

QUESTION PAPER
Computer Science [SHIFT - 1]

Exam Date : 19/01/2025

Time : 10:00 AM - 12:00 PM

Part I - Aptitude

Question 1

Question Id : 251

Directions: Study the following passage to answer the question that follows.

Passage

In terms of the total energy consumed, the largest consumer is understandably the industrial sector which accounts for nearly half the total energy used in the country today. This is followed by the transport sector which consumes about 25%, the household sector (about 14%) and the agricultural sector (about 9%), in that order. This last sector has shown considerable increase in energy use over the last four decades. Among the primary fuels, the relative proportion of coal has dropped from nearly 80% to 40% and that of oil has gone up from 17% to 44% over the same period.

Total consumption of energy in India today is equivalent to 291 million tons of oil. Of this 26% comes from wood. On a per capita basis it works out to about one litre of oil per day, which is extremely low by international standards. The future energy demand depends upon the level of development envisaged and also on the sections of people affected by it. There is clearly no escape from the utilisation of renewable energy sources in a big way if the gap between the desired levels of energy supply and available resources has to be kept at the minimum.

Which of the following styles has been adopted by the author in writing the passage?

Answer :

- (A) Data-based, objective, positive, solution-oriented
- (B) Data-based, but coloured by socialism
- (C) Highly subjective with bias for poor people
- (D) Objective, descriptive, lacking clarity

Option Id

- 251001
- 251002
- 251003
- 251004

Right Answer :

Data-based objective positive solution-oriented

Right Option Id : 251001

Question 2

Question Id : 252

Directions: Study the following passage to answer the question that follows.

Passage

In terms of the total energy consumed, the largest consumer is understandably the industrial sector which accounts for nearly half the total energy used in the country today. This is followed by the transport sector which consumes about 25%, the household sector (about 14%) and the agricultural sector (about 9%), in that order. This last sector has shown considerable increase in energy use over the last four decades. Among the primary fuels, the relative proportion of coal has dropped from nearly 80% to 40% and that of oil has gone up from 17% to 44% over the same period.

Total consumption of energy in India today is equivalent to 291 million tons of oil. Of this 26% comes from wood. On a per capita basis it works out to about one litre of oil per day, which is extremely low by international standards. The future energy demand depends upon the level of development envisaged and also on the sections of people affected by it. There is clearly no escape from the utilisation of renewable energy sources in a big way if the gap between the desired levels of energy supply and available resources has to be kept at the minimum.

The author feels that increasing per capita use of energy is

Answer :

- (A) not at all desirable.
- (B) a matter of meticulous planning.
- (C) not easy but certainly achievable.
- (D) rather difficult, but not impossible.

Option Id

- 252001
- 252002
- 252003
- 252004

Right Answer :

a matter of meticulous planning.

Right Option Id : 252002

Question 3

Question Id : 253

Directions: Study the following passage to answer the question that follows.

Passage

In terms of the total energy consumed, the largest consumer is understandably the industrial sector which accounts for nearly half the total energy used in the country today. This is followed by the transport sector which consumes about 25%, the household sector (about 14%) and the agricultural sector (about 9%), in that order. This last sector has shown considerable increase in energy use over the last four decades. Among the primary fuels, the relative proportion of coal has dropped from nearly 80% to 40% and that of oil has gone up from 17% to 44% over the same period.

Total consumption of energy in India today is equivalent to 291 million tons of oil. Of this 26% comes from wood. On a per capita basis it works out to about one litre of oil per day, which is extremely low by international standards. The future energy demand depends upon the level of development envisaged and also on the sections of people affected by it. There is clearly no escape from the utilisation of renewable energy sources in a big way if the gap between the desired levels of energy supply and available resources has to be kept at the minimum.

Which of the following statements is true?

Answer :

- (A) Industrial sector uses 50% of total energy used in India.
- (B) Energy consumption in India is 26% of world consumption.
- (C) The household sector has shown considerable increase in energy use.
- (D) Use of oil has increased from 40% to 80%.

- 253001
- 253002
- 253003
- 253004

Right Answer :

Industrial sector uses 50% of total energy used in India.

Right Option Id : 253001

Question 4

Question Id : 254

Directions: Study the following passage to answer the question that follows.

Passage

In terms of the total energy consumed, the largest consumer is understandably the industrial sector which accounts for nearly half the total energy used in the country today. This is followed by the transport sector which consumes about 25%, the household sector (about 14%) and the agricultural sector (about 9%), in that order. This last sector has shown considerable increase in energy use over the last four decades. Among the primary fuels, the relative proportion of coal has dropped from nearly 80% to 40% and that of oil has gone up from 17% to 44% over the same period.

Total consumption of energy in India today is equivalent to 291 million tons of oil. Of this 26% comes from wood. On a per capita basis it works out to about one litre of oil per day, which is extremely low by international standards. The future energy demand depends upon the level of development envisaged and also on the sections of people affected by it. There is clearly no escape from the utilisation of renewable energy sources in a big way if the gap between the desired levels of energy supply and available resources has to be kept at the minimum.

Which of the following has been suggested by the author as the best possible solution to overcome energy crisis?

Answer :

- (A) Exploration of oil reserves
- (B) Maximization of renewable sources
- (C) Importing large quantities of coal
- (D) Reducing share of bulk users

- 254001
- 254002
- 254003
- 254004

Right Answer :

Maximization of renewable sources

Right Option Id : 254002

Question 5

Question Id : 255

Directions: Study the following passage to answer the question that follows.

Passage

In terms of the total energy consumed, the largest consumer is understandably the industrial sector which accounts for nearly half the total energy used in the country today. This is followed by the transport sector which consumes about 25%, the household sector (about 14%) and the agricultural sector (about 9%), in that order. This last sector has shown considerable increase in energy use over the last four decades. Among the primary fuels, the relative proportion of coal has dropped from nearly 80% to 40% and that of oil has gone up from 17% to 44% over the same period.

Total consumption of energy in India today is equivalent to 291 million tons of oil. Of this 26% comes from wood. On a per capita basis it works out to about one litre of oil per day, which is extremely low by international standards. The future energy demand depends upon the level of development envisaged and also on the sections of people affected by it. There is clearly no escape from the utilisation of renewable energy sources in a big way if the gap between the desired levels of energy supply and available resources has to be kept at the minimum.

Which of the following has been mentioned as a major hurdle in enhancing per capita consumption of energy in India?

Answer :

- (A) Present level of development in India.
- (B) International norm of 1 litre of oil per day per person.
- (C) Disparity in use of energy in rural and urban areas.
- (D) None of these

- 255001
- 255002
- 255003
- 255004

Right Answer :

None of these

Right Option Id : 255004

Question 6**Question Id : 256**

A Cricket team travelled by bus at 50 km per hour for 3 hours and 17 minutes. Then due to some fault in the bus, they decided to travel the remaining distance by train which also took 3 hours 17 minutes. If the speed of the train is 60 km/hour, the average speed of the whole journey is _____.

Answer :

- (A) 35 km/hr.
- (B) 45 km/hr.
- (C) 55 km/hr.
- (D) 50 km/hr.

Option Id

- 256001
- 256002
- 256003
- 256004

Right Answer :

55 km/hr.

Right Option Id : 256003**Question 7****Question Id : 257**

A and B can separately do a piece of work in 20 and 15 days respectively. They worked together for 6 days, after which B was replaced by C. If the work was finished in next 4 days, then the number of days in which C alone could do the work will be _____.

Answer :

- (A) 60 days
- (B) 40 days
- (C) 35 days
- (D) 30 days

Option Id

- 257001
- 257002
- 257003
- 257004

Right Answer :

40 days

Right Option Id : 257002**Question 8****Question Id : 258**

Three girls are aged 2 years, 4 years and 8 years. They want to divide seventy rupees in the ratio of their ages. How much money would each get?

Answer :

- (A) Rs.15, Rs.20, Rs.35
- (B) Rs.12, Rs.22, Rs.36
- (C) Rs.16, Rs.24, Rs.30
- (D) Rs.10, Rs.20, Rs.40

Option Id

- 258001
- 258002
- 258003
- 258004

Right Answer :

Rs.10 Rs.20 Rs.40

Right Option Id : 258004**Question 9****Question Id : 259**

While selling an electric fan, a dealer gives a discount of 5%. If he gives a discount of 8%, he earns Rs.36 less as profit. The marked price of the fan is _____.

Answer :

- (A) Rs.1000
- (B) Rs.1200
- (C) Rs.800
- (D) Rs.600

Option Id

- 259001
- 259002
- 259003
- 259004

Right Answer :

Rs.1200

Right Option Id : 259002**Question 10****Question Id : 260**

The number of two-digit numbers which on being reversed (i.e., their digits exchanged the position) gives out perfect square two-digit numbers is/are _____.

Answer :

- (A) 6
- (B) 4

Option Id

- 260001
- 260002

(C) 1
(D) 10

260003
 260004

Right Answer :

6

Right Option Id : 260001

Question 11

Find the odd one out.
F9G, G8H, H7I, I6J, I5K, K4L

Answer :
(A) G8H
(B) I5K
(C) I6J
(D) K4L

Question Id : 261

Option Id
 261001
 261002
 261003
 261004

Right Answer :
I5K

Right Option Id : 261002

Question 12

Seema is married to Vidu. Vidu is the brother-in-law of Amrita. Lokesh who is son of Vidu is a male cousin of Mukesh. Amit is the father of Seema's only sister Amrita's son. How is Lokesh related to Amit?

Answer :
(A) Father-in-law
(B) Brother-in-law
(C) Nephew
(D) Can't be determined

Question Id : 262

Option Id
 262001
 262002
 262003
 262004

Right Answer :
Can't be determined

Right Option Id : 262004

Question 13

In a certain code, MOBILE is written as OMIBEL. How is TELEVISION written in that code?

Answer :
(A) ETELVIISNO
(B) ETELVIIISON
(C) ETELIVISNO
(D) ETLEVIISON

Question Id : 263

Option Id
 263001
 263002
 263003
 263004

Right Answer :
ETELIVISNO

Right Option Id : 263003

Question 14

The present ages of A and B are in the ratio of 9:4. Seven years hence, the ratio of their ages will be 5:3. Find the present ages of A and B?

Answer :
(A) 18 and 8
(B) 27 and 12
(C) 45 and 20
(D) 36 and 16

Question Id : 264

Option Id
 264001
 264002
 264003
 264004

Right Answer :
18 and 8

Right Option Id : 264001

Question 15**Question Id : 265**

In the last election, the ruling party got 55% of the total valid votes cast. 20% of the votes cast were invalid. If the total number of votes cast was 7500, what is the number of valid votes that the other parties got?

Answer :

- (A) 2250
- (B) 2700
- (C) 2750
- (D) 2800

Option Id

- 265001
- 265002
- 265003
- 265004

Right Answer :

2700

Right Option Id : 265002**Question 16****Question Id : 266**

Which of the following is a physical change?

Answer :

- (A) Oxidation
- (B) Reduction
- (C) Sublimation
- (D) Decomposition

Option Id

- 266001
- 266002
- 266003
- 266004

Right Answer :

Sublimation

Right Option Id : 266003**Question 17****Question Id : 267**

Which of the following places in India is known as Jain Temple City?

Answer :

- (A) Girnar
- (B) Varanasi
- (C) Prayagraj
- (D) None of these

Option Id

- 267001
- 267002
- 267003
- 267004

Right Answer :

Girnar

Right Option Id : 267001**Question 18****Question Id : 268**

Mahatma Gandhi started Satyagraha movement in 1919 in protest against the

Answer :

- (A) Simon Commission.
- (B) Champaran wrongs.
- (C) proposed Rowlatt Act.
- (D) colonial exploitation of India.

Option Id

- 268001
- 268002
- 268003
- 268004

Right Answer :

proposed Rowlatt Act.

Right Option Id : 268003**Question 19****Question Id : 269**

Who appoints/elects the Chairman of Public Accounts Committee (PAC) of the Parliament?

Answer :

- (A) Union Cabinet of India
- (B) Speaker of Lok Sabha

Option Id

- 269001
- 269002

- (C) President of India
(D) Members of PAC

269003
 269004

Right Answer :
Speaker of Lok Sabha

Right Option Id : 269002

Question 20

Question Id : 270

In which of the following banks one cannot open a personal account?

- Answer :
(A) Commercial Bank
(B) Cooperative Bank
(C) Scheduled Bank
(D) Reserve Bank of India

Option Id
 270001
 270002
 270003
 270004

Right Answer :
Reserve Bank of India

Right Option Id : 270004

Question 21

Question Id : 271

Directions: Study the following information and answer the question that follows.

In a custom component making unit, two machine components P and Q are made using three different types of tools – for pressing, cutting and welding. The unit has 6 Presses, 10 Cutters and 5 Welding tools, all working for 10 hours a day.

One unit of part P needs 40 minutes on Press, 2 hours on Cutter, and 30 minutes on a Welding tool for its completion. Similarly, one unit of part Q needs 1 hour on Press, 30 minutes on Cutter and 1 hour on Welding tool for its completion.

In a day, how many units of machine component Q can be completed?

- Answer :
(A) 20
(B) 30
(C) 40
(D) 50

Option Id
 271001
 271002
 271003
 271004

Right Answer :
50

Right Option Id : 271004

Question 22

Question Id : 272

Directions: Study the following information and answer the question that follows.

In a custom component making unit, two machine components P and Q are made using three different types of tools – for pressing, cutting and welding. The unit has 6 Presses, 10 Cutters and 5 Welding tools, all working for 10 hours a day.

One unit of part P needs 40 minutes on Press, 2 hours on Cutter, and 30 minutes on a Welding tool for its completion. Similarly, one unit of part Q needs 1 hour on Press, 30 minutes on Cutter and 1 hour on Welding tool for its completion.

If 20 units of component Q are made in a day, how many units of component P can be made in the same day?

- Answer :
(A) 10
(B) 20
(C) 40
(D) 45

Option Id
 272001
 272002
 272003
 272004

Right Answer :
45

Right Option Id : 272004

Question 23

Question Id : 273

Directions: Study the following information and answer the question that follows.

In a custom component making unit, two machine components P and Q are made using three different types of tools – for pressing, cutting and welding. The unit has 6 Presses, 10 Cutters and 5 Welding tools, all working for 10 hours a day.

One unit of part P needs 40 minutes on Press, 2 hours on Cutter, and 30 minutes on a Welding tool for its completion. Similarly, one unit of part Q needs 1 hour on Press, 30 minutes on Cutter and 1 hour on Welding tool for its completion.

If 10 units of component P are made in a day, how many units of component Q can be made in the same day?

Answer :

- (A) 45
- (B) 30
- (C) 17
- (D) 50

| Option Id |
|-----------|
| 273001 |
| 273002 |
| 273003 |
| 273004 |

Right Answer :

45

Right Option Id : 273001

Question 24

Question Id : 274

Directions: Study the following information and answer the question that follows.

In a custom component making unit, two machine components P and Q are made using three different types of tools – for pressing, cutting and welding. The unit has 6 Presses, 10 Cutters and 5 Welding tools, all working for 10 hours a day.

One unit of part P needs 40 minutes on Press, 2 hours on Cutter, and 30 minutes on a Welding tool for its completion. Similarly, one unit of part Q needs 1 hour on Press, 30 minutes on Cutter and 1 hour on Welding tool for its completion.

If one more Welding tool is added and 30 units of component Q are made in a day, how many units of component P can be made?

Answer :

- (A) 10
- (B) 5
- (C) 2
- (D) 0

| Option Id |
|-----------|
| 274001 |
| 274002 |
| 274003 |
| 274004 |

Right Answer :

0

Right Option Id : 274004

Question 25

Question Id : 275

Directions: Study the following information and answer the question that follows.

In a custom component making unit, two machine components P and Q are made using three different types of tools – for pressing, cutting and welding. The unit has 6 Presses, 10 Cutters and 5 Welding tools, all working for 10 hours a day.

One unit of part P needs 40 minutes on Press, 2 hours on Cutter, and 30 minutes on a Welding tool for its completion. Similarly, one unit of part Q needs 1 hour on Press, 30 minutes on Cutter and 1 hour on Welding tool for its completion.

If only component Q is to be made, which type of single tool should be bought, so that there is a maximum increase in production capacity?

Answer :

- (A) Press
- (B) Cutter
- (C) Welding tool
- (D) Any one

| Option Id |
|-----------|
| 275001 |
| 275002 |
| 275003 |
| 275004 |

Right Answer :

Welding tool

Right Option Id : 275003

Part II - Technical

Question 26

Question Id : 276

Which method allows for continuous changes and is widely adopted for remote or distributed work?

Answer :

- (A) Agile Method

| Option Id |
|-----------|
| 276001 |

- (B) Waterfall Method
- (C) Lean Method
- (D) Six Sigma

276002
 276003
 276004

Right Answer :
Agile Method

Right Option Id : 276001

Question 27

What is a mathematical model for data types defined by their behavior and operations, rather than their implementation details?

Answer :

- (A) Abstract Data Type (ADT)
- (B) Primitive Data Type
- (C) Composite Data Type
- (D) Object-Oriented Data Type

Question Id : 277

277001
 277002
 277003
 277004

Right Answer :
Abstract Data Type (ADT)

Right Option Id : 277001

Question 28

What is an algorithm?

Answer :

- (A) A programming language
- (B) A set of steps to complete a task
- (C) A type of software
- (D) A machine instruction

Question Id : 278

278001
 278002
 278003
 278004

Right Answer :
A set of steps to complete a task

Right Option Id : 278002

Question 29

Which layer is responsible for controlling the operation of the subnet and managing packet routing in a network?

Answer :

- (A) The Network Layer
- (B) The Transport Layer
- (C) The Data Link Layer
- (D) The Application Layer

Question Id : 279

279001
 279002
 279003
 279004

Right Answer :
The Network Layer

Right Option Id : 279001

Question 30

What is the attack called where data is introduced into a DNS resolver's cache, causing it to return incorrect IP addresses and divert traffic?

Answer :

- (A) DNS Spoofing
- (B) Phishing
- (C) Man-in-the-Middle Attack
- (D) IP Spoofing

Question Id : 280

280001
 280002
 280003
 280004

Right Answer :
DNS Spoofing

Right Option Id : 280001

Question 31

What is a group of objects sharing common properties for data and program parts called in object-oriented programming?

Answer :

- (A) Object
- (B) Method
- (C) Class
- (D) Attribute

Right Answer :

Class

Question Id : 281

- 281001
- 281002
- 281003
- 281004

Question 32

What term refers to the process in which a method in Java calls itself continuously?

Answer :

- (A) Recursion
- (B) Iteration
- (C) Exception Handling
- (D) Polymorphism

Right Answer :

Recursion

Question Id : 282

- 282001
- 282002
- 282003
- 282004

Question 33

Which systems tolerate missed deadlines with degraded performance, rather than causing a disaster?

Answer :

- (A) Hard Real-Time Systems
- (B) Embedded Systems
- (C) Time-Sharing Systems
- (D) Soft Real-Time Systems

Right Answer :

Soft Real-Time Systems

Question Id : 283

- 283001
- 283002
- 283003
- 283004

Question 34

What term refers to a collection of related data items organized to represent meaningful information?

Answer :

- (A) Field
- (B) Record
- (C) File
- (D) Tuple

Right Answer :

Record

Question Id : 284

- 284001
- 284002
- 284003
- 284004

Question 35

Which type of computer is the smallest general-purpose processing system and includes desktops and portables?

Answer :

- (A) Microcomputers
- (B) Mainframe Computers
- (C) Supercomputers

Question Id : 285

- 285001
- 285002
- 285003

(D) Minicomputers

285004

Right Answer :

Microcomputers

Right Option Id : 285001

Question 36

What are the four practices of integrating design thinking in strategic innovation?

Answer :

- (A) Reviewing, Simulating, Conversing, Collaborating
- (B) Designing, Prototyping, Testing, Implementing
- (C) Planning, Developing, Analyzing, Feedback
- (D) Ideating, Reflecting, Communicating, Collaborating

Question Id : 286

Option Id

- 286001
- 286002
- 286003
- 286004

Right Answer :

Reviewing Simulating Conversing Collaborating

Right Option Id : 286001

Question 37

Which type of data structure uses pointers or links to associate elements sequentially, allowing dynamic memory allocation and flexible operations?

Answer :

- (A) Array
- (B) Linked Lists
- (C) Stack
- (D) Queue

Question Id : 287

Option Id

- 287001
- 287002
- 287003
- 287004

Right Answer :

Linked Lists

Right Option Id : 287002

Question 38

Which term refers to a high-level description of an algorithm, more structured than plain English but less detailed than a program?

Answer :

- (A) Flowchart
- (B) Program
- (C) Pseudocode
- (D) Algorithm

Question Id : 288

Option Id

- 288001
- 288002
- 288003
- 288004

Right Answer :

Pseudocode

Right Option Id : 288003

Question 39

Which layer is responsible for breaking data into smaller units, ensuring error-free delivery, and isolating upper layers from hardware changes?

Answer :

- (A) The Network Layer
- (B) The Data Link Layer
- (C) The Transport Layer
- (D) The Application Layer

Question Id : 289

Option Id

- 289001
- 289002
- 289003
- 289004

Right Answer :

The Transport Layer

Right Option Id : 289003

Question 40

Question Id : 290

Which type of attack uses a trial-and-error method to generate multiple guesses to obtain sensitive data like passwords?

Answer :

- (A) Phishing
- (B) Brute Force
- (C) DNS Spoofing
- (D) Social Engineering

Option Id

- 290001
- 290002
- 290003
- 290004

Right Answer :

Brute Force

Right Option Id : 290002

Question 41

Question Id : 291

What term refers to the stage where participants build and experiment with an idea, conduct surveys, and use tools like journey mapping to improve the design?

Answer :

- (A) Testing
- (B) Prototype
- (C) Ideation
- (D) Implementation

Option Id

- 291001
- 291002
- 291003
- 291004

Right Answer :

Prototype

Right Option Id : 291002

Question 42

Question Id : 292

What keyword in Java is used for memory management and belongs to the class rather than an instance of the class?

Answer :

- (A) Final
- (B) Static
- (C) Abstract
- (D) Synchronized

Option Id

- 292001
- 292002
- 292003
- 292004

Right Answer :

Static

Right Option Id : 292002

Question 43

Question Id : 293

What is the process that involves monitoring and managing errors in a system to prevent malfunctioning?

Answer :

- (A) Debugging
- (B) Exception Handling
- (C) Fault Tolerance
- (D) Error Handling

Option Id

- 293001
- 293002
- 293003
- 293004

Right Answer :

Error Handling

Right Option Id : 293004

Question 44

Question Id : 294

What is the highest level of abstraction in a database system, which describes only part of the database to simplify user interaction?

Answer :

- (A) View Level
- (B) Logical Level
- (C) Physical Level
- (D) Conceptual Level

Option Id

- 294001
- 294002
- 294003
- 294004

Right Answer :

View Level

Right Option Id : 294001**Question 45****Question Id : 295**

Which type of computer is characterized by extremely large storage capacity, very high computing speeds, and is used for tasks like weather analysis?

Answer :

- (A) Minicomputer
- (B) Microcomputer
- (C) Mainframe Computer
- (D) Supercomputer

Option Id

- 295001
- 295002
- 295003
- 295004

Right Answer :

Supercomputer

Right Option Id : 295004**Question 46****Question Id : 296**

According to the Theory of Thinking Modes, which thinking mode involves separating things from visible relationships in processes and production?

Answer :

- (A) Analytical Thinking
- (B) Judicial Thinking
- (C) Synthetic Thinking
- (D) Critical Thinking

Option Id

- 296001
- 296002
- 296003
- 296004

Right Answer :

Analytical Thinking

Right Option Id : 296001**Question 47****Question Id : 297**

In a linked list, what does the pointer variable 'head' typically store?

Answer :

- (A) The data value of the first node
- (B) The address of the last node
- (C) The total number of nodes in the list
- (D) The address of the first node

Option Id

- 297001
- 297002
- 297003
- 297004

Right Answer :

The address of the first node

Right Option Id : 297004**Question 48****Question Id : 298**

What term refers to the amount of memory an algorithm needs to complete its execution?

Answer :

- (A) Time Complexity
- (B) Performance Evaluation
- (C) Algorithm Efficiency
- (D) Space Complexity

Option Id

- 298001
- 298002
- 298003
- 298004

Right Answer :

Space Complexity

Right Option Id : 298004**Question 49****Question Id : 299**

Which layer in the TCP/IP model is responsible for connecting the host to the network to send IP packets?

Answer :

- (A) The Transport Layer
- (B) The Application Layer
- (C) The Network Layer
- (D) The Host-to-Network Layer

- Option Id
- 299001
 - 299002
 - 299003
 - 299004

Right Answer :

The Host-to-Network Layer

Right Option Id : 299004

Question 50

Question Id : 300

Which type of malicious program disguises itself as a normal application but executes harmful code in the background when opened?

Answer :

- (A) Ransomware
- (B) Spyware
- (C) Trojan Horse
- (D) Worm

- Option Id
- 300001
 - 300002
 - 300003
 - 300004

Right Answer :

Trojan Horse

Right Option Id : 300003

Question 51

Question Id : 301

What is the process of wrapping up data and functions into a single unit in object-oriented programming called?

Answer :

- (A) Data Encapsulation
- (B) Data Abstraction
- (C) Data Hiding
- (D) Data Integration

- Option Id
- 301001
 - 301002
 - 301003
 - 301004

Right Answer :

Data Encapsulation

Right Option Id : 301001

Question 52

Question Id : 302

What are the modifiers in Java that specify the accessibility (scope) of a data member, method, constructor, or class?

Answer :

- (A) Non-access Modifiers
- (B) Access Modifiers
- (C) Static Modifiers
- (D) Final Modifiers

- Option Id
- 302001
 - 302002
 - 302003
 - 302004

Right Answer :

Access Modifiers

Right Option Id : 302002

Question 53

Question Id : 303

Which program in Linux acts as an interpreter to execute operating system commands and perform various operations?

Answer :

- (A) Kernel
- (B) Terminal
- (C) Shell
- (D) GUI

- Option Id
- 303001
 - 303002
 - 303003
 - 303004

Right Answer :

Shell

Question 54

What term refers to the overall design of a database, which changes infrequently and defines the structure and types of data?

Answer :

- (A) Instance
- (B) Schemas
- (C) Tables
- (D) Records

Question Id : 304

- Option Id
- 304001
 - 304002
 - 304003
 - 304004

Right Answer :

Schemas

Right Option Id : 304002

Question 55

Which storage medium is an example of secondary memory used for storing large amounts of data and programs?

Answer :

- (A) RAM
- (B) Cache Memory
- (C) Floppies
- (D) Registers

Question Id : 305

- Option Id
- 305001
 - 305002
 - 305003
 - 305004

Right Answer :

Floppies

Right Option Id : 305003

Question 56

According to the Theory of Thinking Modes, which thinking mode focuses on combining ideas and concepts to create new processes or combinations?

Answer :

- (A) Analytical Thinking
- (B) Judicial Thinking
- (C) Synthetic Thinking
- (D) Logical Thinking

Question Id : 306

- Option Id
- 306001
 - 306002
 - 306003
 - 306004

Right Answer :

Synthetic Thinking

Right Option Id : 306003

Question 57

Which data structure follows the Last-In-First-Out (LIFO) principle, where elements are pushed and popped, and may experience overflow or underflow?

Answer :

- (A) Queue
- (B) Stack
- (C) Linked List
- (D) Array

Question Id : 307

- Option Id
- 307001
 - 307002
 - 307003
 - 307004

Right Answer :

Stack

Right Option Id : 307002

Question 58

What term describes the highest degree term of a formula for running time, focusing on how the running time grows as the input size increases?

Answer :

Question Id : 308

- Option Id

- (A) Order of Growth
- (B) Time Complexity
- (C) Space Complexity
- (D) Execution Time

- 308001
- 308002
- 308003
- 308004

Right Answer :

Order of Growth

Right Option Id : 308001

Question 59

Question Id : 309

Which type of media provides a physical conduit for signals between devices and includes twisted-pair cable, coaxial cable, and fiber-optic cable?

Answer :

- (A) Unguided Media
- (B) Wireless Media
- (C) Digital Media
- (D) Guided Media

- 309001
- 309002
- 309003
- 309004

Right Answer :

Guided Media

Right Option Id : 309004

Question 60

Question Id : 310

What is the method called that bypasses the normal authentication process, often created by developers for troubleshooting purposes?

Answer :

- (A) Keylogger
- (B) Ransomware
- (C) Backdoors
- (D) Spyware

- 310001
- 310002
- 310003
- 310004

Right Answer :

Backdoors

Right Option Id : 310003

Question 61

Question Id : 311

In machine learning, which component involves creating general concepts and models from stored data?

Answer :

- (A) Data Storage
- (B) Abstraction
- (C) Generalization
- (D) Evaluation

- 311001
- 311002
- 311003
- 311004

Right Answer :

Abstraction

Right Option Id : 311002

Question 62

Question Id : 312

In machine learning, which geometric model segments the instance space using geometric concepts like lines or planes to classify data?

Answer :

- (A) Distance-based Models
- (B) Non-linear Models
- (C) Linear Models
- (D) Clustering Models

- | |
|---|
| Option Id |
| <input type="radio"/> 312001 |
| <input type="radio"/> 312002 |
| <input type="radio"/> 312003 |
| <input checked="" type="radio"/> 312004 |

Right Answer :

Linear Models

Right Option Id : 312003

Question 63

What is the purpose of the `elif` keyword in shell scripting?

Answer :

- (A) It defines a loop
- (B) It creates an alternative condition in an if statement
- (C) It terminates a script
- (D) It checks for multiple conditions

Question Id : 313

- | |
|---|
| Option Id |
| <input type="radio"/> 313001 |
| <input type="radio"/> 313002 |
| <input type="radio"/> 313003 |
| <input checked="" type="radio"/> 313004 |

Right Answer :

It creates an alternative condition in an if statement

Right Option Id : 313002

Question 64

What data model uses entities and relationships among these entities to represent real-world objects in database design?

Answer :

- (A) Relational Model
- (B) Entity-Relationship Model
- (C) Network Model
- (D) Object-Oriented Model

Question Id : 314

- | |
|---|
| Option Id |
| <input type="radio"/> 314001 |
| <input type="radio"/> 314002 |
| <input type="radio"/> 314003 |
| <input checked="" type="radio"/> 314004 |

Right Answer :

Entity-Relationship Model

Right Option Id : 314002

Question 65

What controls the timing of processor circuits and divides instruction execution into sequences of basic steps?

Answer :

- (A) Instruction Register (IR)
- (B) Program Counter (PC)
- (C) Arithmetic Logic Unit (ALU)
- (D) Processor Clock

Question Id : 315

- | |
|---|
| Option Id |
| <input type="radio"/> 315001 |
| <input type="radio"/> 315002 |
| <input type="radio"/> 315003 |
| <input checked="" type="radio"/> 315004 |

Right Answer :

Processor Clock

Right Option Id : 315004

Question 66

What term refers to a representative data point that is used in situations where the centroid is not applicable, such as in cases like image data?

Answer :

- (A) Centroid
- (B) Mode
- (C) Medoid
- (D) Mean

Question Id : 316

- | |
|---|
| Option Id |
| <input type="radio"/> 316001 |
| <input type="radio"/> 316002 |
| <input type="radio"/> 316003 |
| <input checked="" type="radio"/> 316004 |

Right Answer :

Medoid

Right Option Id : 316003**Question 67****Question Id : 317**

Which data structure is commonly implemented using an array with two variables, front and rear, to manage insertion and deletion?

Answer :

- (A) Queue
- (B) Stack
- (C) Linked List
- (D) Priority Queue

Option Id

- 317001
- 317002
- 317003
- 317004

Right Answer :

Queue

Right Option Id : 317001**Question 68****Question Id : 318**

What is the formal way to describe the growth rate of an algorithm's running time, focusing on its behavior as the input size increases?

Answer :

- (A) Asymptotic Notation
- (B) Performance Evaluation
- (C) Time Complexity
- (D) Space Complexity

Option Id

- 318001
- 318002
- 318003
- 318004

Right Answer :

Asymptotic Notation

Right Option Id : 318001**Question 69****Question Id : 319**

Which type of cable uses a central core conductor enclosed in insulation and a metallic outer conductor that acts as both a shield against noise and the second conductor?

Answer :

- (A) Twisted-Pair Cable
- (B) Fiber-Optic Cable
- (C) Coaxial Cable
- (D) Shielded Twisted-Pair Cable

Option Id

- 319001
- 319002
- 319003
- 319004

Right Answer :

Coaxial Cable

Right Option Id : 319003**Question 70****Question Id : 320**

What term refers to the protection of sensitive, private information from unauthorized access?

Answer :

- (A) Integrity
- (B) Authentication
- (C) Availability
- (D) Confidentiality

Option Id

- 320001
- 320002
- 320003
- 320004

Right Answer :

Confidentiality

Right Option Id : 320004**Question 71****Question Id : 321**

In machine learning, which type of model forms a single global model over the entire instance space, as opposed to breaking it into segments or groups?

Answer :

- (A) Decision Trees
- (B) K-Nearest Neighbors (KNN)
- (C) Grading Models
- (D) Grouping Models

Option Id

- 321001
- 321002
- 321003
- 321004

Right Answer :

Grading Models

Right Option Id : 321003

Question 72

Question Id : 322

What type of learning involves an agent discovering which actions yield the most reward through trial and error, without being explicitly told how to correct mistakes?

Answer :

- (A) Supervised Learning
- (B) Unsupervised Learning
- (C) Reinforcement Learning
- (D) Semi-supervised Learning

Option Id

- 322001
- 322002
- 322003
- 322004

Right Answer :

Reinforcement Learning

Right Option Id : 322003

Question 73

Question Id : 323

What refers to the different stages that a process goes through during execution, based on its current activity?

Answer :

- (A) Process Queues
- (B) Process States
- (C) Process Scheduling
- (D) Process Management

Option Id

- 323001
- 323002
- 323003
- 323004

Right Answer :

Process States

Right Option Id : 323002

Question 74

Question Id : 324

What type of language enables users to access and manipulate data within a database, including retrieval, insertion, deletion, and modification?

Answer :

- (A) Data Definition Language
- (B) Data Manipulation Language
- (C) Structured Query Language
- (D) Query Language

Option Id

- 324001
- 324002
- 324003
- 324004

Right Answer :

Data Manipulation Language

Right Option Id : 324002

Question 75

Question Id : 325

Which method is used to obtain the 2's complement of a binary number?

Answer :

- (A) Subtracting 1 from the binary number
- (B) Adding 1 to the 1's complement of the binary number
- (C) Reversing the order of all bits in the binary number
- (D) Doubling the binary number

Option Id

- 325001
- 325002
- 325003
- 325004

Right Answer :

Adding 1 to the 1's complement of the binary number

Right Option Id : 325002**Question 76****Question Id : 326**

What term refers to a language processor that directly executes operations specified in the source program, rather than producing a separate target program?

Answer :

- (A) Compiler
- (B) Interpreter
- (C) Assembler
- (D) Linker

Option Id

- 326001
- 326002
- 326003
- 326004

Right Answer :

Interpreter

Right Option Id : 326002**Question 77****Question Id : 327**

Which sorting algorithm repeatedly compares successive elements and swaps them if they are out of order, often requiring many comparisons and swaps to sort the list?

Answer :

- (A) Quick Sort
- (B) Merge Sort
- (C) Bubble Sort
- (D) Selection Sort

Option Id

- 327001
- 327002
- 327003
- 327004

Right Answer :

Bubble Sort

Right Option Id : 327003**Question 78****Question Id : 328**

What is the time complexity of the Merge Sort algorithm?

Answer :

- (A) $O(n)$
- (B) $O(n \log n)$
- (C) $O(n^2)$
- (D) $O(\log n)$

Option Id

- 328001
- 328002
- 328003
- 328004

Right Answer :

$O(n \log n)$

Right Option Id : 328002**Question 79****Question Id : 329**

Which type of electromagnetic waves, used for communication, are unidirectional and require aligned sending and receiving antennas?

Answer :

- (A) Radio Waves
- (B) Infrared Waves
- (C) X-Rays
- (D) Microwaves

Option Id

- 329001
- 329002
- 329003
- 329004

Right Answer :

Microwaves

Right Option Id : 329004**Question 80****Question Id : 330**

Which type of active attack involves an intruder pretending to be an authorized user to gain unauthorized access or privileges?

Answer :

- (A) Masquerade
- (B) Phishing
- (C) Denial of Service (DoS)
- (D) Eavesdropping

- Option Id
- 330001
 - 330002
 - 330003
 - 330004

Right Answer :

Masquerade

Right Option Id : 330001

Question 81

What component of a compiler reads characters from the source program and groups them into tokens?

Answer :

- (A) Syntax Analyzer
- (B) Lexical Analyzer
- (C) Code Generator
- (D) Optimizer

Question Id : 331

- Option Id
- 331001
 - 331002
 - 331003
 - 331004

Right Answer :

Lexical Analyzer

Right Option Id : 331002

Question 82

Which method in Java is used to request garbage collection for reclaiming unused memory?

Answer :

- (A) gc() method
- (B) delete() method
- (C) free() method
- (D) finalize() method

Question Id : 332

- Option Id
- 332001
 - 332002
 - 332003
 - 332004

Right Answer :

gc() method

Right Option Id : 332001

Question 83

What contains the information associated with a specific process, such as its state, program counter, CPU registers, and I/O status?

Answer :

- (A) Process Scheduler
- (B) Process Control Block
- (C) Memory Management Unit
- (D) System Control Block

Question Id : 333

- Option Id
- 333001
 - 333002
 - 333003
 - 333004

Right Answer :

Process Control Block

Right Option Id : 333002

Question 84

What term refers to the portion of DML used specifically for retrieving information from a database?

Answer :

- (A) Data Definition Language
- (B) Query Language
- (C) Data Manipulation Language
- (D) Structured Query Language

Question Id : 334

- Option Id
- 334001
 - 334002
 - 334003
 - 334004

Right Answer :

Query Language

Question 85

Which flag in the 8086 microprocessor is set when there is a carry from the lower nibble?

Answer :

- (A) Auxiliary Carry Flag (AC)
- (B) Zero Flag (Z)
- (C) Parity Flag (P)
- (D) Sign Flag (S)

Right Answer :

Auxiliary Carry Flag (AC)

Question Id : 335

- Option Id
- 335001
 - 335002
 - 335003
 - 335004

Question 86

Which command does the parser use to request the next token from the lexical analyzer during the token identification process?

Answer :

- (A) getToken()
- (B) fetchToken()
- (C) nextToken()
- (D) getNextToken()

Right Answer :

getNextToken()

Question Id : 336

- Option Id
- 336001
 - 336002
 - 336003
 - 336004

Question 87

Which sorting algorithm selects the smallest element from the remaining list and swaps it with the current element until the entire list is sorted?

Answer :

- (A) Quick Sort
- (B) Merge Sort
- (C) Selection Sort
- (D) Bubble Sort

Right Answer :

Selection Sort

Question Id : 337

- Option Id
- 337001
 - 337002
 - 337003
 - 337004

Question 88

What is the time complexity of the Quick Sort algorithm in the average case?

Answer :

- (A) $O(n \log n)$
- (B) $O(n^2)$
- (C) $O(\log n)$
- (D) $O(n)$

Right Answer :

$O(n \log n)$

Question Id : 338

- Option Id
- 338001
 - 338002
 - 338003
 - 338004

Question 89

Which error-detection technique appends redundant bits to a data unit, making it divisible by a predetermined binary number?

Answer :

Question Id : 339

- Option Id

- (A) Parity Check
- (B) Checksum
- (C) Hamming Code
- (D) Cyclic Redundancy Check (CRC)

- 339001
- 339002
- 339003
- 339004

Right Answer :

Cyclic Redundancy Check (CRC)

Right Option Id : 339004

Question 90

Question Id : 340

Which type of attack involves intercepting and listening to messages exchanged between two entities, especially if the data is unencrypted?

Answer :

- (A) Spoofing
- (B) Eavesdropping (tapping)
- (C) Man-in-the-Middle Attack
- (D) Phishing

- 340001
- 340002
- 340003
- 340004

Right Answer :

Eavesdropping (tapping)

Right Option Id : 340002

Question 91

Question Id : 341

In the context of lexical analysis, which function is used to install a lexeme (pointed to by yytext) into the symbol table and return a pointer to it?

Answer :

- (A) installID0()
- (B) installNum()
- (C) installToken()
- (D) addSymbol()

- 341001
- 341002
- 341003
- 341004

Right Answer :

installID0()

Right Option Id : 341001

Question 92

Question Id : 342

What term refers to a sequence of characters in the source program that matches the pattern for a token and is identified by the lexical analyzer?

Answer :

- (A) Lexeme
- (B) Token
- (C) Syntax
- (D) Identifier

- 342001
- 342002
- 342003
- 342004

Right Answer :

Lexeme

Right Option Id : 342001

Question 93

Question Id : 343

What term describes the execution of multiple smaller tasks within a single process, allowing the program to continue running even when some threads are blocked?

Answer :

- (A) Parallel Processing
- (B) Concurrency
- (C) Task Scheduling
- (D) Multithreading

- Option Id
343001
- Option Id
343002
- Option Id
343003
- Option Id
343004

Right Answer :

Multithreading

Right Option Id : 343004

Question 94

Question Id : 344

What term refers to ensuring that a value in one relation corresponds to a valid value in another relation, maintaining consistency between related data?

Answer :

- (A) Entity Integrity
- (B) Domain Integrity
- (C) Referential Integrity
- (D) Data Integrity

- Option Id
344001
- Option Id
344002
- Option Id
344003
- Option Id
344004

Right Answer :

Referential Integrity

Right Option Id : 344003

Question 95

Question Id : 345

What term is used to describe the transfer of data between computer registers, such as MAR, PC, and IR?

Answer :

- (A) Instruction Execution
- (B) Register Transfer
- (C) Memory Access
- (D) Data Bus Communication

- Option Id
345001
- Option Id
345002
- Option Id
345003
- Option Id
345004

Right Answer :

Register Transfer

Right Option Id : 345002

Question 96

Question Id : 346

In the context of the theory of computation, what type of proof consists of a sequence of statements leading from a hypothesis to a conclusion based on their truth?

Answer :

- (A) Inductive Proof
- (B) Deductive Proof
- (C) Proof by Contradiction
- (D) Constructive Proof

- Option Id
346001
- Option Id
346002
- Option Id
346003
- Option Id
346004

Right Answer :

Deductive Proof

Right Option Id : 346002

Question 97

Question Id : 347

Which sorting algorithm uses the divide-and-conquer method, dividing the array into smaller sub-arrays based on pivot elements and recursively sorting them?

Answer :

- (A) Merge Sort
- (B) Quick Sort
- (C) Bubble Sort
- (D) Selection Sort

- Option Id
347001
- Option Id
347002
- Option Id
347003
- Option Id
347004

Right Answer :

Quick Sort

Right Option Id : 347002**Question 98**

Which algorithm adds the cheapest edge and the node it leads to, provided the node is not already in the spanning tree?

Answer :

- (A) Dijkstra's Algorithm
- (B) Prim's Algorithm
- (C) Kruskal's Algorithm
- (D) Bellman-Ford Algorithm

Question Id : 348

Option Id

- 348001
- 348002
- 348003
- 348004

Right Answer :

Prim's Algorithm

Right Option Id : 348002**Question 99**

What is the technique called where an acknowledgment (ACK) frame is included in the header of a data frame traveling in the same direction?

Answer :

- (A) Sliding Window
- (B) Piggybacking
- (C) Full Duplexing
- (D) Frame Interleaving

Question Id : 349

Option Id

- 349001
- 349002
- 349003
- 349004

Right Answer :

Piggybacking

Right Option Id : 349002**Question 100**

What type of malware remains dormant until triggered by a specific event or activity, such as a date or the launch of a program?

Answer :

- (A) Worm
- (B) Trojan Horse
- (C) Ransomware
- (D) Logic Bomb

Question Id : 350

Option Id

- 350001
- 350002
- 350003
- 350004

Right Answer :

Logic Bomb

Right Option Id : 350004**Question 101**

What represents an instantaneous description of a system in finite automata, containing all the necessary information to determine future behavior?

Answer :

- (A) Transition
- (B) Input
- (C) State
- (D) Output

Question Id : 351

Option Id

- 351001
- 351002
- 351003
- 351004

Right Answer :

State

Right Option Id : 351003**Question 102**

Which keyword in Java is used as a reference variable to refer to the immediate parent class object?

Question Id : 352

Answer :

- (A) super
- (B) this
- (C) parent
- (D) base

Option Id

- 352001
- 352002
- 352003
- 352004

Right Answer :

super

Right Option Id : 352001

Question 103

In which scheduling method is the CPU assigned to a process and not released until that process finishes?

Answer :

- (A) Preemptive Scheduling
- (B) Round-Robin Scheduling
- (C) Non-Preemptive Scheduling
- (D) Priority Scheduling

Question Id : 353

- Option Id
- 353001
 - 353002
 - 353003
 - 353004

Right Answer :

Non-Preemptive Scheduling

Right Option Id : 353003

Question 104

What term is used for an attribute that can be split into smaller components?

Answer :

- (A) Simple Attribute
- (B) Derived Attribute
- (C) Composite Attribute
- (D) Key Attribute

Question Id : 354

- Option Id
- 354001
 - 354002
 - 354003
 - 354004

Right Answer :

Composite Attribute

Right Option Id : 354003

Question 105

Which instruction adds two decimal numbers in Binary Coded Decimal (BCD) format?

Answer :

- (A) ADDI
- (B) ADDF
- (C) ADDD
- (D) SUBD

Question Id : 355

- Option Id
- 355001
 - 355002
 - 355003
 - 355004

Right Answer :

ADDD

Right Option Id : 355003

Question 106

What is a key characteristic of a Deterministic Finite Automaton (DFA)?

Answer :

- (A) It can have multiple ways to process the input string.
- (B) It reads the input string one symbol at a time and has only one unique way to process it.
- (C) It processes the input string using a probabilistic model.
- (D) It accepts or rejects the input string based on random decisions.

Question Id : 356

- Option Id
- 356001
 - 356002
 - 356003
 - 356004

Right Answer :

It reads the input string one symbol at a time and has only one unique way to process it.

Right Option Id : 356002**Question 107**

Which search algorithm uses backtracking to explore all nodes along a path before moving to the next path?

Answer :

- (A) Breadth First Search (BFS)
- (B) Dijkstra's Algorithm
- (C) A* Search
- (D) Depth First Search (DFS)

Question Id : 357

- 357001
- 357002
- 357003
- 357004

Right Answer :

Depth First Search (DFS)

Right Option Id : 357004**Question 108**

Which method is used for problems like job sequencing with deadlines, minimum cost spanning trees, and the 0/1 knapsack problem?

Answer :

- (A) Dynamic Programming
- (B) Greedy Method
- (C) Backtracking
- (D) Divide and Conquer

Question Id : 358

- 358001
- 358002
- 358003
- 358004

Right Answer :

Greedy Method

Right Option Id : 358002**Question 109**

What technique improves bandwidth utilization by allowing the sender to transmit multiple frames before waiting for an acknowledgment?

Answer :

- (A) Sliding Window
- (B) Full Duplexing
- (C) Piggybacking
- (D) Pipelining

Question Id : 359

- 359001
- 359002
- 359003
- 359004

Right Answer :

Pipelining

Right Option Id : 359004**Question 110**

What is the act of obtaining secrets and information without permission or knowledge of the holder, often for personal, economic, political, or military advantage?

Answer :

- (A) Phishing
- (B) Hacking
- (C) Cyber Espionage
- (D) Ransomware

Question Id : 360

- 360001
- 360002
- 360003
- 360004

Right Answer :

Cyber Espionage

Right Option Id : 360003**Question 111**

Which statement is used to access all elements of the standard C++ library without prefixing them with std::?

Question Id : 361

Answer :

- (A) #include <iostream>
- (B) #include <stdlib.h>
- (C) int main()
- (D) using namespace std;

- Option Id
- 361001
 - 361002
 - 361003
 - 361004

Right Answer :

using namespace std;

Right Option Id : 361004

Question 112

Question Id : 362

What in Java is used as a blueprint for a class, has static constants and abstract methods, and is used to achieve abstraction and multiple inheritance?

Answer :

- (A) Abstract Class
- (B) Enum
- (C) Class
- (D) Interface

- Option Id
- 362001
 - 362002
 - 362003
 - 362004

Right Answer :

Interface

Right Option Id : 362004

Question 113

Question Id : 363

What term refers to the number of jobs completed by the CPU within a specific time period?

Answer :

- (A) Waiting Time
- (B) Turnaround Time
- (C) Throughput
- (D) Response Time

- Option Id
- 363001
 - 363002
 - 363003
 - 363004

Right Answer :

Throughput

Right Option Id : 363003

Question 114

Question Id : 364

What type of relationship occurs when one entity is associated with multiple entities of another type, and vice versa, such as students enrolling in many courses and courses having many students?

Answer :

- (A) One-to-One
- (B) One-to-Many
- (C) Many-to-One
- (D) Many-to-Many

- Option Id
- 364001
 - 364002
 - 364003
 - 364004

Right Answer :

Many-to-Many

Right Option Id : 364004

Question 115

Question Id : 365

Which method for designing a control unit uses trigger points activated after gaps of one T-state, avoiding the inefficiency of multiple delay elements?

Answer :

- (A) Delay Element Method
- (B) Microprogrammed Control Method
- (C) Sequence Counter Method
- (D) Hardwired Flowchart Method

- Option Id
- 365001
 - 365002
 - 365003
 - 365004

Right Answer :

Sequence Counter Method

Right Option Id : 365003**Question 116****Question Id : 366**

In the context of a Deterministic Finite Automaton (DFA), which of the following symbols represents the set of input symbols or alphabet?

Answer :

- (A) Q
- (B) Σ
- (C) δ
- (D) F

Option Id

- 366001
- 366002
- 366003
- 366004

Right Answer : Σ **Right Option Id : 366002****Question 117****Question Id : 367**

What function is used to place data into a hash table and retrieve it using the same function, returning an integer called the hash key?

Answer :

- (A) Sorting Function
- (B) Comparison Function
- (C) Search Function
- (D) Hash Function

Option Id

- 367001
- 367002
- 367003
- 367004

Right Answer :

Hash Function

Right Option Id : 367004**Question 118****Question Id : 368**

What term refers to a closed loop in a graph that visits each vertex exactly once and returns to the starting point?

Answer :

- (A) Eulerian Cycle
- (B) Hamiltonian Cycle
- (C) Spanning Tree
- (D) Directed Acyclic Graph

Option Id

- 368001
- 368002
- 368003
- 368004

Right Answer :

Hamiltonian Cycle

Right Option Id : 368002**Question 119****Question Id : 369**

Which system coordinates access to a shared communication network by allowing nodes to transmit data whenever available, handling collisions when they occur?

Answer :

- (A) CSMA/CD
- (B) Token Ring
- (C) TDMA
- (D) ALOHA

Option Id

- 369001
- 369002
- 369003
- 369004

Right Answer :

ALOHA

Right Option Id : 369004**Question 120****Question Id : 370**

Which framework provides a flexible and cost-effective approach to managing cybersecurity risks and is authorized by a global certifying body?

Answer :

- (A) NIST Compliance
- (B) ISO 27001
- (C) GDPR Framework
- (D) COBIT

- Option Id
 370001
- 370002
- 370003
- 370004

Right Answer :

NIST Compliance

Right Option Id : 370001

Question 121

Which statement in the main function is used to indicate successful execution of a C++ program?

Answer :

- (A) int main()
- (B) cout << 'Hello';
- (C) return 0;
- (D) using namespace std;

Question Id : 371

- Option Id
 371001
- 371002
- 371003
- 371004

Right Answer :

return 0;

Right Option Id : 371003

Question 122

What is a group of similar types of classes, interfaces, and sub-packages in Java, and can be either built-in or user-defined?

Answer :

- (A) Java Interface
- (B) Java Package
- (C) Java Class
- (D) Java Module

Question Id : 372

- Option Id
 372001
- 372002
- 372003
- 372004

Right Answer :

Java Package

Right Option Id : 372002

Question 123

What is the formula for calculating average response time in scheduling algorithms?

Answer :

- (A) Completion Time - Arrival Time
- (B) First Response Time - Arrival Time
- (C) Turnaround Time - Arrival Time
- (D) Waiting Time - Completion Time

Question Id : 373

- Option Id
 373001
- 373002
- 373003
- 373004

Right Answer :

First Response Time - Arrival Time

Right Option Id : 373002

Question 124

What term refers to a set of one or more attributes that collectively allow us to uniquely identify a tuple in a relation?

Answer :

- (A) Candidate Key
- (B) Superkey
- (C) Foreign Key
- (D) Primary Key

Question Id : 374

- Option Id
 374001
- 374002
- 374003
- 374004

Right Answer :

Superkey

Question 125

Which type of semiconductor memory uses chalcogenide glass to store data by changing its state between amorphous and polycrystalline?

Answer :

- (A) DRAM
- (B) SRAM
- (C) Flash Memory
- (D) P-RAM

Question Id : 375

Option Id

- 375001
- 375002
- 375003
- 375004

Right Answer :

P-RAM

Right Option Id : 375004