

National Testing Agency

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Computer Applications and IT

Group Number :	1
Group Id :	71087075
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 :	710870223
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 : 710870223
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 7108708941 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 :

71087035761. 1
71087035762. 2
71087035763. 3
71087035764. 4

Question Number : 2 Question Id : 7108708942 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 :

- 71087035765. 1
- 71087035766. 2
- 71087035767. 3
- 71087035768. 4

Question Number : 3 Question Id : 7108708943 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 :

- 71087035769. 1

71087035770. 2

71087035771. 3

71087035772. 4

Question Number : 4 Question Id : 7108708944 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 :

71087035773. 1

71087035774. 2

71087035775. 3

71087035776. 4

Question Number : 5 Question Id : 7108708945 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 :

71087035777. 1

71087035778. 2

71087035779. 3

71087035780. 4

Question Number : 6 Question Id : 7108708946 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 :

- 71087035781. 1
- 71087035782. 2
- 71087035783. 3
- 71087035784. 4

Question Number : 7 Question Id : 7108708947 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 :

- 71087035785. 1
- 71087035786. 2
- 71087035787. 3
- 71087035788. 4

Question Number : 8 Question Id : 7108708948 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. Utter 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 :

71087035789. 1
71087035790. 2
71087035791. 3
71087035792. 4

Question Number : 9 Question Id : 7108708949 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 :

71087035793. 1
71087035794. 2
71087035795. 3
71087035796. 4

Question Number : 10 Question Id : 7108708950 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 :

71087035797. 1

71087035798. 2

71087035799. 3

71087035800. 4

Question Number : 11 Question Id : 7108708951 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 :

71087035801. 1

71087035802. 2

71087035803. 3

71087035804. 4

Question Number : 12 Question Id : 7108708952 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 :

71087035805. 1
71087035806. 2
71087035807. 3
71087035808. 4

Question Number : 13 Question Id : 7108708953 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 :

71087035809. 1
71087035810. 2
71087035811. 3
71087035812. 4

Question Number : 14 Question Id : 7108708954 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 :

- 71087035813. 1
- 71087035814. 2
- 71087035815. 3
- 71087035816. 4

Question Number : 15 Question Id : 7108708955 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 :

- 71087035817. 1
- 71087035818. 2
- 71087035819. 3
- 71087035820. 4

Question Number : 16 Question Id : 7108708956 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 :

- 71087035821. 1
- 71087035822. 2
- 71087035823. 3
- 71087035824. 4

Question Number : 17 Question Id : 7108708957 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 :

- 71087035825. 1
- 71087035826. 2
- 71087035827. 3
- 71087035828. 4

Question Number : 18 Question Id : 7108708958 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 :

- 71087035829. 1
- 71087035830. 2
- 71087035831. 3
- 71087035832. 4

Question Number : 19 Question Id : 7108708959 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 :

- 71087035833. 1
- 71087035834. 2
- 71087035835. 3
- 71087035836. 4

Question Number : 20 Question Id : 7108708960 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 :

- 71087035837. 1

71087035838. 2
71087035839. 3
71087035840. 4

Part B Core Agricultural Statistics

Section Id :	710870224
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 :	710870224
Question Shuffling Allowed :	Yes

Question Number : 21 Question Id : 7108708961 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 :

71087035841. 1

71087035842. 2

71087035843. 3

71087035844. 4

Question Number : 22 Question Id : 7108708962 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 :

71087035845. 1

71087035846. 2

71087035847. 3

71087035848. 4

Question Number : 23 Question Id : 7108708963 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 :

- 71087035849. 1
- 71087035850. 2
- 71087035851. 3
- 71087035852. 4

Question Number : 24 Question Id : 7108708964 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 :

- 71087035853. 1
- 71087035854. 2
- 71087035855. 3
- 71087035856. 4

Question Number : 25 Question Id : 7108708965 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 :

71087035857. 1

71087035858. 2

71087035859. 3

71087035860. 4

Question Number : 26 Question Id : 7108708966 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 :

71087035861. 1

71087035862. 2

71087035863. 3

71087035864. 4

Question Number : 27 Question Id : 7108708967 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 :

- 71087035865. 1
- 71087035866. 2
- 71087035867. 3
- 71087035868. 4

Question Number : 28 Question Id : 7108708968 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 :

- 71087035869. 1
- 71087035870. 2
- 71087035871. 3
- 71087035872. 4

Question Number : 29 Question Id : 7108708969 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 :

71087035873. 1

71087035874. 2

71087035875. 3

71087035876. 4

Question Number : 30 Question Id : 7108708970 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 :

- 71087035877. 1
- 71087035878. 2
- 71087035879. 3
- 71087035880. 4

Question Number : 31 Question Id : 7108708971 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 :

- 71087035881. 1
- 71087035882. 2
- 71087035883. 3
- 71087035884. 4

Question Number : 32 Question Id : 7108708972 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 :

- 71087035885. 1
- 71087035886. 2
- 71087035887. 3
- 71087035888. 4

Question Number : 33 Question Id : 7108708973 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 :

71087035889. 1

71087035890. 2

71087035891. 3

71087035892. 4

Question Number : 34 Question Id : 7108708974 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 :

71087035893. 1

71087035894. 2

71087035895. 3

71087035896. 4

Question Number : 35 Question Id : 7108708975 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 :

- 71087035897. 1
- 71087035898. 2
- 71087035899. 3
- 71087035900. 4

Question Number : 36 Question Id : 7108708976 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 :

- 71087035901. 1
- 71087035902. 2

71087035903. 3

71087035904. 4

Question Number : 37 Question Id : 7108708977 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 :

71087035905. 1

71087035906. 2

71087035907. 3

71087035908. 4

Question Number : 38 Question Id : 7108708978 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 :

71087035909. 1

71087035910. 2

71087035911. 3

71087035912. 4

Question Number : 39 Question Id : 7108708979 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 :

71087035913. 1

71087035914. 2

71087035915. 3

71087035916. 4

Question Number : 40 Question Id : 7108708980 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 :

71087035917. 1

71087035918. 2

71087035919. 3

71087035920. 4

Question Number : 41 Question Id : 7108708981 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 :

71087035921. 1
71087035922. 2
71087035923. 3
71087035924. 4

Question Number : 42 Question Id : 7108708982 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. Raghavrao
3. Aloke Dey and Ashis Das
4. P.K Sahu and A.K. Das

Options :

71087035925. 1
71087035926. 2
71087035927. 3
71087035928. 4

Question Number : 43 Question Id : 7108708983 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 :

71087035929. 1

71087035930. 2

71087035931. 3

71087035932. 4

Question Number : 44 Question Id : 7108708984 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 :

71087035933. 1

71087035934. 2

71087035935. 3

71087035936. 4

Question Number : 45 Question Id : 7108708985 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 :

71087035937. 1

71087035938. 2

71087035939. 3

71087035940. 4

Question Number : 46 Question Id : 7108708986 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 :

71087035941. 1

71087035942. 2

71087035943. 3

71087035944. 4

Question Number : 47 Question Id : 7108708987 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 :

71087035945. 1

71087035946. 2

71087035947. 3

71087035948. 4

Question Number : 48 Question Id : 7108708988 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 :

71087035949. 1

71087035950. 2

71087035951. 3

71087035952. 4

Question Number : 49 Question Id : 7108708989 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 :

71087035953. 1

71087035954. 2

71087035955. 3

71087035956. 4

Question Number : 50 Question Id : 7108708990 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 :

71087035957. 1

71087035958. 2

71087035959. 3

71087035960. 4

Question Number : 51 Question Id : 7108708991 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 :

71087035961. 1

71087035962. 2

71087035963. 3

71087035964. 4

Question Number : 52 Question Id : 7108708992 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 :

71087035965. 1

71087035966. 2

71087035967. 3

71087035968. 4

Question Number : 53 Question Id : 7108708993 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 :

71087035969. 1

71087035970. 2

71087035971. 3

71087035972. 4

Question Number : 54 Question Id : 7108708994 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 :

71087035973. 1

71087035974. 2

71087035975. 3

71087035976. 4

Question Number : 55 Question Id : 7108708995 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 :

71087035977. 1
71087035978. 2
71087035979. 3
71087035980. 4

Question Number : 56 Question Id : 7108708996 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 :

71087035981. 1
71087035982. 2
71087035983. 3
71087035984. 4

Question Number : 57 Question Id : 7108708997 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 :

71087035985. 1
71087035986. 2
71087035987. 3
71087035988. 4

Question Number : 58 Question Id : 7108708998 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 :

71087035989. 1
71087035990. 2
71087035991. 3
71087035992. 4

Question Number : 59 Question Id : 7108708999 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 :

- 71087035993. 1
- 71087035994. 2
- 71087035995. 3
- 71087035996. 4

Question Number : 60 Question Id : 7108709000 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 :

- 71087035997. 1
- 71087035998. 2
- 71087035999. 3
- 71087036000. 4

Question Number : 61 Question Id : 7108709001 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 :

71087036001. 1
71087036002. 2
71087036003. 3
71087036004. 4

Question Number : 62 Question Id : 7108709002 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 :

71087036005. 1
71087036006. 2
71087036007. 3
71087036008. 4

Question Number : 63 Question Id : 7108709003 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 :

71087036009. 1
71087036010. 2
71087036011. 3
71087036012. 4

Question Number : 64 Question Id : 7108709004 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 :

71087036013. 1
71087036014. 2
71087036015. 3
71087036016. 4

Question Number : 65 Question Id : 7108709005 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 :

71087036017. 1
71087036018. 2
71087036019. 3
71087036020. 4

Question Number : 66 Question Id : 7108709006 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 :

71087036021. 1
71087036022. 2
71087036023. 3
71087036024. 4

Question Number : 67 Question Id : 7108709007 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 :

71087036025. 1

71087036026. 2

71087036027. 3

71087036028. 4

Question Number : 68 Question Id : 7108709008 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 :

71087036029. 1

71087036030. 2

71087036031. 3

71087036032. 4

Question Number : 69 Question Id : 7108709009 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 :

71087036033. 1

71087036034. 2

71087036035. 3

71087036036. 4

Question Number : 70 Question Id : 7108709010 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 :

71087036037. 1

71087036038. 2

71087036039. 3

71087036040. 4

Part C Computer Applications and IT

Section Id :

710870225

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 :	710870225
Question Shuffling Allowed :	Yes

Question Number : 71 Question Id : 7108709011 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: A machine language program is executed by a computer in two phases. In the first phase, the program is stored in memory. In the second phase, instructions are retrieved from memory one after another, decoded and executed

Statement II: Processors are designed with the objective of easing programming and preventing processor-to-memory communication delays

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 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 :

71087036041. 1

71087036042. 2

71087036043. 3

71087036044. 4

Question Number : 72 Question Id : 7108709012 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: Main memory capacity of a computer is the number of bytes that its main memory can store

Statement II: A computer's main memory uses volatile RAM chips of two types - ROM and PROM

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 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 :

71087036045. 1

71087036046. 2

71087036047. 3

71087036048. 4

Question Number : 73 Question Id : 7108709013 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. Communicates with I/O devices	I. Memory Buffer
B. Holds the address of next instruction to be executed	II. Input/Output
C. Holds information on its way to and from memory	III. Program Control
D. Holds the address of active memory location	IV. Memory address

Choose the correct answer from the options given below:

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

Options :

71087036049. 1
71087036050. 2
71087036051. 3
71087036052. 4

Question Number : 74 Question Id : 7108709014 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 connectivity channel used for interaction between CPU and memory is known as a bus. Every computer has three types of buses. Which of the following options are the correct three types?

1. Data bus, Address bus and Control bus
2. Data bus, Memory bus and CPU bus
3. Data bus, CPU bus and Address bus
4. CPU bus, Control bus and Address bus

Options :

- 71087036053. 1
- 71087036054. 2
- 71087036055. 3
- 71087036056. 4

Question Number : 75 Question Id : 7108709015 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 INCORRECT statement:

1. An input device is an electro-mechanical device that accepts data from outside
2. Data scanning devices allow data entry from source documents directly
3. A parallel port can handle less data than a serial port
4. A device controller is an interface between I/O device and the computer's system bus

Options :

- 71087036057. 1
- 71087036058. 2
- 71087036059. 3
- 71087036060. 4

Question Number : 76 Question Id : 7108709016 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

CPU does not perform which of the following operations?

1. Data transfer
2. Logic operation
3. Arithmetic operation
4. All of the above

Options :

- 71087036061. 1
- 71087036062. 2
- 71087036063. 3
- 71087036064. 4

Question Number : 77 Question Id : 7108709017 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 memory unit has the lowest access time?

1. Compact disc
2. Main memory
3. Magnetic disc
4. Registers

Options :

- 71087036065. 1
- 71087036066. 2
- 71087036067. 3
- 71087036068. 4

Question Number : 78 Question Id : 7108709018 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 32-bit address bus allows access to a memory of capacity

1. 64 MB
2. 1 GB
3. 4 GB
4. 16 MB

Options :

71087036069. 1
71087036070. 2
71087036071. 3
71087036072. 4

Question Number : 79 Question Id : 7108709019 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 128 x 8 bit RAMs are required to design 32K x 32 bit RAM?

1. 512
2. 1024
3. 128
4. 32

Options :

71087036073. 1
71087036074. 2
71087036075. 3
71087036076. 4

Question Number : 80 Question Id : 7108709020 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

ALU (Arithmetic Logic Unit) and control section of CPU both employ a special purpose of storage locations called

1. Registers
2. Decoders
3. Multiplexer
4. Buffers

Options :

71087036077. 1

71087036078. 2

71087036079. 3

71087036080. 4

Question Number : 81 Question Id : 7108709021 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

What output will you get if this program is run?

```
class test
{
public static void main(String args[ ])
{
    int x = 42
    double y = 86.45;
    System.out.println("x mod 10 = " + x%10);
    System.out.println("y mod 10 = " + y % 10);
}
}
```

1. x mod 10 = 4 y mod 10 = 6.45
2. x mod 10 = 2 y mod 10 = 6.42
3. x mod 10 = 4 y mod 10 = 8.64
4. x mod 10 = 2 y mod 10 = 6.45

Options :

- 71087036081. 1
- 71087036082. 2
- 71087036083. 3
- 71087036084. 4

Question Number : 82 Question Id : 7108709022 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 class members can be accessed from the classes in the same package as well as classes in other packages that are subclasses of the declaring class?

1. Private
2. Protected
3. Public
4. All of the above

Options :

- 71087036085. 1
- 71087036086. 2
- 71087036087. 3
- 71087036088. 4

Question Number : 83 Question Id : 7108709023 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 action tags are used in JSP for developing a web application with JavaBean?

1. jsp : useBean
2. jsp : setProperty
3. jsp : getProperty
4. Both Option 2 and Option 3 above

Options :

- 71087036089. 1
- 71087036090. 2
- 71087036091. 3
- 71087036092. 4

Question Number : 84 Question Id : 7108709024 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 method is called only once during the runtime of your applet?

1. stop()
2. paint()
3. destroy()
4. init()

Options :

71087036093. 1
71087036094. 2
71087036095. 3
71087036096. 4

Question Number : 85 Question Id : 7108709025 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

What are the main features of XML?

1. Text data description
2. Human and computer-friendly format
3. Handles data in a tree structure having one and only one root element
4. All of the above

Options :

71087036097. 1
71087036098. 2
71087036099. 3
71087036100. 4

Question Number : 86 Question Id : 7108709026 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 boolean algebra, what will the value of $(a+b+c)'$?

1. $a b c$
2. $a' b' c'$
3. $a + b + c$
4. $a' + b' + c'$

Options :

71087036101. 1

71087036102. 2

71087036103. 3

71087036104. 4

Question Number : 87 Question Id : 7108709027 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 boolean function can be converted from algebraic expressions to a product of max terms by using

1. Graphical representation
2. Truth table
3. Canonical conversion method
4. Both Option 2 and Option 3 above

Options :

71087036105. 1

71087036106. 2

71087036107. 3

71087036108. 4

Question Number : 88 Question Id : 7108709028 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

Exclusive-OR is a/an

1. Prime function
2. Even function
3. Odd function
4. Undefined function

Options :

71087036109. 1

71087036110. 2

71087036111. 3

71087036112. 4

Question Number : 89 Question Id : 7108709029 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 sorting algorithms is of divide-and-conquer type?

1. Quick sort
2. Bubble sort
3. Insertion sort
4. All of the above

Options :

71087036113. 1

71087036114. 2

71087036115. 3

71087036116. 4

Question Number : 90 Question Id : 7108709030 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. Completeness	I. How long does it take to find a solution
B. Time complexity	II. How much memory is needed to perform the search
C. Space complexity	III. Is the strategy guaranteed to find the solution when there is one
D. Heap	IV. A complete binary tree with value of each node is greater than or equal to its children

Choose the correct answer from the options given below:

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

Options :

- 71087036117. 1
- 71087036118. 2
- 71087036119. 3
- 71087036120. 4

Question Number : 91 Question Id : 7108709031 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 storage method that provides easy insertion, deletion, concatenation and rearrangement of sub strings

1. Stack
2. Array
3. Queue
4. Linked list

Options :

- 71087036121. 1
- 71087036122. 2
- 71087036123. 3
- 71087036124. 4

Question Number : 92 Question Id : 7108709032 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 operating system of computer forms a contiguous block of free space by periodically collecting all the free memory space. This process is said to be

1. Dynamic memory allocation
2. Concatenation
3. Collision
4. Garbage collection

Options :

- 71087036125. 1
- 71087036126. 2
- 71087036127. 3
- 71087036128. 4

Question Number : 93 Question Id : 7108709033 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 data structure, which of the following is the fastest exact match search?

1. Pointers
2. Stacks
3. Hash tables
4. Array

Options :

- 71087036129. 1
- 71087036130. 2
- 71087036131. 3
- 71087036132. 4

Question Number : 94 Question Id : 7108709034 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

Any algorithm that should fulfil the operation(s) is/are:

1. Compute the function
2. Getting correct outputs from each input
3. Intended functional parameters
4. All of the above

Options :

- 71087036133. 1
- 71087036134. 2
- 71087036135. 3
- 71087036136. 4

Question Number : 95 Question Id : 7108709035 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** about an SQL query?

- A. An SQL query can contain a HAVING clause even if it does not have a GROUP BY clause
- B. All attributes used in the GROUP BY clause need not appear in the SELECT clause
- C. An SQL query can contain a HAVING clause only if it has a GROUP BY clause
- D. All attributes used in the GROUP BY clause must appear in the SELECT clause
- E. An SQL query may not have all attributes in SELECT clause that have been used in HAVING clause

Choose the correct answer from the options given below:

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

Options :

- 71087036137. 1
- 71087036138. 2
- 71087036139. 3
- 71087036140. 4

Question Number : 96 Question Id : 7108709036 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, as a side effect of the modification of the database, the system executes the following statement automatically

1. Assertion
2. Backup
3. Recovery
4. Trigger

Options :

- 71087036141. 1
- 71087036142. 2
- 71087036143. 3
- 71087036144. 4

Question Number : 97 Question Id : 7108709037 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 following table has two attributes P and Q where P is the primary key and Q is the foreign key referencing P with an on-delete cascade

P	Q
4	7
2	9
9	4
5	4
3	7
7	2
8	6

The set of all tuples that must be additionally deleted to preserve referential integrity, when tuple (4,7) is deleted is

1. (2, 9), (7, 2), (8, 6)
2. (9, 4), (2, 9), (3, 7)
3. (5, 4), (2, 9), (8, 6)
4. (5, 4), (9, 4), (2, 9)

Options :

- 71087036145. 1
- 71087036146. 2
- 71087036147. 3
- 71087036148. 4

Question Number : 98 Question Id : 7108709038 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 correct?

1. Every relation in Boyce-Codd Normal (BCNF) is also 3rd normal form (3NF)
2. Every relation that is in 3NF is also in BCNF
3. A relation R is in 3 NF if every non-prime attribute of relation R is fully functionally dependent on every key of R
4. No relation can be in 3NF and BCNF

Options :

- 71087036149. 1
- 71087036150. 2
- 71087036151. 3
- 71087036152. 4

Question Number : 99 Question Id : 7108709039 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 NOT correct?

1. Packet switching results in less variation in delay than circuit switching
2. Packet switching requires more per-packet processing than circuit switching
3. Packet switching leads to better utilization of bandwidth resources than circuit switching
4. Packet switching can lead to reordering unlike in circuit switching

Options :

- 71087036153. 1
- 71087036154. 2
- 71087036155. 3
- 71087036156. 4

Question Number : 100 Question Id : 7108709040 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

Assume that a company needs to connect to not more than 70 host machines to the network, then which of the following would be the best possible subnet mask?

1. 255.255.255.100
2. 255.255.255.224
3. 255.255.255.183
4. 255.255.255.230

Options :

71087036157. 1
71087036158. 2
71087036159. 3
71087036160. 4

Question Number : 101 Question Id : 7108709041 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 seven layers of the OSI model are:

1. Physical, Data-link, Network, Transport, Session, Presentation and Application
2. Physical, Data-link, Network, Transport, Session, Documentation and Application
3. Physical, Data-link, Network, Transport, Session, Documentation and Encryption
4. Physical, Data-link, Network, Transport, Session, Encryption and Decryption

Options :

71087036161. 1
71087036162. 2
71087036163. 3
71087036164. 4

Question Number : 102 Question Id : 7108709042 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 is NOT a part of the IP header in case of TCP/IP protocol suite?

1. Source's IP address
2. Destination's IP address
3. Port number of destination
4. Fragment offset

Options :

- 71087036165. 1
- 71087036166. 2
- 71087036167. 3
- 71087036168. 4

Question Number : 103 Question Id : 7108709043 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: TCP connections are full-duplex

Statement II: TCP connections are message streams and have no options for selective acknowledgement

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 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 :

- 71087036169. 1
- 71087036170. 2
- 71087036171. 3

71087036172. 4

Question Number : 104 Question Id : 7108709044 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 Software Configuration Management, which of the following is systematically controlled?

1. The changes due to the evolution of work as the project proceeds
2. The changes due to bugs found and fixed
3. The changes due to the changes in requirements
4. All of the above

Options :

71087036173. 1

71087036174. 2

71087036175. 3

71087036176. 4

Question Number : 105 Question Id : 7108709045 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

Testing of software with actual data and in actual environment is called

1. Alpha testing
2. Beta testing
3. Regression testing
4. None of the above

Options :

71087036177. 1

71087036178. 2

71087036179. 3

71087036180. 4

Question Number : 106 Question Id : 7108709046 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** about Time Sharing Systems?

- A. Time-sharing is a mechanism to provide simultaneous use of a computer system by many users
- B. Time-sharing is to keep track of free and occupied parts of memory
- C. Time-sharing uses multi-programming with a special CPU scheduling algorithm
- D. In time-sharing, one job is processed at one time
- E. In time-sharing, how to allocate space to multiple files on the disc is dealt with

Choose the correct answer from the options given below:

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

Options :

- 71087036181. 1
- 71087036182. 2
- 71087036183. 3
- 71087036184. 4

Question Number : 107 Question Id : 7108709047 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: Unix is multi-user, time-sharing operating system

Statement II: Unix was the first operating system written in a high-level language, C++

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 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 :

71087036185. 1

71087036186. 2

71087036187. 3

71087036188. 4

Question Number : 108 Question Id : 7108709048 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: Software engineering is systematic application of principles of computer science and mathematics in creation and building of cost-effective software solutions

Statement II: Firmware is a software substituted hardware and stored in the hard disc

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 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 :

71087036189. 1

71087036190. 2

71087036191. 3

71087036192. 4

Question Number : 109 Question Id : 7108709049 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. Interleaved execution of two or more independent program by a computer	I.Multitasking
B. Interleaved execution of multiple jobs in a single user system	II.Multi-threading
C. Process only one job at a time	III.Uniprogramming
D. Process consisting of more than one threads of control	IV.Multi-programming

Choose the correct answer from the options given below:

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

Options :

71087036193. 1
71087036194. 2
71087036195. 3
71087036196. 4

Question Number : 110 Question Id : 7108709050 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. An unauthorized person or program trying to get access to data or resources	I. Active Attacks
B. A system that verifies the identity of a user	II. Authentication
C. Interfering with the normal functioning of a system and having damaging effects	III. Intruder
D. Protecting private information against unauthorized access	IV. Cryptography

Choose the correct answer from the options given below:

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

Options :

71087036197. 1
71087036198. 2
71087036199. 3
71087036200. 4

Question Number : 111 Question Id : 7108709051 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 convergence of which of the following methods is sensitive to starting value?

1. Newton-Raphson method
2. Gauss-Seidel method
3. False position
4. All of the above

Options :

- 71087036201. 1
- 71087036202. 2
- 71087036203. 3
- 71087036204. 4

Question Number : 112 Question Id : 7108709052 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 applies to the bisection method used for finding roots of functions?

- 1. It is a faster method than Newton-Raphson method
- 2. It requires that there be no error in determining the sign of the function
- 3. Guaranteed to work for all continuous functions
- 4. Converges within a few iterations

Options :

- 71087036205. 1
- 71087036206. 2
- 71087036207. 3
- 71087036208. 4

Question Number : 113 Question Id : 7108709053 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 order of errors of the Simpson's rule for numerical integration with a step size 'h' is

- 1. h
- 2. h^2
- 3. h^3
- 4. h^4

Options :

71087036209. 1
71087036210. 2
71087036211. 3
71087036212. 4

Question Number : 114 Question Id : 7108709054 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

Jacobi's method is also known as

1. Diagonal method
2. Displacement method
3. Simultaneous method
4. Simultaneous Displacement method

Options :

71087036213. 1
71087036214. 2
71087036215. 3
71087036216. 4

Question Number : 115 Question Id : 7108709055 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 of the following methods, the curve of solution by the tangent in each interval is approximated?

1. Euler's method
2. Newton's method
3. Runge-Kutta method
4. Picard's method

Options :

71087036217. 1

71087036218. 2

71087036219. 3

71087036220. 4

Question Number : 116 Question Id : 7108709056 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 is NOT a popular markup language?

1. Syntax for Generalized Markup Language (SGML)
2. Hyper Text Markup Language (HTML)
3. Dynamic Markup Language (DML)
4. Extensible Markup Language (XML)

Options :

71087036221. 1

71087036222. 2

71087036223. 3

71087036224. 4

Question Number : 117 Question Id : 7108709057 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 is NOT a service type provided by cloud computing architectures?

1. Infrastructure as a service
2. Platform as a service
3. Network as a service
4. Software as a service

Options :

71087036225. 1

71087036226. 2

71087036227. 3

71087036228. 4

Question Number : 118 Question Id : 7108709058 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 the protocol that keeps the internet operational without a major breakdown in spite of exponential growth of computers connected to it?

1. HTTPS
2. HTTP
3. FTP
4. TCP/IP

Options :

71087036229. 1
71087036230. 2
71087036231. 3
71087036232. 4

Question Number : 119 Question Id : 7108709059 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 memory management mechanism that an operating system uses to solve the problem of external fragmentation is called

1. Time-sharing
2. Paging
3. Deadlock
4. Spooling

Options :

71087036233. 1
71087036234. 2
71087036235. 3

71087036236. 4

Question Number : 120 Question Id : 7108709060 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 process of identifying useful patterns from large databases or data warehouses is called

1. Data interpretation
2. Data mining
3. Data transformation
4. Data extraction

Options :

71087036237. 1

71087036238. 2

71087036239. 3

71087036240. 4