1)(p-1)$ and $mn(p-1)(r-1)$

Options :

71087035173. 1
71087035174. 2
71087035175. 3
71087035176. 4

Question Number : 95 Question Id : 7108708795 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In a $(2^5, 2^3)$ confounded factorial experiment, the key block contains (1, bcde, ace, acd, abd, abe, de and bc). Write down which effects are confounded in the design?

1. ABC, ADE, BCDE
2. ABC, AD, BCD
3. ABD, ACE, BCDE
4. AB, BCE, ACE

Options :

71087035177. 1
71087035178. 2
71087035179. 3
71087035180. 4

Question Number : 96 Question Id : 7108708796 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I: In a block design (v, b, r, k) the equations for estimating treatment and block effects are $C\alpha = Q$ and $D\beta = P$ (N be the incidence matrix of order $v \times b$). Then covariance between Q and P is zero if and only if $N = rk' / n$

Statement II: The covariance between Q and P is always zero, i.e. $\text{Cov}(Q, P) = 0$

In the light of the above statements, choose the **most appropriate** answer from the options given below

1. Both Statement I and Statement II are true
2. Both Statement I and Statement II are false
3. Statement I is correct but Statement II is false
4. Statement I is incorrect but Statement II is true

Options :

- 71087035181. 1
- 71087035182. 2
- 71087035183. 3
- 71087035184. 4

Question Number : 97 Question Id : 7108708797 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements: one is labelled as **Assertion A** and the other is labelled as **Reason R**

Assertion A: Let D be a BIB design $(v, b, r, k \text{ \& } \lambda)$, N be the incidence matrix and θ_0 be the largest eigenvalue of NN' other than rk . Now $\theta_0 = r - \lambda$ and D is resolvable BIB design

Reason R: $k \leq r - \lambda$ and $b \geq v + r - 1$

In the light of the above statements, choose the correct answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

Options :

71087035185. 1

71087035186. 2

71087035187. 3

71087035188. 4

Question Number : 98 Question Id : 7108708798 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements: one is labelled as **Assertion A** and the other is labelled as **Reason R**

Assertion A: Two contrasts $C_1 = \sum l_i y_i$ and $C_2 = \sum m_i y_i$ on y are orthogonal to each other and $\text{Cov}(C_1, C_2) = 0$

Reason R: Necessary condition for orthogonality of C_1 and C_2 will be $\sum l_i m_i \neq 0$

In the light of the above statements, choose the **correct** answer from the options given below

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

Options :

71087035189. 1

71087035190. 2

71087035191. 3

71087035192. 4

Question Number : 99 Question Id : 7108708799 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I	List II
A. A optimality	I. $\det(V_d^*) \leq \det(V_d)$
B. D optimality	II. $\text{Trace}(V_d^*) \leq \text{Trace}(V_d)$
C. E optimality	III. $\text{Trace}(C_d^*) \leq \text{Trace}(C_d)$
D. Universal optimality	IV. $\max \lambda_d^* \leq \max \lambda_d$

Choose the correct answer from the options given below:

1. A - I, B - II, C - IV, D - III
2. A - III, B - II, C - I, D - IV
3. A - II, B - I, C - IV, D - III
4. A - IV, B - I, C - II, D - III

Options :

71087035193. 1

71087035194. 2

71087035195. 3

71087035196. 4

Question Number : 100 Question Id : 7108708800 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is

Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I	List II
A. Connect block design	I. $b \geq v$
B. Variance Balanced	II. $AGA = A$
C. BIB design (v, b, r, k & λ)	III. Rank ($v - 1$)
D. Generalized inverse matrix	IV. $C = (a - b) I + b J J'$

Choose the correct answer from the options given below

1. A - III, B - IV, C - I, D - II
2. A - II, B - I, C - IV, D - III
3. A-III, B-I, C-II, D-IV
4. A - IV, B - I, C - III, D - II

Options :

71087035197. 1

71087035198. 2

71087035199. 3

71087035200. 4

Question Number : 101 Question Id : 7108708801 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Let us consider a symmetric BIB design D_i ($v = b, r = k, \lambda$). The parameters of the residual design D will be

1. $v^* = v - k, b^* = v - 1, r^* = k, k^* = k - \lambda$ and $\lambda^* = \lambda$
2. $v^* = v, b^* = b, r^* = b - r, k^* = v - k$ and $\lambda^* = b - 2r + \lambda$
3. $v^* = v - k, b^* = b, r^* = k, k^* = k - \lambda$ and $\lambda^* = \lambda$
4. $v^* = k, b^* = v - 1, r^* = k - 1, k^* = \lambda$ and $\lambda^* = \lambda - 1$

Options :

71087035201. 1

71087035202. 2

71087035203. 3

71087035204. 4

Question Number : 102 Question Id : 7108708802 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The values of α and β , when the critical region is empty will be

1. $\alpha = 0, \beta = 0$

2. $\alpha = 0, \beta = 1$

3. $\alpha = 1, \beta = 0$

4. $\alpha = 1, \beta = 1$

Options :

71087035205. 1

71087035206. 2

71087035207. 3

71087035208. 4

Question Number : 103 Question Id : 7108708803 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Sign test uses which of the following distributions?

1. Binomial

2. Hypergeometric

3. Multinomial

4. Negative binomial

Options :

71087035209. 1

71087035210. 2

71087035211. 3

71087035212. 4

Question Number : 104 Question Id : 7108708804 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If a random sample of size n is drawn from $N(\mu, \sigma^2)$, with μ known, the Neyman-Pearson lemma for testing $H_0: \sigma^2 = \sigma_0^2$ versus $H_1: \sigma^2 = \sigma_1^2$, leads to a test statistic whose distribution is

1. Chi-square distribution
2. Normal distribution
3. t - distribution
4. F - distribution

Options :

71087035213. 1

71087035214. 2

71087035215. 3

71087035216. 4

Question Number : 105 Question Id : 7108708805 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Suppose T_1 and T_2 are two unbiased estimators of θ and $\text{Var}(T_1) = \sigma^2$, $\text{Var}(T_2) = K\sigma^2$, $K > 0$, $\text{Cov}(T_1, T_2) = 0$. If the best linear unbiased combination of T_1 and T_2 is $\frac{T_1 + 9T_2}{10}$, then the value of K will be

1. 10
2. $\frac{1}{10}$
3. $\frac{1}{9}$
4. 9

Options :

71087035217. 1

71087035218. 2

71087035219. 3

71087035220. 4

Question Number : 106 Question Id : 7108708806 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A sample of two units is selected as follows from a population of N units. In the first draw, one unit is drawn from the whole population with probability proportional to its size and in the next draw, one unit is drawn by simple random sampling from the remaining (N - 1) population units. If the selection probability of a particular unit in the first draw is p, then the probability that this unit has to be surveyed is

1. $\frac{p}{(N-1)}$
2. $\frac{N-1}{N-2}p + \frac{1}{N-1}$
3. $p + \frac{1}{N-1}$
4. $\frac{N-2}{N-1}p + \frac{1}{N-1}$

Options :

71087035221. 1

71087035222. 2

71087035223. 3

71087035224. 4

Question Number : 107 Question Id : 7108708807 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If X and Y are two independent random variables, X has a Poisson distribution with mean 1 and Y has the geometric distribution $P(Y = y) = (1 - p)p^y$; $y = 0, 1, 2, \dots$, then $P[X = Y]$ is equal to

1. $(1 - p)e^{-1}$
2. $(1 - p) + e^{-1}$
3. $(1 - p)e^{(p-1)}$
4. pe^{-p}

Options :

71087035225. 1
71087035226. 2
71087035227. 3
71087035228. 4

Question Number : 108 Question Id : 7108708808 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let a population of size $N = 5$ have its mean $\bar{X}_N = 12$ and $S^2 = 100$. A sample of size $n = 2$ is drawn without replacement. If the sample mean is $\bar{X}_n$, then $E(\bar{X}_n^2)$

1. 174
2. 144
3. 50
4. 30

Options :

71087035229. 1
71087035230. 2
71087035231. 3
71087035232. 4

Question Number : 109 Question Id : 7108708809 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The two sample 't' test, when samples are drawn independently from two normal populations and where the notations have their usual meanings is

1. $t = \frac{\bar{x}_1 - \bar{x}_2}{s / \sqrt{n_1 + n_2 - 2}}$
2. $t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$
3. $t = \frac{\bar{d}}{SE(d)}$
4. $t = \frac{(\bar{x}_1 - \bar{x}_2)\sqrt{(n-1)}}{\sqrt{s_1^2 + s_2^2}}$

Options :

71087035233. 1
 71087035234. 2
 71087035235. 3
 71087035236. 4

Question Number : 110 Question Id : 7108708810 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A fair die is rolled repeatedly. Then the probability of event A, that a '2' will show up before '5' is

1. $\frac{1}{2}$
2. $\frac{1}{3}$
3. $\frac{1}{4}$
4. $\frac{3}{4}$

Options :

71087035237. 1
 71087035238. 2
 71087035239. 3

71087035240. 4

Question Number : 111 Question Id : 7108708811 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If the moment-generating function of a random variable X is $(\frac{1}{3} + \frac{2}{3}e^t)^5$, then $P_r(X = 2 \text{ or } 3)$ is

1. $\frac{40}{81}$
2. $\frac{40}{243}$
3. $\frac{80}{243}$
4. $\frac{60}{81}$

Options :

71087035241. 1

71087035242. 2

71087035243. 3

71087035244. 4

Question Number : 112 Question Id : 7108708812 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The MLE of p based on a single observation x from the Bernoulli distribution with parameter

$p \in \left[\frac{1}{3}, \frac{2}{3}\right]$ is

1. $\frac{X+1}{3}$
2. $\frac{2X+1}{3}$
3. $\frac{X-1}{3}$
4. $\frac{2X-1}{3}$

Options :

71087035245. 1

71087035246. 2

71087035247. 3

71087035248. 4

Question Number : 113 Question Id : 7108708813 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

If a random variable has the probability density function $\frac{3}{4}x(2-x)$ for $0 < x < 2$, then its variance will be

1. $\frac{6}{5}$
2. $\frac{1}{5}$
3. 1
4. $\frac{1}{2}$

Options :

71087035249. 1

71087035250. 2

71087035251. 3

71087035252. 4

Question Number : 114 Question Id : 7108708814 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

If x follows Poisson distribution (λ), find out the efficient and sufficient estimator of the variance of the mean of x i.e. $V(\bar{x})$ will be

1. λ
2. $\frac{\lambda^2}{n}$
3. $\frac{\lambda}{n}$
4. $\frac{\lambda}{n}$

Options :

- 71087035253. 1
- 71087035254. 2
- 71087035255. 3
- 71087035256. 4

Question Number : 115 Question Id : 7108708815 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If you draw a card from a well-shuffled pack of 52 cards, any card may be selected because the events/cards are:

- 1. Mutually exclusive
- 2. Equally likely
- 3. Exhaustive
- 4. Favourable

Options :

- 71087035257. 1
- 71087035258. 2
- 71087035259. 3
- 71087035260. 4

Question Number : 116 Question Id : 7108708816 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a bivariate set up, if the coefficient of correlation is 0.6, then the percentage of variation in the dependent variable explained by the independent variable is

- 1. 36
- 2. 40
- 3. 60
- 4. 64

Options :

- 71087035261. 1
- 71087035262. 2
- 71087035263. 3
- 71087035264. 4

Question Number : 117 Question Id : 7108708817 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following inequalities is always true for the regression coefficients B_{YX} , B_{XY} and the correlation coefficient ρ_{XY} of the two variables X and Y ?

- 1. $(B_{XY} + B_{YX})^{\frac{1}{2}} \geq \rho_{XY}$
- 2. $B_{XY} + B_{YX} \leq \rho_{XY}$
- 3. $|B_{XY}| + |B_{YX}| \geq 2|\rho_{XY}|$
- 4. $2(B_{XY} + B_{YX}) \leq \rho_{XY}$

Options :

- 71087035265. 1
- 71087035266. 2
- 71087035267. 3
- 71087035268. 4

Question Number : 118 Question Id : 7108708818 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Neyman-Pearson lemma gives a general method for finding a best (most powerful) test when

- 1. H_0 is simple and H_1 is a composite hypothesis
- 2. H_0 and H_1 are any hypotheses - simple or composite
- 3. H_0 and H_1 are both simple hypotheses
- 4. H_0 and H_1 are both composite hypotheses

Options :

71087035269. 1

71087035270. 2

71087035271. 3

71087035272. 4

Question Number : 119 Question Id : 7108708819 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let $x_1, x_2, \dots, x_{25}$ denote a random sample of size 25 from $N(\mu, \sigma^2 = 100)$. If $\bar{x} = 65.20$, then 95% confidence interval for μ is

1. (61.20, 69.72)

2. (64.73, 72.51)

3. (61.28, 69.12)

4. (63.61, 70.20)

Options :

71087035273. 1

71087035274. 2

71087035275. 3

71087035276. 4

Question Number : 120 Question Id : 7108708820 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Let $y_1 < y_2 < y_3 < y_4$ denote the order statistics of a random sample of size 4 from a distribution having probability density function (pdf), $f(x) = 2x, 0 < x < 1$ and zero elsewhere.

Then the $P_r(\frac{1}{2} < y_3)$ is

1. $\frac{243}{256}$
2. $\frac{241}{256}$
3. $\frac{143}{256}$
4. $\frac{141}{256}$

Options :

71087035277. 1

71087035278. 2

71087035279. 3

71087035280. 4