

“LowCost LMS Handling Available”



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CS101

Final Term(LiveQuiz)

MEGA “(1000)MCQS” File

PAID VU LMS HANDLING by Mam Mehwish

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Past Papers for Mids./Finals are also Available

Question 1: A major role of the DBMS in commercial systems is to maintain the database’s integrity by guarding against _____.

- Intentional deletions
- Complete operations
- Small errors
- Unintentional interactions

Question 2: The protocol that ensures older transactions are given priority when accessing locked items is called the _____ protocol.

- Wound wait
- Priority inversion
- Deadlock avoidance
- Young-Old transaction

Question 3: In a two-dimensional array, what does the second index in a pair identify?

- Row associated with the position
- Column associated with the position
- Numerical index number
- Field name

Question 4: In the case of _____ that are subject to heavy transaction loads, it is highly likely that a random snapshot will find the database in the middle of some transaction.

- Small database
 - Object oriented programming
 - Web development
 - Large databases
-

Question 5: Researchers are trying to develop systems that exhibit intelligent behavior in _____ track:

- Theoretical
- Engineering
- Artificial
- Intelligent

Question 6: Ethics and legality are essential in many industries including:

- Teachers
- Doctors
- Government officer
- All of these

Question 7: Text files are considered as sequential files where each logical record is a _____ encoded using ASCII or Unicode.

- Sound byte
- Encrypted message
- Single image
- Symbol

Question 8: To retrieve the information about an employee, we must select the _____ with the appropriate identification attribute value from the EMPLOYEE relation.

- Model
- Attributes
- Tuple
- Table

Question 9: Actions according to environment knowledge:

- Reflex action
- Intelligent action
- Predefined action
- Simplest response

Question 10: The following statement extracts _____ from the EMPLOYEE relation. MAIL <- PROJECT Name, Address from EMPLOYEE

- Phone numbers
- Names and Addresses
- Names only
- Addresses only

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Question # 1: Shared access to a data item is allowed if the item is _____.

Locked with a shared lock only

Exclusively accessed by one transaction

Locked with an exclusive lock

Unlocked or locked with a shared lock

Question # 2: In hash file, the key used to identify an employee's record is the _____.

identification number

department

employee's position

name

Question # 3: Usual way of protecting software is:

Company monogram

Patent

Copyright

Rules

Question # 4: To retrieve information about an employee, we perform _____ operation on the EMPLOYEE relation.

UPDATE

SELECT

INSERT

DELETE

Question # 5: How many common forms of data mining?

Four

Two

Five

Three

Question # 6: In the context of the environment, computer science has impacts:

Negative

Positive

Both positive & negative

Dangerous

Question # 7: Database systems emerged as a means of _____ the information stored in organizations.

Restricting

Separating

Duplicating

Integrating

Question # 8: Turing gave a percentage of a machine that will have a chance to pass the Turing test in the year:

2002

2008

2012

2000

Question # 9: How are fields in an aggregate type usually accessed?

Numerical index numbers

Row and column numbers

Pairs of indices

Field names

Question # 10: Object-oriented databases allow the entire software system to be designed in the _____ paradigm.

relational

imperative

object-oriented

procedural

cs101

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relational

imperative

object-oriented

procedural

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Question # 1:

Act that gives control over what information websites can collect from kids is:

ECPA

HIPPA

COPPA

Video Privacy Protection

Question # 2:

A file's _____ is normally stored as a separate file on the same mass storage device as the_.

sequential, sequential file

flat, flat file

database, database file

index , indexed file

Question # 3:

Usual way of protecting software is:

Patent

Rules

Company monogram

Copyright

Question # 4:

The data storage space in a hash system is divided into sections called _____.

buckets

indexes

arrays

nodes

Question # 5:

Object-oriented databases allow the entire software system to be designed in the _____ paradigm.

relational

procedural

imperative

object-oriented

Question # 6:

Retrieving an employee's job history in an object-oriented database involves asking the _____ to report its job history.

manager

employee object

DBMS

network

Question # 7:

In a queue, where are entries inserted?

At the tail

At the top

At the head

At the base

Question # 8:

A _____ is a description of the entire database structure that is used by the database software to maintain the database.

subschema

nonschema

superschema

schema

Question # 9:

What is a stack in the context of data structures?

A list of sounds recorded on a CD

A list with entries removed only at the tail

A list with entries inserted and removed only at the head

A list with entries arranged sequentially

Question # 10:

In traditional file structures, variations of the basic index concept include constructing an index in a _____ manner.

hierarchical

parallel

chronological

linear

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A _____ is a collection whose entries have a hierarchical organization similar to that of an organization chart of a typical company.

stack

tree

queue

graph

The PROJECT operation allows extraction of columns and places the result in a _____.

New relation

Matrix

Existing column

New row

Operations that are only partially completed in commercial systems might lead to _____ information in the database.

Accurate

Verified

Valid

Incomplete

A file's _____ is normally stored as a separate file on the same mass storage device as the_.

flat, flat file

database, database file

index, indexed file

sequential, sequential file

To retrieve information about an employee, we perform _____ operation on the EMPLOYEE relation.

SELECT

DELETE

INSERT

UPDATE

Reports can be received at home through email because of advancement in:

Artificial intelligence

Computer science

Hospitals

Medical databases

Subschemas are crucial in providing _____ to different users within a database.

identical information

restricted access

similar access

universal access

Software licenses provide users with the right to one or more copies of the software without:

Using license

Violating copyright

Legislation

Using copyright

To retrieve the information about an employee, we must select the _____ with the appropriate identification attribute value from the EMPLOYEE relation.

table

tuple

model

attributes

There are many types of sensors including:

All of these

Camera

Microphone

Range sensor

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Question 1:

Information that was once buried in arcane records has become accessible because of:

Computer

Artificial intelligence

Online management

Database

Question 2:

A _____ is a collection whose entries have a hierarchical organization similar to that of an organization chart of a typical company.

graph

queue

stack

tree

Question 3:

Theoretical track is a part of:

Declarative knowledge

AI domain

AI responses

Amplifying

Question 4:

The process used by the DBMS to undo activities performed by an incomplete transaction is termed _____.

revert

restore

rollback

rewind

Question 5:

Text files are considered as sequential files where each logical record is a _____ encoded using ASCII or Unicode.

Symbol

Sound byte

Encrypted message

Single image

Question 6:

In an array, what does the first index in a pair identify?

Column associated with the position

Row associated with the position

Field name

Numerical index number

Question 7:

AI is helping to make:

Online education

Robots

Smartphones

DBMS

Question 8:

What is an aggregate type in programming?

Rectangular array of numbers

2-dimensional array

Block of data items with different data types

An integer variable

Question 9:

An index for a file contains a list of _____ stored in the file.

keys

file names

data types
directory paths

Question 10:

What is a queue's characteristic in terms of entry removal?

Random access

First-in, first-out

Last-in, first-out

Sequential access

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Question 1:

Process of understanding what the characteristics of images means refers to:

Image analysis

Image identifying

Image understanding

Image processing

Question 2:

Persistent objects in a database are distinct from transient objects because they are _____.

created during program execution

linked to other objects

saved after program termination

discarded after program termination

Question 3:

When using PROJECT, if multiple columns are required, they are specified _____.

Separately

Using quotation marks

Using a comma

Using brackets

Question 4:

How are addresses in a machine's main memory encoded and stored?

As a 2-dimensional grid

As a pair of rows and columns

As numeric values

As a cursor

Question 5:

The SELECT operation extracts _____ from a relation.

columns

rows ✓

table

a cell

Question 6:

Act that mandates about financial institutions dealing with the private information of individuals.

HIPPA

COPPA

ECPA

Gramm-Leach-Bliley ✓

Question 7:

One operation we might want to perform on a relation is to select _____ possessing certain characteristics and to place these selected _____ in a new relation.

tuple, attribute

table, tuple

attribute, attribute

tuple, tuple ✓

Question 8:

To retrieve information about an employee, we perform _____ operation on the EMPLOYEE relation.

DELETE

SELECT ✓

INSERT

UPDATE

Question 9:

The Turing test result of program DOCTOR developed by Joseph Weizenbaum was:

Failed ✓

Ambiguous

Passed

No result

Question 10:

A _____ is a storage area that contains such an encoded address.

array

graph

pointer ✓

tree

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Question 1: What are the keywords used in the syntax for a SELECT operation?

JOIN and GROUP BY

SELECT and FROM ✓

UPDATE and WHERE

INSERT and DELETE

Question 2: In a two-dimensional array, what does the second index in a pair identify?

Numerical index number

Row associated with the position

Column associated with the position ✓

Field name

Question 3: Turing test was proposed in:

1950 ✓

1970

1980

1960

Question 4: Turing gave a percentage of a machine that will have a chance to pass Turing test in year:

2002

2008

2012

2000 ✓

Question 5: Theoretical track is a part of:

AI responses

Declarative knowledge

AI domain ✓

Amplifying

Question 6: How does a program counter function as a pointer?

It updates the value of data items

It holds the address of the next instruction ✓

It decodes data in memory cells

It stores numeric values

Question 7: Procedural knowledge is learning:

“how” ✓

“slowly”

“when”

“what”

Question 8: Information technology has _____ overarching standardization in place:

Multiple
Complex
Old
No ✓

Question 9: The term _____ refers to a collection of data that is multidimensional in the sense that internal links between its entries make the information accessible from a variety of perspectives.

data structure
data mining
data science
database ✓

Question 10: The following statement extracts _____ from the EMPLOYEE relation.

MAIL <- PROJECT Name, Address from EMPLOYEE

Names and Addresses ✓
Addresses only
Phone numbers
Names only
cs101

Question 1: With computer science the access to private information has:

Removed
Controlled
Increased ✓
Reduced

Question 2: Act that mandates about financial institutions dealing with the private information of individuals.

COPPA
ECPA
HIPPA
Gramm-Leach-Bliley ✓

Question 3: Changes in the database schema for a single user involve modifying the overall schema and the subschemas of _____ users involved in the change.

other ✓
new
all
selected

Question 4: What do we call the structures in a tree that consist of a node and the nodes below it?

Leaves

Roots

Subtrees ✓

Branches

Question 5: The protocol that ensures older transactions are given priority when accessing locked items is called the _____ protocol.

Young-Old transaction

Priority inversion

Deadlock avoidance

Wound wait ✓

Question 6: Robots identify veins by:

Artificial intelligence

Image processing ✓

Testing

Touching veins

Question 7: Ethical issues are related to:

Behaviour principles

Linguistics principles

Moral principles ✓

AI principles

Question 8: Act that ranges government restrictions on wire taps to include transmissions of data is:

ECPA ✓

Gramm-Leach-Bliley

HIPPA

COPPA

Question 9: There are many types of sensors including:

Range sensor

Microphone

All of these ✓

Camera

Question 10: The links between _____ in an object-oriented database are normally maintained by the DBMS.

objects ✓

forms

local data

functions

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Question # 1:

Learning procedural knowledge usually involves a process:

- Procedure-and-error
- Try-and-error
- Trial-and-error
- Process-and-error

Question # 2:

In Belgian Pepper Robot works in:

- Hotels
- Hospitals
- Schools
- Agencies

Question # 3:

A patent can last:

- 40 years
- 50 years
- 30 years
- 20 years

Question # 4:

Meaning of a statement in natural language depends on the manner in which it is:

- Communicated
- Taken
- Written
- Amplified

Question # 5:

Major component of syntactic analysis is:

- Context
- Parsing
- Understanding syntax
- Identifying

Question # 6:

Sequential files, like an employee records file, require a _____ format for representing information about each employee.

- Disjointed
- Uniform
- Complex and variable

Hierarchical

Question # 7:

What does a tree structure's hierarchical organization resemble?

Array

Organization chart

Graph

Stack

Question # 8:

Turing gave a percentage of a machine that will have a chance to pass Turing test in year:

2000

2008

2002

2012

Question # 9:

An object-oriented database consists of objects linked to each other to reflect their _____.

Sizes

Relationships

Colors

Attributes

Question # 10:

In a database, information is accessible from _____.

A single dimension

A variety of perspectives

One perspective only

Limited viewpoints

cs101

Question #1:

In bit manipulation of binary systems, if we shift a bit towards right then it means we are _____ that binary value with '2'.

Multiplying

Subtracting

Dividing

Adding

Question #2:

In C++, which operator is used while accessing through the pointer to structure?

=

&

-

[✓] ->

Question #3:

Where to put inline function during the frequent calling inside the program from multiple source files?

Inside the class

Outside the class

Main()

[✓] Header File

Question #4:

Dynamic memory allocation uses memory from the _____.

Array

[✓] Heap

Stack

Multi-dimensional Array

Question #5:

The bit manipulation operator _____ is used to set a specific bit.

&

[✓] |

*

^

Question #6:

To understand programming concepts, _____ programming language is being used as a vehicle in CS201- "Introduction to Programming" course.

Java

C#

[✓] C/C++

B

Question #7:

What would be the output of the following statement?

c = 13 % 2;

[✓] 1

2

0

3

Question #8:

Functions seekg() and seekp() require an argument of type ____ to let them know how many bytes to move forward or backward.

- int
- long
- double
- float

Question #9:

In C++, which of the following function causes the full definition of the function to be inserted in each place when it gets called?

- Inline function
- Recursive function
- Built-in function
- Library function

Question #10:

_____ is a user-defined data type.

- Pointer
- Constructor
- Function

- Class
- cs101

Question # 1: Control structure which iterates a set of instructions based on the provided condition, is called a _____.

- Loop
- Conditional statement
- Class
- Function

Question # 2: _____ is the process in which prototypes evolve into the complete (final) system in the incremental model.

- Iterative prototyping
- Throwaway prototyping
- Rapid prototyping
- Evolutionary prototyping

Question # 3: Which keyword is used in Python convention to announce the title of a pseudocode unit representing a program unit?

subprogram

def

unit

module

Question # 4: www stands for _____.

World Wild Web

World While Web

World Wide Web

World White Web

Question # 5: By attaching the _____ to a message, the sender can mark the message as authentic.

Single Signature

Dual Signature

Security

Protocol

Question # 6: How are hypertext documents typically transferred between browsers and web servers?

Hypertext Transfer Protocol

Web Transfer Protocol

File Transfer Protocol

Internet Transfer Protocol

Question # 7: If While ($i \leq n$), the loop will keep executing until "i" remains:

Greater than and equal to n

Equal to n

Less than n

Less than or equal to n

Question # 8: What technology enables an end user to connect to the closest server out of a defined group of servers?

Unicast

Anycast

Multicast

P2P

Question # 9: When a packet reaches at the intermediate stop, the network layer:

Forwards it to all the recognized networks

Hands the packet to transport layer rather than forwarding it

Forwards it to the Link layer after determining the direction of the next hop

Discards the packet considering it irrelevant

Question # 10: Which methodology is considered an example of an agile method?

Waterfall model

Spiral model

Extreme programming

Prototyping

cs101

Question 1: What would be the next statement?

Def findmax():

Max = first number in the list

Current = second number in the list

While (elements in the list exist)

If (max<current)

Max=value

Max=current

Current = next value in the list

Question 2: What will be the output of the following pseudo code?

def FindFactorial():

fact = 2

i=1;

While (i<=7)

fact=fact*i;

i=i+1;

print(fact)

10080

5040

980

120

Question 3: Why is information about the software's implementation important during maintenance?

To simplify the software development process.

To explain why the software was implemented as it was.

To increase the chance of disruptions.

To blur the distinction between technical and user documentation.

Question 4: What is stepwise refinement in algorithm discovery?

Ignoring subproblems

Breaking a problem into subproblems

Solving the entire original problem immediately

Conquering an entire task at once

Question 5: _____ is a phase that makes distinction between the tasks of a software Analyst and a Programmer.

Testing
Implementation
Design ✓

Analysis

Question 6: Which of the following protocols are primarily involved in the exchange of email messages between email servers and clients?

A. SMTP B. IMAP C. MIME D. POP3

A and C

B and D

All of the given

A, B and D ✓

Question 7: _____ is not an Object Oriented Programming Language.

HTML ✓

C#

C++

Java

Question 8: Polya's analysis of problem solving is to evaluate the solution for

Cost

Consistency

Accuracy ✓

Time

Question 9: Which term is commonly used for a loop where the termination test is performed before the body is executed?

Pretest loop ✓

Precondition loop

Preliminary loop

Prerequisite loop

Question 10: The primary purpose of Internet Mail Access Protocol is to:

Transfer email messages to mail servers.

Retrieving emails from a mail server to a client. ✓

Convert non-ASCII data to SMTP-compatible form.

Download all the attachments of an email.

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What is a correct expression for finding factorial where $f = 1$, $i=1$; While ($i \leq n$)?

$F=f*n$ ✓

$F=f+n$

$F=f^2n$

F=f-n

What, according to most practitioners in the software engineering field, is the major cause of cost overruns and late product delivery?

Early completion of requirements

Poor communication and changing requirements

Well-defined requirements

Limited stakeholder involvement

The time required for a modern router to forward a packet is measured in _____.

Billions of a second

Millionths of a second

Bits per second

Hundreds of a second

Which of the following protocol helps to store the email messages on the email server machine, while retrieving email messages from the receiving server?

IMAP

POP3

MIME

SMTP

What technology enables an end user to connect to the closest server out of a defined group of servers?

Unicast

Anycast

P2P

Multicast

What will be the value of "f" after the first iteration of the while loop in the given pseudo-code?

Cannot be determined

1

2

n

The statement $z=x+y$ shows

The X and Y be assigned to the variable Z

The Y be assigned to the variable Z

The sum of x and z be assigned to the variable y

The sum of X and Y be assigned to the variable Z

What is the primary role of the control process in a loop structure?

To reduce the flexibility of the algorithm.

To execute the body of the loop.

To avoid stepwise refinement.

To guide the repetition of the loop.

The _____ is a standardized style (similar to that of our music example) for designing notational systems for representing data as text files.

UML

OOP

XML

CSS

Which of the following is the correct sequence of network layers for the flow of message at the sender side?

Application layer to Transport layer to Network layer to Link layer

Application layer to Link layer to Network layer to Transport layer

Link layer to Network layer to Transport layer to Application layer

Network layer to Link layer to Transport layer to Application layer

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Question 1:

What will be the output of the loop for the given example?

cpp

Copy code

```
int i=1;
while(i<7)
{
    cout<<i;
    i=i+2;
}
```

Select the correct option:

135

1357

1234567

7654321

Question 2:

For controlling vandalism over network connections, a primary prevention technique to filter out the traffic passing through a point is:

Select the correct option:

- Proxy server
- Auditing software
- Antivirus software
- Firewall

Question 3:

What are descriptive names like "Price", "ShippingCharge", and "TotalCost" often called in programming?

Select the correct option:

- Program variables or identifiers
- Machine codes
- Mnemonics
- Numeric forms

Question 4:

What does VoIP stand for?

Select the correct option:

- Voice of Internet Protocol
- Voice over Internet Protocol
- Virtually over Internet Protocol
- Voice of International Protocol

Question 5:

In background, insertion sort algorithm works on _____ code.

Select the correct option:

- UTF-16
- ANSI
- ASCII
- Hexadecimal

Question 6:

This finding maximum number function will keep on going until we reach at the last value:

[12,18,299,38,999,89,101,500,801,45]

Select the correct option:

- 45 each time
- 38 each time
- 801 each time
- 12 each time

Question 7:

Write an if-statement to check if a variable temperature is above 30 degrees Celsius and print "High temperature" if true.

Select the correct option:

- if (temperature > 30) { cout << "High temperature"; }
- if (temperature >= 30) { cout << "High temperature"; }
- if (temperature == 30) { cout << "High temperature"; }
- if (temperature < 30) { cout << "High temperature"; }

Question 8:

What is the role of the loop counter "i" in the given pseudo-code?

```
cpp
Copy code
f = 1;
i = 1;
while(i<=n)
{
    f = f * i;
    i = i + 1;
}
```

Select the correct option:

- To determine the initial value of 'f'
- To control the number of iterations in the loop
- To compare with the value of 'n'
- To reset the loop condition

Question 9:

Which of the following is an incorrect scenario for Shopping Cart Design patterns?

Select the correct option:

- User is intended to buy more products

- Do not use in case of single product to sell
- Paying money later on
- User needs to buy a single product

Question 10:

According to the statistics, which two services were consuming more than half of the internet bandwidth in 2014?

Select the correct option:

- Netflix and YouTube
- SSH and IM
- NNTP and FTP
- HTTP and VoIP

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Certainly! Here are the MCQs with their options and the correct answers marked with a tick (✓):

Question 1:

The bit manipulation operator _____ is used to set a specific bit.

- |
- &
- ^
- | ✓

Question 2:

In C++, which of the following function causes the full definition of the function to be inserted in each place when f() gets called?

- inline function ✓
- Built-in function
- Recursive function
- Inline function

Question 3:

In C++, which operator is used while accessing a structure through its pointer?

- =
- > ✓

.
&

Question 4:

Which function is automatically called when an object of a class is initialized?

- Constructor ✓
- Utility function
- Friend function
- Destructor

Question 5:

What will be the output of the following code?

C++

```
void sampleFunction(int a, char *b) {  
    a = a + 1;  
    *b = *b + 1;  
}
```

```
int main() {  
    int a = 50;  
    char b = 'A';  
    sampleFunction(a, &b);  
    cout << a << " " << b << endl;  
    return 0;  
}
```

- 50, A
- 50, 3.2
- 51, A
- 50, 3.2 ✓

Question 6:

Function seekg() and seekp() require an argument of type _____ to let them know how many bytes to move forward or backward.

- int
- float
- long ✓
- double

Question 7:

In C++, the default constructor takes _____.

No arguments ✓
Only one argument
Only two arguments
More than two arguments
Question 8:

In C++, the name of the _____ is the same as that of a class with a preceding tilde sign (~).

Destructor ✓
Friend function
Utility function
Constructor
Question 9:

Macro is defined by _____ preprocessor directive.

#else
#endif
#define ✓
#include
Question 10:

Which is not a preprocessor directive of C language?

#else
#endif
✓
#endif
cs101

Question 1: What does the imperative paradigm, also known as the procedural paradigm, represent in the programming process?

- Linear scale development
- Traditional approach to programming
- Functional programming approach
- Object-oriented approach

Question 2: _____ is used to detect and remove the presence of known viruses and other infections.

- Spyware

Antivirus

Spoofing

Firewall

Question 3: The _____ in the state of the process must be sufficient to determine uniquely and completely the actions required by each step.

Data

Information

Program

Instructions

Question 4: What is the primary focus of a programmer in a declarative programming system?

Developing problem-solving algorithms

Writing procedural code

Developing a precise statement of the problem

Describing algorithms

Question 5: Which of the following informal examples illustrates the concept of repeated execution of a statement as long as a condition is true?

Tickets are sold only once

As long as there are tickets to sell, keep selling tickets.

Sell a ticket if there are tickets available.

If there are tickets to sell, sell tickets.

Question 6: SSL protocol is the backbone of _____.

HTML

HTTP

HTTPS

HTML5

Question 7: Which of the following could be the correct URL for a HTML file named "sample", with a directory path "com/etc" at a server named "star.com"?

http://www.star.com/etc/sample.html

http://www.star.com/com/etc/sample.html

http://www.star.com/etc/sample

http://www.star.com/com/etc/sample.html

Question 8: Which one is a unary operator?

EQUAL

OR

NOT

AND

Question 9: Which one of the following options is necessary for an executing algorithm?

- Start
- End
- Flow
- Cycle

Question 10: The initialization step in loop structure establishes a starting _____.

- Condition
- Body
- Function definition
- Total Number of code lines

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Question 1:

What task is a programmer charged with using this implementation phase of software development?

Options:

- System testing
- Writing code as per the design ✓
- Requirements gathering
- Database design

Question 2:

The Binary Search Algorithm will find the mid value in second level of recursion in the following array:
45, 58, 74, 94, 95, 202, 203, 405, 419

Options:

- 95
- 89
- 94 ✓
- 90

Question 3:

What is a full form of JSP?

Options:

Java Source Pages
Java Script Pages
Java Server Pages ✓
Java Semantic Pages

Question 4:

CGI stands for

Options:

Common gateway interface ✓
Common graphic interface
Common gateway/interface
Common graphic interfaces

Question 5:

What will be the output of the following statement?

```
int a = 5*4 + 4;
```

Options:

80
79 ✓
7
8

Question 6:

What is the primary purpose of the Creational Design Pattern?

Options:

To create a tightly coupled system
To design graphical user interfaces
To manufacture physical products
To create instances and promote reuse ✓

Question 7:

How many iterations are required to find 10 in the following array?

```
6, 7, 10, 15, 49
```

Options:

4

1

3

2 ✓

Question 8:

An Oregon ... is a type of malware that can replicate itself into other computers connected to a network.

Options:

Vandal

Vision

Client

Abstract ✓

Question 9:

What is a full form of CGI?

Options:

Collaborative Gateway Interface

Console Gateway Interface

Common Gateway Interface ✓

Collective Gateway Interface

Question 10:

..... is a type of malware that can replicate itself into other computers connected to a network.

Options:

Trojan Horses

Worms ✓

Virus

Spyware

The beginning of a list is called the _____ of the list.

- head ✓
- bob
- tail
- devon

☑ The term _____ refers to a collection of data that is multidimensional in the sense that internal links between its entries make the information accessible from a variety of perspectives.

- data science
 - data mining
 - database ✓
 - data structure
- ☒ In a tree, what is the term for nodes at the other extreme, often called leaf nodes?
- Terminal nodes ✓
 - Root nodes
 - Internal nodes
 - Parent nodes
- ☒ In case of an equipment malfunction, the DBMS uses the log to reconstruct _____.
- only incomplete transactions
 - the entire database from scratch
 - non-committed transactions
 - completed transactions since the last backup ✓
- ☒ In context of environment, computer science has impacts:
- Positive
 - Dangerous
 - Negative
 - Both positive & negative ✓
- ☒ USA has passed legislation allowing the government to actively monitor citizens in the name of:
- National security ✓
 - National ethics
 - Data security
 - Data ethics
- ☒ In hash file, hashing identifies the location of a record directly from the _____.
- key ✓
 - bucket
 - index
 - algorithm
- ☒ In a stack, what is the term for removing an entry from the top?
- Popping ✓
 - Removing
 - Pushing
 - Dequeuing
- ☒ To obtain information about an employee, the process of selecting the tuple with the appropriate identification attribute value results in a relation with _____ tuple(s).
- Few
 - No
 - Single ✓
 - Many
- ☒ This _____ view of the database is called a database model.
- theoretical
 - empirical
 - logical

- conceptual ✓

Question 1:

When using PROJECT, if multiple columns are required, they are specified _____.

- Separately
 - Using brackets
 - [✓] Using a comma
 - Using quotation marks
-

Question 2:

Act that gives control over what information websites can collect from kids is:

- ECPA
 - [✓] COPPA
 - HIPPA
 - Video Privacy Protection
-

Question 3:

IPR stands for:

- Intellectual property release
 - [✓] Intellectual property rights
 - Intellectual property resources
 - Intellectual property restate
-

Question 4:

_____ is used to combine different relations into one relation.

- [✓] JOIN
 - PROJECT
 - SELECT
 - COMBINE
-

Question 5:

Matching geometric characteristics technique of recognizing images is used in:

- Taking pictures
 - Mark recognition
 - [✓] Optical character recognition
 - Sorting pictures
-

Question 6:

One of the advantages of separating application software from the DBMS is to achieve _____, allowing changes in the database without modifying the application software.

- [✓] data independence
- networking

- user access control
 - data security
-

Question 7:

The protocol that ensures older transactions are given priority when accessing locked items is called the _____ protocol.

- Priority inversion
 - Young-Old transaction
 - Deadlock avoidance
 - [✓] Wound wait
-

Question 8:

In a tree structure, what is the top node called?

- Leaf node
 - Parent node
 - [✓] Root node
 - Terminal node
-

Question 9:

How many common forms of data mining?

- Five
 - [✓] Four
 - Two
 - Three
-

Question 10:

Americans use about 680 pounds of paper in a year:

- Per city
 - Per company
 - [✓] Per person
 - Per newspaper
-

Question 1

One operation we might want to perform on a relation is to select _____ possessing certain characteristics and to place these selected _____ in a new relation.

- attribute, attribute
 - tuple, attribute
 - tuple, tuple ✓
 - table, tuple
-

Question 2

The node at the top is called the _____ node.

- head

- siblings
 - terminal
 - root ✓
-

Question 3

A device that responds to stimuli from its environment:

- Router
 - Computer
 - Agent ✓
 - AI device
-

Question 4

USA has passed legislation allowing the government to actively monitor citizens in the name of:

- National ethics
 - Data security
 - National security ✓
 - Data ethics
-

Question 5

What is a queue's characteristic in terms of entry removal?

- Sequential access
 - First-in, first-out ✓
 - Random access
 - Last-in, first-out
-

Question 6

A _____ is a storage area that contains such an encoded address.

- tree
 - pointer ✓
 - array
 - graph
-

Question 7

The point at which all the steps in a transaction have been recorded in the log is called the _____.

- roll back
 - commit point ✓
 - snapshot
 - schema
-

Question 8

What is an aggregate type in programming?

- Block of data items with different data types ✓
 - Rectangular array of numbers
 - An integer variable
 - 2-dimensional array
-

Question 9

Computer science has made hacking bank account:

- Challenging
 - Possible ✓
 - Impossible
 - Difficult
-

Question 10

A rapidly expanding subject that is closely associated with database technology is _____, which consists of techniques for discovering patterns in collections of data.

- data mining ✓
 - text mining
 - Sentiment analysis
 - opening mining
-

Question 1:

_____ is exemplified by two transactions, each of which makes a deduction from the same account.

- Potential problem
 - Time sharing
 - Lost update problem ✓
 - Incorrect summary problem
-

Question 2:

Act that gives control over what information websites can collect from kids is:

- ECPA
 - Video Privacy Protection
 - COPPA ✓
 - HIPPA
-

Question 3:

This conceptual view of the database is called a _____ model.

- Data science
 - Data mining
 - Database ✓
 - Data structure
-

Question 4:

Text files are considered as sequential files where each logical record is a _____ encoded using ASCII or Unicode.

- Single image
 - Symbol ✓
 - Sound byte
 - Encrypted message
-

Question 5:

In the context of data structures, what is the primary use of pointers?

- To store string data type
 - To record the location of data items ✓
 - To serve as a counter in loops
 - To delete instructions
-

Question 6:

What do we call the structures in a tree that consist of a node and the nodes below it?

- Roots
 - Branches
 - Leaves
 - Subtrees ✓
-

Question 7:

The following statement extracts _____ from the EMPLOYEE relation.

MAIL <- PROJECT Name, Address from EMPLOYEE

- Names only
 - Addresses only
 - Names and Addresses ✓
 - Phone numbers
-

Question 8:

In a stack, what is the term for inserting a new entry at the top?

- Dequeueing
 - Removing
 - Pushing ✓
 - Popping
-

Question 9:

The point at which all the steps in a transaction have been recorded in the log is called the _____.

- Snapshot
- Roll back

- Schema
- Commit point ✓

Question 10:

Information that was once buried in arcane records has become accessible because of:

- Computer
- Online management
- Database ✓
- Artificial intelligence

cs01

Question #1: Relative reference is useful when we need to apply _____ type of calculations.

Same ✓

Mathematical

Complex

Simple

Question #2:

To select a word with mouse

Press shift and click on the word

Double click on the word ✓

Right click on the word

Single click on the word

Question #3:

In case you make some mistake, you can undo it by pressing

Alt+Y

Alt+Z

Ctrl+Z ✓

Ctrl+Y

Question #4:

At the right side of the title bar of the word document, you can see three buttons;

Minimize button, Restore down button, Close button ✓

Minimize button, Cancel Button, Close button

Format Button, Bullet and Numbering button, Minimize Button

Copy button, Paste Button, Close Button

Question #5:

By default there are sheet(s) in MS Excel

1 ✓

4

2

3

Question #6:

Word processing software is used for _____.

Sound editing

Image editing

Text editing ✓

Video editing

Question #7:

The process of removing the unwanted part of an image is called:

Hiding

Bordering

Cutting

Cropping ✓

Question #8:

How do you magnify your document?

Click Ribbon Customize

Click Tools, Options

Click View, Zoom ✓

Click Home, Font

Question #9:

In MS Word, shortcut key combination to open the print window is _____.

Ctrl + I

Ctrl + P ✓

Ctrl + F

Ctrl + K

Question #10:

Three buttons at the top right corner of a window are _____.

minimize, size and close

minimize, move and close

minimize, hold and close

minimize, restore and close ✓

Question #1:

Why is information about the software's implementation important during maintenance?

- To explain why the software was implemented as it was.
- To increase the chance of disruptions.

- To simplify the software development process.
- To blur the distinction between technical and user documentation.

Correct option:

✓ To explain why the software was implemented as it was.

Question #2:

When sending email, an SMTP client assumes that it should communicate with the SMTP mail server through port number _____.

- ✓ 25
- 35
- 30
- 20

Correct option:

✓ 25

Question #3:

Which of the following is not malware?

- Antivirus
- Worms
- Spyware
- Trojan Horses

Correct option:

✓ Antivirus

Question #4:

What is the key syntax used to announce different sub-structures within the decision-making pseudocode?

- Periods and commas
- ✓ Keywords if and else
- Colons and semicolons
- Parentheses and brackets

Correct option:

✓ Keywords if and else

Question #5:

Let an unsorted list Fred, Alex, Diana, Byron, Carol. Which one will be sorted last?

- Fred
- Alex
- Diana
- ✓ Carol

Correct option:

✓ Carol

Question #6:

What does the term "src" stand for in the context of the image tag?

- Screenshot
- Short for "script"
- Special Render Code
- Source

Correct option:

✓ Source

Question #7:

In the URL "<https://www.abc.com/http/xyz.html>", what does "http" represent?

- Server address
- Protocol
- Document name
- Directory path

Correct option:

✓ Directory path

Question #8:

What is true about the importance of the sequence of steps in the algorithm for making a cup of tea?

- The sequence ensures a successful outcome.
- The sequence is arbitrary.
- The sequence does not matter at all.
- The sequence does not impact the final result.

Correct option:

✓ The sequence ensures a successful outcome.

Question #9:

What is the primary function of Simple Mail Transfer Protocol (SMTP) in the context of email?

- Downloading mail messages
- Transferring text messages
- Converting non-ASCII to SMTP-compatible form
- Storing messages locally

Correct option:

✓ Transferring text messages

Question #10:

First software for implementing the Web was released in _____.

- December 1990

- October 1990
- November 1990
- September 1990

Correct option:

December 1990

Question # 1:

_____ is a malware which gathers data about your activities on the system and forwards it to the outside party without your consent.

- Virus
- Worms
- Trojan Horses
- Spyware

Question # 2:

What is the role of a software analyst in the development process?

- Responsible for database management
- Focused on the implementation step
- Involved with the entire development process, with emphasis on requirements analysis and design
- Primarily involved in writing programs

Question # 3:

What does the cyclic pattern of a loop involve?

- Repeatedly checking the condition and executing the body.
- Ignoring the condition and executing the body.
- Executing the body continuously without interruption.
- Checking the condition only at the end of the loop.

Question # 4:

----- refers to data items that can take on only the values true or false.

- Char
- Float
- Boolean
- Int

Question # 5:

Which of these describes stepwise refinement?

- It is a bottom up approach
- It is a top down approach
- Depth First Search
- Greedy Approach

Question # 6:

If we have to insertion sort on names Fred, Alex, Diana ,Byron ,Carol

One approach to sorting this list is to note that the sublist consisting of

- Both fred and alex
 - Sub list having 3 names
 - Only carol
 - Only top name
-

Question # 7:

According to the statistics, which two services were consuming more than half of the Internet bandwidth in 2014?

- SSH and IM
 - NNTP and FTP
 - Netflix and YouTube
 - HTTP and VoIP
-

Question # 8:

When sending email, an SMTP client assumes that it should communicate with the SMTP mail server through port number _____.

- 30
 - 20
 - 25
 - 35
-

Question # 9:

What is the primary focus of a programmer in a declarative programming system?

- Developing problem-solving algorithms
 - Writing procedural code
 - Developing a precise statement of the problem
 - Describing algorithms
-

Question # 10:

Which of the following data types will be used for a variable having a string of symbols and alphabets?

- Integer
- Boolean
- Float
- Character

Question 1:

Control structure which iterates a set of instructions based on the provided condition, is called a _____.

- Function
- Conditional statement
- Class
- Loop

Question 2:

We use _____ to reduce unnecessary dependencies or effects on other modules.

- abstraction
- inheritance
- polymorphism
- information hiding

Question 3:

Which of the following language is related to functional paradigm.

- Python
- Smalltalk
- Prolog
- LISP

Question 4:

Float CGPA=3.5;

If (CGPA>=3.0)

Cout<<"Give Scholarship";

Else

Cout<<"Sorry you do not qualify for the scholarship";

It will show

- Give Scholarship
- Display none
- Sorry you do not qualify for the scholarship
- Good

Question 5:

How does the technique of working a problem backward relate to the bird-folding (paper-based) algorithm?

- It is irrelevant to the bird-folding problem.
- It contradicts the approach used in bird folding.
- It aligns with the process of unfolding a completed bird.
- It adds unnecessary steps to the folding process.

Question 6:

What is the key characteristic of an algorithm, according to the formal definition provided in the text?

- Ambiguity
- Order and executability
- Parallel processing

- Repetition

Question 7:

What is cited as a beneficiary of research in human-machine interface design?

- Source code repositories
- Networking protocols
- Smartphone interface
- Database management systems

Question 8:

What is the significance of the term "posttest" in loop structures?

- Test for termination before loop execution
- Test for termination after loop execution
- Loop testing performed in parallel
- Continuous testing during loop execution

Question 9:

_____ is a technique of obtaining information explicitly by simply asking for it.

- Spyware
- Worm
- Phishing
- Sniffing

Question 10:

What does the while loop condition "while (Count > 0):" indicate in the provided pseudocode?

python

Copy code

```
def Greetings():
```

```
    Count = 3
```

```
    while (Count > 0):
```

```
        print('Hello')
```

```
        Count = Count - 1
```

- The loop will run indefinitely
- The loop will run three times
- The loop will execute only once
- The loop will run as long as Count is negative

1. What does the while statement in a loop structure signify?

- The body of the loop.
- The end of the loop.
- **The condition for repeating the loop.**
- The initialization of loop variables.

2. ISO makes software _____ for software companies to guarantee quality control.

- Software

- Hardware
 - Queries
 - **Standards** ✓
3. **Distinction between software engineering and other engineering disciplines is the lack of quantitative techniques, called**
- **Metrics** ✓
 - Complexity
 - Calculation
 - Quality
4. _____ is not a phase of SDLC.
- Testing
 - Implementation
 - Requirement analysis
 - **Problem Identification** ✓
5. **The statement $z=x+y$ shows**
- The sum of X and Y be assigned to the variable Z ✓
 - The sum of x and z be assigned to the variable y
 - The Y be assigned to the variable Z
 - The X and Y be assigned to the variable Z
6. **How long is a typical patent granted for?**
- Life time
 - **20 years** ✓
 - 5 year
 - 10 years
7. **What is the primary purpose of the condition in the while structure?**
- To repeat the activity indefinitely.
 - To skip the activity.
 - To determine the activity to be performed.
 - **To control the execution of the activity.** ✓
8. **An alternative to translators**
- **Interpreter** ✓
 - Compiler
 - Mnemonics
 - Assembler
9. **The Pseudo code can have the equivalent _____ assignment structure.**
- Python
 - **C/C++** ✓
 - COBOL
 - Java
10. **What is the ASCII code for alphabet "A"?**
- 64
 - 62
 - 63
 - **65** ✓

1. **A paradigm a program is viewed as an entity that accepts inputs and produces outputs.**
 - Object-Oriented
 - Functional
 - Declarative
 - Imperative
2. **In the case of highly standardized languages, compiler designers often provide features, sometimes called:**
 - Language extension
 - Language code
 - Language symbols
 - Language translators
3. **The Model allows the development process only in one direction.**
 - RAD
 - Spiral
 - Incremental
 - Waterfall
4. **It is the responsibility of the application layer to:**
 - Use the services of the name servers to translate mnemonic addresses into IP addresses
 - Add sequence numbers to the small segments of a message
 - Ensure that the messages are properly formatted for transmission over the Internet
 - Determine the direction in which to forward packets
5. **Why is understanding the underlying program crucial during the maintenance phase, even for well-designed software?**
 - To encourage frequent updates
 - To facilitate a complete code rewrite
 - To prevent further problems during modifications
 - To eliminate the need for maintenance
6. **What is the purpose of the given pseudo-code? f=1 i=1; While (i<=n): f=f*i; i=i+1;**
 - To sort the number list
 - To determine the maximum value in a list
 - To identify prime numbers
 - To calculate the factorial of a given number
7. **Extreme programming (XP) is an example of:**
 - Evolutionary prototyping
 - Rapid prototyping
 - Agile method
 - Throwaway prototyping
8. **Interior feature of the system can be ignored by the programmer/user, this abstraction technique is also called:**

- Assembling
 - Black Box
 - Cohesion
 - Coupling
9. Which of the following is the correct syntax to initialize a 3-element integer array in C/C++?
- `int arr[3] = (12,3)`
 - `int arr(3) = (1,2,3);`
 - `int arr[3] = {12,3}`
 - `int arr(3) = {1,2,3}`
10. Which of the following informal examples illustrates the concept of repeated execution of a statement as long as a condition is true?
- As long as there are tickets to sell, keep selling tickets.
 - Sell a ticket if there are tickets available.
 - Tickets are sold only once.
 - If there are tickets to sell, sell tickets.

What will be the output of the following pseudocode?

scss

Copy code

marks = 60

if (marks<60)

Print(You have passed the examination)

Else

Print(You have failed the examination)

Options:

Both messages will be displayed

You have failed the examination

You have passed the examination

No message will be displayed

The _____ uses the transport layer to send and receive messages over the Internet.

Options:

Link layer

Data layer

Network layer

Application layer

The imperative paradigm, also known as the Particular machine

Options:

Non-Procedural paradigms

Traditional paradigms

Non traditional paradigms

Procedural paradigms

What is the key syntax used to announce different sub-structures within the decision-making pseudocode?

Options:

Keywords if and else

Colons and semicolons

Periods and commas

Parentheses and brackets

What category of testing relies on knowledge of the internal composition of the software?

Options:

Black-box testing

Gray-box testing

Glass-box testing

Pink-box testing

What is the role of the loop counter 'i' in the given pseudo-code?

```
less
```

```
Copy code
```

```
f = 1
```

```
i = 1
```

```
While (i<=n):
```

```
    f = f * i
```

```
    i = i + 1
```

Options:

To reset the loop condition

To determine the initial value of 'f'

To compare with the value of 'n'

To control the number of iterations in the loop

Sequential search involves a circular form of repetition; the binary search executes each stage of the repetition as a subtask of the previous stage known as:

Options:

Transition

Recursion

Searching

Decomposition

Why do some governments view VoIP as a threat?

Options:

It consumes too much bandwidth

It challenges traditional telephone systems

It lacks security features

It is difficult to implement

Each programming language tends to approach the parallel processing paradigm and have different terminology. In Ada we use term ___ for this purpose.

Options:

Task

Method

Thread

Function

The URL is used to:

Options:

Locate a specific system connected to the internet

Locate a document on any system connected to the internet

Locate a document on the webserver

Locate a document on the client system

Question 1: What is the layperson's perception about software design?

- Option A: Deciding what the software system is to do
- Option B: Determining the software accuracy
- Option C: Deciding how the software system will do it
- Option D: Determining the software performance
- Correct Option: C

Question 2: Procedural knowledge is learning:

- Option A: "when"
- Option B: "what"
- Option C: "slowly"
- Option D: "how"
- Correct Option: D

Question 3: Why has software engineering struggled to find a rigorous footing, compared to other engineering disciplines?

- Option A: Lack of engineering principles
- Option B: Lack of quantitative techniques in measuring software properties
- Option C: Inability to develop generic software components

- Option D: Overreliance on prefabricated components
- Correct Option: B

Question 4: A schema describes the database structure used by the database software.

- Option A: external
- Option B: partial
- Option C: secondary
- Option D: complete
- Correct Option: D

Question 5: Database technology, combined with data mining techniques, is an important

-
- Option A: Financial
 - Option B: Communication
 - Option C: Data storage
 - Option D: Decision-making
 - Correct Option: D

Question 6: The two common types of locks in a locking protocol are

- Option A: Read, Write
- Option B: Primary, Secondary
- Option C: Shared, Exclusive
- Option D: Static, Dynamic
- Correct Option: C

Question 7: The problem known as the _____ can arise if one transaction is in the middle of transferring funds from one account to another when another transaction tries to compute the total deposits in the bank.

- Option A: lost update problem
- Option B: incorrect summary problem
- Option C: potential problem
- Option D: time sharing
- Correct Option: A

Question 8: A program DOCTOR developed by Joseph Weizenbaum in the mid-1960s named as:

- Option A: Smart Doctor
- Option B: Joseph
- Option C: Alexa
- Option D: Eliza
- Correct Option: D

Question 9: nnn patterns are generally used for the creation of loosely coupled systems.

- Option A: Implementation
- Option B: Requirement
- Option C: Factory Design
- Option D: Database
- Correct Option: C

Question 10: With computer science the access to private information has:

- **Option A: Reduced**
- **Option B: Controlled**
- **Option C: Increased**
- **Option D: Removed**
- **Correct Option: C**

Question 1:

- **Question:** The process used by the DBMS to undo activities performed by an incomplete transaction is termed
 - A. revert
 - B. rollback
 - C. rewind
 - D. restore
- **Correct Answer: B. rollback**

Question 2:

- **Question:** This view of the database is called a database model.
 - A. conceptual
 - B. logical
 - C. theoretical
 - D. empirical
- **Correct Answer: A. conceptual**

Question 3:

- **Question:** How many common forms of data mining?
 - A. Three
 - B. Five
 - C. Two
 - D. Four
- **Correct Answer: A. Three**

Question 4:

- **Question:** ISO makes software _____ for software companies to guarantee quality control.
 - A. Standards
 - B. Hardware
 - C. Software
 - D. Queries
- **Correct Answer: A. Standards**

Question 5:

- **Question:** An object-oriented database consists of objects linked to each other to reflect their _____.
 - A. attributes
 - B. sizes
 - C. relationships
 - D. colors
- **Correct Answer: C. relationships**

Question 6:

- **Question:** Text files are considered as sequential files where each logical record is a encoded using ASCII or Unicode.
 - A. Encrypted message
 - B. Single image
 - C. Sound byte
 - D. symbol
- **Correct Answer:** D. symbol

Question 7:

- **Question:** What does the term "manageable pieces" refer to in software engineering?
 - A. Code documentation
 - B. Breaking down a project into smaller components
 - C. Debugging techniques
 - D. Software Development Life Cycle phases
- **Correct Answer:** B. Breaking down a project into smaller components

Question 8:

- **Question:** What was the initial focus in the early years of computing regarding software quality?
 - A. Software engineering procedures
 - B. Certification programs
 - C. Debugging process
 - D. Software Analysis
- **Correct Answer:** C. Debugging process

Question 9:

- **Question:** The two common types of locks in a locking protocol are
 - A. Primary, Secondary
 - B. Static, Dynamic
 - C. Read, Write
 - D. Shared, Exclusive
- **Correct Answer:** D. Shared, Exclusive

Question 10:

- **Question:** How is a programmer's role distinct from that of a software analyst in the implementation stage?
 - A. Programmers are primarily involved in the implementation step.
 - B. Programmers only work on database development.
 - C. Programmers are responsible for the entire development process.
 - D. Programmers focus on requirements analysis and design.
- **Correct Answer:** A. Programmers are primarily involved in the implementation step.

❑ **What is the output of the following code?**

cpp

Copy code

```
int sum = 7;
```

```
if (sum >= 20) cout << "You win *"; if (sum < 20) cout << "You lose ";
```

- You win
- You lose
- You win the prize.
- You lose the prize.

Which one of the following is the traditional approach of programming process?

- Functional paradigm
- Declarative paradigm
- Object oriented paradigm
- Imperative Paradigm

Let an unsorted list Fred, Alex, Diana, Byron, Carol. Which one will be sorted at last?

- Carol
- Diana
- Fred
- Alex

What does it mean to "get your foot in the door" in the context of problemsolving?

- Finding an initial insight or starting point.
- Ignoring clues that seem unrelated.
- Solving the entire problem at once.
- Having a detailed plan from the beginning.

What are descriptive names like "Price," "ShippingCharge," and "TotalCost" often called in programming?

- Program variables or identifiers
- Numeric forms
- Mnemonics
- Machine codes

What keyword is used in Python language to define a function?

- "Define"
- "Def"

🔍 What will be the output of following pseudo code? def FindFactorial():

- 10080
- 5040
- 120
- 980

🔍 In the declarative paradigm, what does a programmer focus on when presented with a problem?

- Developing a precise statement of the problem
- Finding a generalpurpose algorithm
- Describing detailed algorithms
- Developing a sequence of commands

🔍 What is the primary focus of a programmer in a declarative programming system?

- Developing a precise statement of the problem
- Writing procedural code
- Developing problemsolving algorithms
- Describing algorithms

🔍 In the provided pseudocode, what is the role of the "Current" variable?

- It holds the maximum value in the list
- It represents the minimum value in the list
- It stores the current value being compared
- It indicates the position of the current element in the list

1. In assembly language, the instructions like MOV or ADD are called as:

- Commands
- OPCODE

- Identifiers
 - Operators
2. **In which of the following paradigms, a program is constructed by connecting smaller predefined program units?**
- Declarative paradigm
 - ✓ Functional paradigm
 - Imperative Paradigm
 - Objectoriented paradigm
3. **What is the significance of the mathematician G. Polya's problemsolving phases in the context of algorithm discovery?**
- They provide a precise language model for the solution of a problem.
 - They exclude the use of general problemsolving techniques.
 - They provide a precise mathematical model for the solution of a problem.
 - ✓ They present a systematic approach to algorithm discovery.
4. **What advantage does a loop structure provide over explicitly writing the body multiple times?**
- It reduces the flexibility of the algorithm.
 - ✓ It allows for greater flexibility without knowing in advance how many iterations are needed.
 - It simplifies the structure of the algorithm.
 - It increases the errorproneness of the algorithm.
5. **What term does computer science use for program units that can be used as abstract tools in other applications?**
- Paragraph
 - Script
 - ✓ Subprogram
 - Software part
6. **What is the significance of the statement "f = f * i" in each iteration of the loop in the given pseudocode? f = 1; i = 1; While (i <= n): f = f * i; i = i + 1;**
- It resets the value of "f" to 1.
 - ✓ It multiplies the current value of "f" by the loop counter "i."

- It subtracts the loop counter 'i' from the current value of "f."
 - It has no impact on the loop.
7. **What is the role of the loop counter 'i' in the given pseudocode? f = 1; i = 1; While (i <= n): f = f * i; i = i + 1;**
- To reset the loop condition
 - To control the number of iterations in the loop
 - To determine the initial value of "f"
 - To compare with the value of "n"
8. **The initialization step in the loop structure establishes a starting:**
- Function definition
 - Condition
 - Total Number of code lines
 - Body
9. **Posttest loop structure refers to?**
- Test for termination is performed with the body is executed
 - Test for termination is performed after the body is executed
 - Test for termination is performed before the body is executed
 - Test for termination is performed as well as the body is executed
10. **How many choices are possible when using a single ifelse statement?**
- 1
 - 2
 - 3
 - 4

1. What is collectively called an assembly language in the context of programming?

- a. Highlevel language
- b. Mnemonic system (Correct)

- c. Machine language
- d. Compiler

2. In the context of the provided pseudocode, what is the purpose of the statement "Count = Count1"?

- a. To print a message
- b. To reset the counter
- c. To increment the counter
- d. To decrement the counter (Correct)

3. Why is the Therac25 incident considered a software failure?

- a. There was a technical issue in the software (Correct)
- b. It resulted in a man's death
- c. The software was believed to be correct
- d. It occurred in Texas.

4. In the context of network security, what is the term used for pretending to be a party other than oneself to gain an illegitimate advantage?

- a. Proxying
- b. Proxying
- c. Masking
- d. Masquerading (Correct)

5. What does the bottomup methodology in problemsolving progress from?

- a. The general to the specific (Correct)
- b. The specific to the general
- c. Steps that increase the complexity of the problem
- d. Complicated steps to simple steps

6. A translator which takes assembly language program as input & produces machine language code as output is known as: a. Compiler

- b. Interpreter
- c. Debugger
- d. Assembler (Correct)

7. What is the role of Phase 3 in the problemsolving process in the context of program development?

- a. Understanding the problem
- b. Getting an idea of how an algorithmic function might solve the problem
- c. Evaluating the solution
- d. Formulating the algorithm as a program (Correct)

8. How is the pseudocode structure for making decisions based on conditions represented in the algorithm representation?

- a. if (activity): condition else: activity
- b. activity: condition else activity
- c. if (condition): activity else: activity (Correct)
- d. condition: activity else: activity

9. As a general rule, the use of _____ produces a higher degree of flexibility that would be obtained merely by explicitly writing the body several times.

- a. Loop structure (Correct)
- b. Sequential statements

10. Which one is not a valid data type?

- a. Int
- b. Html

- c. Char
- d. Float (Correct)

1. Which programming construct is given below?

- If(condition) Statement A else Statement B
- Options:
- FunctionPointer
- Control structure
- Loop structure
- Correct Option: Control structure

2. A translator which takes assembly language program as input & produces machine language code as output is known as:

- Options:
- Assembler
- Compiler
- Debugger
- Correct Option: Assembler

3. What could be the first step in the algorithm for making a cup of tea among the following?

- Options:
- Boil water
- Add Sugar
- Put water in the kettle
- Put tea in the water
- Correct Option: Put water in the kettle

4. The Pseudo code can have the equivalent _____ assignment structure.

- Options:
- Java

- C/C++
- COBOL
- Python
- Correct Option: Python

5. Which of the following terms refers to the process in which a small request is initially made and detailed solution is shared later?

- Options:
- Footinthedoor technique
- Lowballing
- Highballing
- Doorinthe face technique
- Correct Option: Doorinthe face technique

6. What approach does the imperative paradigm use for the programming process?

- Options:
- Linear scale development
- Finding an algorithm and expressing it as a sequence of commands
- Objectoriented approach
- Functional programming approach
- Correct Option: Finding an algorithm and expressing it as a sequence of commands

7. Which of the following is the correct syntax for a conditional statement?

Options:

- If (condition) If (condition Statement A Else Statement B.
- If condition) Statement A Else Statement B.
- If (condition) Statement A Else Statement B.

- Correct Option: If (condition) Statement A Else Statement B.

8. In ObjectOriented Paradigm, each object will have its own collection of functions which is known as:

- Options:

- Objects

- Classes

- Elements

- Methods

- Correct Option: Methods

9. Which ordinance in Pakistan addresses the prevention of electronic crimes and was enacted in 2007?

- Options:

- Cybersecurity Law

- Prevention of Electronic Crimes Ordinance

- Telegraph Act

- Electronic Transaction Ordinance

- Correct Option: Prevention of Electronic Crimes Ordinance

10. Sequential Search Algorithm technique _____ in success.

- Options:

- does not always result

- is fast

- is always optimal

- always result

- Correct Option: does not always result in success.

1. A private key is used to _____ messages.

- a) Send

- b) Receive

- c) Decrypt
- d) Encrypt
- Correct Option: d) Encrypt

2. What term is used to refer to the building blocks in algorithm representation that help eliminate ambiguity?

- a) Terminators
- b) Symbols
- c) Primitives
- d) Constructs
- Correct Option: d) Constructs

3. Phase 2 of problemsolving steps is _____.

- a) Formulate the algorithm and represent it as a program
- b) Understand the problem
- c) Get an idea of how an algorithmic function might solve the problem
- d) Evaluate the program for accuracy and for its potential as a tool for solving other problems
- Correct Option: a) Formulate the algorithm and represent it as a program

4. What does it mean for an algorithm to be "unambiguous," according to the formal definition of computer algorithms?

- a) The steps are clear and have a unique interpretation.
- b) The steps have multiple interpretations.
- c) It involves parallel processing.
- d) It can be executed by any computer.

Correct Option: a) The steps are clear and have a unique interpretation.

5. How many times will the loop in the example below execute?

```
```cpp int
i=2;
while(i<=5) {
cout<<i;
i=i+1;
}
...

```

- a) 4
- b) 5
- c) 6
- d) 7
- Correct Option: a) 4

6. What will be the output of the following statement?

```
```cpp int a = 10
+ 4.867;
...

```

- a) 1014.867
- b) 14.867
- c) 14
- d) Compiler error
- Correct Option: c) 14

7. Sequential Search Algorithm technique _____ in success.

- a) is always optimal
- b) does not always result
- c) is fast
- d) always result

Correct Option: b) does not always result

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8. If the condition in the ifelse structure is false, what function will be executed based on the following pseudocode example?

```
``python if
```

(condition):

ProcessLoan()

else:

RejectApplication()

``

- a) ProcessLoan()
- b) Both
- c) RejectApplication()
- d) None
- Correct Option: c) RejectApplication()

9. In the case of highly standardized languages, compiler designers often provide features, sometimes called _____.

- a) Language symbols
- b) Language translators
- c) Language code
- d) Language extension

- Correct Option: a) Language symbols

10. What is the protocol system underlying HTTPS that is responsible for secure communication links between clients and servers?

- a) DNS
- b) HTTP
- c) TCP/IP
- d) SSL/TLS

Correct Option: d) SSL/TLS

1. What is the primary advantage of using the while structure in expressing algorithms?

- A. It provides a onetime execution.
 - B. It introduces complexity.
 - C. It simplifies the algorithm.
 - D. It allows for dynamic, repeated execution of a task.
- **Correct Option: D**

2. What is the primary role of the control process in a loop structure?

- A. To reduce the flexibility of the algorithm.
 - B. To guide the repetition of the loop.
 - C. To avoid stepwise refinement.
 - D. To execute the body of the loop.
- **Correct Option: B**

3. What describes the relationship between a process and an algorithm?

- A. A process is the activity of executing an algorithm.
- B. Both the terms are the same and interchangeable.

- C. A process is a static representation of an algorithm.
- D. An algorithm is the activity of executing a process.

- ****Correct Option: A****

4. An algorithm is the activity of executing a process. What symbol follows the keywords "if" and "else" in the decisionmaking structure in pseudocode?

- A. Colon (":")
- B. Semicolon (";")
- C. Exclamation mark ("!")
- D. Hyphen ("-")

****Correct Option: A****

5. What is the significance of the mathematician G. Polya's problemsolving phases in the context of algorithm discovery?

- A. They provide a precise language model for the solution of a problem.
- B. They exclude the use of general problemsolving techniques.
- C. They present a systematic approach to algorithm discovery.
- D. They provide a precise mathematical model for the solution of a problem. ****Correct Option: C****

6. What is the primary focus of a programmer in a declarative programming system?

- A. Developing a precise statement of the problem.
- B. Developing problemsolving algorithms.
- C. Writing procedural code.
- D. Describing algorithms.

- ****Correct Option: D****

7. In the condition: `if (TargetValue == TestEntry)`, what is "=="?

- A. Assignment Operator
- B. Equal to Operator
- C. Expression
- D. Conditional loop
- ****Correct Option: B****

8. What term is used to refer to a formal representation of an algorithm designed for computer application within the computing community?

- A. Process
- B. Algorithm
- C. Program
- D. Primitive

****Correct Option: B****

9. What is the purpose of HTTPS in the context of secure Internet access?

- A. To block unwanted emails
- B. To block all traffic other than HTTP
- C. To encrypt HTTP messages
- D. To encrypt emails
- ****Correct Option: C****

10. Which of the following data type will be used for a variable having a string of symbols and alphabets?

- A. Integer
- B. Boolean
- C. Character
- D. Float
- ****Correct Option: C****

1. What advantage does a loop structure provide over explicitly writing the body multiple times?

Options:

- A. It increases the errorproneess of the algorithm.
- B. It allows for greater flexibility without knowing in advance how many iterations are needed.
- C. It reduces the flexibility of the algorithm.
- D. It simplifies the structure of the algorithm.

Correct Option: D. It simplifies the structure of the algorithm.

2. How many iterations are required to find 90 in the following array? **1 Error! Bookmark not defined.**

- 2.....75
- 3.....75
- 4.....75
- Correct Option:.....88

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{5, 6, 77, 90, 99}

Options:

3. In ObjectOriented Paradigm, each object will have its own collection of functions, which is known as:

Options:

- A. Objects
- B. Classes
- C. Methods
- D. Elements

Correct Option: C. Methods

4. Polya's analysis of problem solving is to evaluate the solution for:

Options:

- A. Time
- B. Accuracy
- C. Consistency
- D. Cost

Correct Option: A. Time

5. How does the termination condition relate to the while statement in pseudocode?

Options:

- A. It is the condition for initializing the loop.
- B. It is the negation of the condition appearing in the while structure. C. It is the negation of the condition appearing in the while structure.

D. It is the condition for modifying the loop.

Correct Option: D. It is the condition for exiting or terminating the loop.

6. Starting with vocabulary words and then giving students a reading passage is an example of:

Options:

- A. A topdown approach
- B. A Popup approach
- C. A cronup approach
- D. A bottomup approach

Correct Option: D. A bottomup approach.

7. What is the main idea behind breaking the original problem into subproblems in stepwise refinement?

Options:

- A. To approach the overall solution in steps.
- B. To make the problem more complicated.
- C. To solve the entire problem at once.
- D. To avoid solving any part of the problem.

Correct Option: A. To approach the overall solution in steps.

8. What is the role of the Prevention of Electronic Crimes Ordinance, 2007, in Pakistan's legal framework for cybersecurity?

Options:

- A. It enforces nonelectronic fund transfer regulations.
- B. It addresses the prevention of electronic crimes.
- C. It addresses the prevention of electronic crimes.
- D. It reorganizes the telecommunication structure.

Correct Option: B. It addresses the prevention of electronic crimes.

9. What will be the value of "f" after the first iteration of the while loop in the given pseudocode?

f = 1

i=1;

While (i<=n):

f=f*i;

i=i+1;

Options:

1. 2

2. 1

3. n

4. none

Correct Option: 2. 1

10. In the context of program development, what is the goal of finding a general algorithm?

Options:

A. To develop an algorithm that can solve all instances of a problem.

B. To find a specific solution for each instance.

C. To solve a specific problem without decomposition.

D. To solve a particular instance of a problem.

Correct Option: A. To develop an algorithm that can solve all instances of a problem.

1. How many times will the loop in the example below execute?

- 3

- 4 (Correct Option)

- 5

- 6

2. A single algorithm can be represented in _____ way(s).

- Modern

- Malicious

- Many (Correct Option)

- Single

3. The set of instructions in a computer language, to get the desired result is known as:

- An algorithm
- A decision table
- A pseudo code
- A program (Correct Option)

4. What is the formal definition of an algorithm?

- An ordered set of ambiguous steps
- A sequence of parallel executable steps
- A random set of steps
- An ordered set of unambiguous, executable steps (Correct Option)

5. The originator of a message can encrypt the message using the _____.

- Public key (Correct Option)
- Double key
- Single key
- Private key

6. Which of the following informal examples illustrates the concept of repeated execution of a statement as long as a condition is true?

- Tickets are sold only once
- If there are tickets to sell, sell tickets.
- Sell a ticket if there are tickets available.
- As long as there are tickets to sell, keep selling tickets. (Correct Option)

7. What is the primary purpose of encryption in the context of data transfer over networks?

- To speed up data transfer
- To speed up data transfer
- To hide data from users
- To ensure data confidentiality (Correct Option)

8. A alters the execution sequence of the program.

- Division
- Assignment statement
- Control statement (Correct Option)
- Modulus

9. Which of the following statement is used for output in C++?

- `cin >> cout >> cin >> cout <<`
- `cout << "Hello, World!" << endl;` (Correct Option)
- `cout >> "Hello, World!" << endl; cout << "Hello, World!" >> endl;`

10. Which of the following examples is inconsistent with the requirement of a "terminating process"?

- Monitoring the vital signs of a hospital patient
- Maintaining an aircraft's altitude in flight
- Making a list of all the positive integer (Correct Option)
- Sorting a deck of cards

1. The Binary Search Algorithm, what will be the mid value in the second level of recursion in the following array.

Options:

- A. 45
- B. 77
- C. 94
- D. 100

Correct Option: C. 94

2. Which of the following is not true about a firewall?

Options:

- A. Firewall protects the entire domain from outside intrusion
- B. Firewall protects the individual computer from outside intrusion
- C. Firewall protects the individual computer from inside intrusion
- D. Firewall protects the entire network from inside intrusion

Correct Option: C. Firewall protects the individual computer from inside intrusion

3. Which of these describes stepwise refinement?

Options:

- A. Greedy Approach
- B. It is a bottomup approach
- C. Depth First Search
- D. It is a topdown approach

Correct Option: D. It is a topdown approach

4. A program logic written in an ordinary language illustrating a structure similar to computer instructions is known as _____.

Options:

- A. Flowcharts
- B. Algorithms
- C. Programs
- D. Pseudo codes

Correct Option: D. Pseudo codes

5. Which programming language was developed for scientific and engineering applications?

Options:

- A. Machine language
- B. FORTRAN
- C. Assembly Language
- D. COBOL

Correct Option: B. FORTRAN

6. An alternative to translators is _____.

Options:

- A. Compiler
- B. Interpreter
- C. Mnemonics
- D. Assembler

Correct Option: B. Interpreter

7. In the given example, what does the loop do? `while (pH level > 4): add a drop of sulfuric acid`

Options:

- A. Adds a drop of sulfuric acid regardless of the pH level.
- B. Adds a drop of sulfuric acid if the pH level is greater than 4.
- C. Adds a drop of sulfuric acid only once.
- D. Adds a drop of sulfuric acid if the pH level is less than or equal to 4.

Correct Option: B. Adds a drop of sulfuric acid if the pH level is greater than 4.

8. Stepwise refinement is a _____ methodology in that it progresses from the general to the specific.

Options:

- A. Left to right
- B. Bottom up
- C. Top down
- D. Right to left

Correct Option: C. Top down

9. Which of the following terms refers to the process in which a small request is initially made and a detailed solution is shared later?

Options:

- A. Doorinthe face technique

B. Lowballing

C. Footinthedoor technique

D. Highballing

Correct Option: C. Footinthedoor technique

10. What will be the output of the following pseudocode?

...

marks = 60

if (marks > 60)

 Print("You have passed the examination")

Else

 Print("You have failed the examination")

...

Options:

A. "You have passed the examination"

B. Both messages will be displayed

C. No message will be displayed

D. "You have failed the examination"

Correct Option: D. "You have failed the examination"

1. Pseudo code is language _____.

Options: A) AlgorithmDependent, B) Sequence, C) Independent, D) Algorithm

Correct Option: A) AlgorithmDependent

2. Independent

Options: A) By repeating the initialization step, B) By skipping the test activity, C) By applying the modification step repeatedly, D) By executing the test activity

Correct Option: C) By applying the modification step repeatedly

3. In the provided pseudocode, what is the role of the "Current" variable?

Options: A) It stores the current value being compared, B) It holds the maximum value in the list, C) It indicates the position of the current element in the list, D) It represents the minimum value in the list
Correct Option: B) It holds the maximum value in the list

4. Which of these describes stepwise refinement?

Options: A) Greedy Approach, B) Depth First Search, C) It is a topdown approach, D) It is a bottomup approach

Correct Option: C) It is a topdown approach

5. If the result after comparison of two variables in relational operators is False, then if statement returns value _____.

Options: A) No, B) 10, C) True, D) False

Correct Option: A) No

6. True parallel processing requires _____.

Options: A) Single, B) Multiple, C) None of these, D) Exactly two cores

Correct Option: B) Multiple

7. Fetch an instruction, Decode the instruction and Execute the instruction are parts of _____.

Options: A) Algorithm, B) Flow chart, C) Program, D) Machine cycle

Correct Option: D) Machine cycle

8. Someone can conclude that specifications of a software are met or not by:

Options: A) Verification, B) Modularity, C) Validation, D) Requirement gathering

Correct Option: C) Validation

9. What will be the value of "f" after the first iteration of the while loop in the given pseudocode?

Options: A) Cannot be determined, B) n, C) 1, D) 2

Correct Option: C) 1

10. Which of the following data type will be used for a variable having a string of symbols and alphabets?

Options: A) Character, B) Integer, C) Float, D) Boolean

Correct Option: A) Character

1. Which organizations have adopted and published standards for popular programming languages to address the lack of agreement on language definitions?

Options:

A) Programming Language Alliance

B) International Compiler Consortium

C) Compiler Writers Association

D) American National Standards Institute (ANSI) and International Organization for Standardization (ISO)

Correct Option: D) American National Standards Institute (ANSI) and International Organization for Standardization (ISO)

2. What is the purpose of HTTPS in the context of secure Internet access?

Options:

A) To block all Traffic other than HTTP

B) To encrypt emails

C) To encrypt HTTP messages

D) To block unwanted emails

Correct Option: C) To encrypt HTTP messages

3. Which of the following is essential for the representation of an algorithm?

Options:

A) Ambiguous language

B) Natural landscapes

C) Physical objects

D) Welldefined primitives

Correct Option: D) Welldefined primitives

4. How many times will the loop in the example below execute?

```
``cpp int i =  
2; while (i <=  
5) { cout <<  
i; i = i + 1;  
}  
...
```

Options:

- A) 4 times
- B) 6 times
- C) 3 times
- D) 5 times

Correct Option: C) 3 times

5. What is the purpose of an assignment statement in programming?

Options:

- A) To terminate the program
- B) To declare variables
- C) To request input from the user
- D) To assign a value to a variable

Correct Option: D) To assign a value to a variable

6. What does the repeated execution of a statement or sequence of statements as long as some condition remains true define in the context of algorithms?

Options:

- A) Assignment statement
- B) Selection structure
- C) Pseudocode structure

D) Loop structure

Correct Option: D) Loop structure

7. While structure starts with checking _____.

Options:

A) Values

B) Iteration Sequence C) Sequence

Correct Option: A) Values

8. The control of a loop consists of the _____ activities.

Options:

A) 2

B) 3

C) 4

Correct Option: B) 3

9. What will be the output of the loop for the given example?

```
```cpp
int i = 1;
while (i < 7) {
cout << i; i
= i + 2;
}
```
```

Options:

A) 135135

B) 77654321

C) 1234567

Correct Option: A) 135135

10. Which ordinance in Pakistan addresses the prevention of electronic crimes and was enacted in 2007?

Options:

- A) Electronic Transaction Ordinance
- B) Prevention of Electronic Crimes Ordinance
- C) CyberSecurity Law
- D) Telegraph Act

Correct Option: B) Prevention of Electronic Crimes Ordinance

1. What is the primary advantage of using the while structure in expressing algorithms?

Options:

- A. It provides a onetime execution.
- B. It allows for dynamic, repeated execution of a task. (Correct Option)
- C. It introduces complexity.
- D. It introduces complexity.

2. If we have to insertion sort on names Fred, Alex, Diana, Byron, Carol, one approach to sorting this list is to note that the sublist consisting of:

Options:

- A. Only top name
- B. Both Fred and Alex
- C. Sublist having 3 names (Correct Option)
- D. Only Carol

3. Choose the correct labels for the diagrams of iterative structures given below:

Options:

- A. A is Posttest and B is PreTest
- B. Both are Pretest (Correct Option)
- C. Both are Posttest
- D. A is Pretest and B is PostTest

4. What is the main characteristic of publickey encryption systems?

Options:

- A. Knowledge of encryption allows decryption
- B. The use of a single key for encryption and decryption
- C. The use of any random key for encryption and the same key for decryption
- D. The use of two keys for encryption and decryption (Correct Option)

5. What will be the output of the loop for the given example?

```
int i=3;
while(i<=5)
{ cout<<i;
i=i+1; }
```

Options:

- A. 333
- B. 543
- C. 21345
- D. 12345 (Correct Option)

6. _____ loop structure referred to as a posttest loop.

Options:

- A. While
- B. For
- C. For each
- D. Repeat (Correct Option)

7. In the pseudocode, what is the initial value of the variable max?

```
def FindMax():
```

```
    max = first number in the list
```

Current = second number in the list

While (elements in the list exist)

If (max < current)

max = current

Current = next value in the list

Options:

- A. The maximum value representable in the programming language
- B. The first element in the list (Correct Option)
- C. The second element in the list
- D. The last element in the list

8. Nature of an algorithm is _____ because its representation may change.

Options:

- A. Static
- B. Abstract
- C. Tremendous
- D. Dynamic (Correct Option)

9. The imperative paradigm, also known as the

Options:

- A. Particular machine
- B. NonProcedural paradigms
- C. Nontraditional paradigms
- D. Procedural paradigms (Correct Option)

10. How is pseudocode described?

Options:

- A. A lowlevel programming language
- B. A less formal and intuitive notational system (Correct Option)

C. A highly formal notational system

D. A complex programming language

1. Which of the following symbol is used at the end of the line to separate statements in many imperative languages?

- a) ;

- b) ,

- c) *

Correct: a) ;

2. Which of the following is not true about a firewall?

- a) Firewall protects the individual computer from outside intrusion

- b) Firewall protects the individual computer from inside intrusion

- c) Firewall protects the entire network from inside intrusion

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Correct: b) Firewall protects the individual computer from inside intrusion

3. What will be the output of the following pseudo code?

...

{20, 58, 90, 10, 15, 87, 30, 12, 98}

Count = 0

For number in list

If (number >=50)

Count=count+1

...

- a) Count = 3
- b) Count = 4
- c) Count = 5
- Correct: c) Count = 5

4. In what case will the statement "Give Scholarship" NOT be executed in the following code?

...

if (CGPA>=3.0)

cout<<"Give Scholarship";

else

cout<<"Sorry you do not qualify for the scholarship";

...

- a) For any CGPA value above three
- b) Both statements will be executed in any case
- c) CGPA is equal to three
- Correct: a) For CGPA value 2.9 or below

5. In computer programming, what comes after the "if" keyword in an ifstatement?

a) StatementA

b) StatementB

- c) Else

- Correct: b) Condition

6. Let a list Fred, Alex, Diana, Byron, Carol. After sorting the first sublist, our list would be:

- a) Alex, Diana, Fred, Byron, Carol

- b) Alex, Byron, Diana, Fred, Carol

- c) Alex, Fred, Diana, Byron, Carol

- Correct: b) Alex, Byron, Diana, Fred, Carol

7. For controlling vandalism over network connections, a primary prevention technique to filter out the traffic passing through a point is:

- a) Firewall

- b) Proxy server

- c) Auditing software

- d) Antivirus software

- Correct: a) Firewall

8. What is the primary focus of a programmer in a declarative programming system?

- a) Describing algorithms

- b) Writing procedural code

- c) Developing a precise statement of the problem

- d) Developing problemsolving algorithms

- Correct: c) Developing a precise statement of the problem

9. What are the three activities involved in the control of a loop structure?

- a) Initialize, Test, Modify
- b) Begin, End, Continue
- c) Launch, Halt, Adjust
- d) Start, Stop, Proceed

Correct: a) Initialize, Test, Modify

10. The set of instructions in a computer language, to get the desired result is known as:

- a) An algorithm
 - b) A decision table
 - c) A program
 - d) A pseudo code
- Correct: c) A program

1. What is the purpose of an assignment statement in programming? To assign a value to a variable (Correct)

2. In _____ paradigm, the task of the programmer is to develop a precise problem statement rather than designing an algorithm for solving the problem.

Declarative (Correct)

3. What is a correct expression for finding factorial where $f = 1$, $i = 1$; while $(i \leq n)$? $F = F * i$

(Correct)

4. Why is the else statement used in an if statement?

To execute a block of code if the condition is false (Correct)

5. In Pakistan, what is the punishment for firsttime offenders under the Cybersecurity Law passed in 2016?

I cannot provide this information as it may change over time. Please consult an updated source or legal expert.

6. What is the role of "getting your foot in the door" in the problemsolving process?

It opens the way to extending knowledge (Correct)

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7. What does the repeated execution of a statement or sequence of statements as long as some condition remains true define in the context of algorithms?

Loop structure (Correct)

8. In the sequential search algorithm, what is the purpose of the while loop? To iterate through the list entries (Correct)

9. The reason behind the Welsch NHS IT Failure was primarily related to:

- Software Technical issue (Correct)
- Employees training (Correct)

10. Which of the following is the correct option for initializing an integer array with values 1, 2, and 3?
`int arr[3] = {1,2,3}` (Correct)

1. What will be the value of "n" after the first iteration of the while loop in the given pseudocode?

Options:

- a) n=1
- b) 12
- c) Cannot be determined

Correct Option: a) n=1

2. SSL protocol is the backbone of _____.

Options:

- a) HTML5
- b) HTTP
- c) HTTPS
- d) HTML

Correct Option: c) HTTPS

3. Why is the initialization step important in loop control?

Options:

- a) It ensures the termination of the looping process
- b) It executes the loop body
- c) It compares the current state to the termination condition
- d) It establishes a starting condition that will be modified toward the termination condition

Correct Option: d) It establishes a starting condition that will be modified toward the termination condition.

4. What is the purpose of HTTPS in the context of secure Internet access?

Options:

- a) To encrypt emails
- b) To block all Traffic other than HTTP
- c) To encrypt HTTP messages
- d) To block unwanted emails

Correct Option: c) To encrypt HTTP messages.

5. What is the significance of the mathematician G. Polya's problemsolving phases in the context of algorithm discovery?

Options:

- a) They present a systematic approach to algorithm discovery.
- b) They exclude the use of general problemsolving techniques.
- c) They provide a precise mathematical model for the solution of a problem.
- d) They present a systematic approach to algorithm discovery. (This option is repeated but is the correct one.)

Correct Option: a) They present a systematic approach to algorithm discovery.

6. What will be the output of the following pseudo code?

```
def FindFactorial():
```

```
fact = 2
i=1;
While (i<=7)
fact=fact*i;
i=i+1; print(fact)
```

Options:

- a) 980
- b) 120
- c) 5040
- d) 10080

Correct Option: c) 5040

7. What is the purpose of the provided pseudocode?

```
def FindMax():
max = first number in the list
Current = second number in the list
While (elements in the list exist)
If (max<current) max=current
Current = next value in the list
```

Options:

- a) Counting the number of elements in a list
- b) Sorting a list in ascending order
- c) Finding the average of a list
- d) Finding the maximum value in a list

Correct Option: d) Finding the maximum value in a list.

8. Which of the following semantic structures is used in algorithms for making decisions based on conditions?

Options:

- a) Selection structures
- b) Iterative structures
- c) Loop structures
- d) Assignment statements

Correct Option: a) Selection structures.

9. The description of the object's properties is called

Options:

- a) Function
- b) Instance
- c) Class
- d) Object

Correct Option: c) Class

10. Which act in Pakistan primarily focuses on the reorganization of telecommunication structures?

Options:

- a) Prevention of Electronic Crimes Ordinance, 2007
- b) Pakistan Telecommunication Act, 1996
- c) Wireless Telegraphy Act, 1933
- d) Electronic Transaction Ordinance, 2002, 2008

Correct Option: b) Pakistan Telecommunication Act, 1996

1. How is the pseudocode structure for making decisions based on conditions represented in the algorithm representation?

Options:

if (condition): activity else: activity

condition: activity else: activity

condition: activity else: activity

if (activity): condition else: activity

Correct Option: if (condition): activity else: activity

2. Float CGPA=3.5; If (CGPA>=3.0) Cout<<"Give Scholarship"; Else Cout<<"Sorry you do not qualify for the scholarship"; It will show:

Options:

- Sorry you do not qualify for the scholarship
- Display none
- Good
- Give Scholarship

Correct Option: Sorry you do not qualify for the scholarship

3. What is the purpose of the given pseudocode? f = 1 i=1; While (i<=n): f=f*i; i=i+1;

Options:

- To identify prime numbers
- To determine the maximum value in a list
- To sort the number list
- To calculate the factorial of a given number

Correct Option: To calculate the factorial of a given number

4. What is the role of the semicolon in an assignment statement in most imperative languages?

Options:

- Separates statements

- Initiates a loop
- Represents a comment
- Marks the end of the program

Correct Option: Separates statements

5. _____ is a package containing a party's name and that party's public key.

Options:

- Certificate
- CertificateContract
- Security
- Correct Option: Certificate

6. Write a program that prints "Pass" if the CGPA is greater than or equal to 2.0 and "Fail" otherwise.

Options:

- `if (CGPA < 2.0) { cout << "Pass"; } else { cout << "Fail"; }`
- `if (CGPA < 2.0) { cout << "Pass"; } else { cout << "Fail"; }`
- `if (CGPA == 2.0) { cout << "Pass"; } else { cout << "Fail"; }`
- `if (CGPA >= 2.0) { cout << "Pass"; } else { cout << "Fail"; }`

Correct Option: `if (CGPA >= 2.0) { cout << "Pass"; } else { cout << "Fail"; }`

7. What is the key syntax used to announce different substructures within the decisionmaking pseudocode?

Options:

- Colons and semicolons
- Parentheses and brackets
- Periods and commas
- Keywords if and else

Correct Option: Keywords if and else

8. Why does making an action illegal not necessarily stop the action, in the context of legal approaches to network security?

Options:

International differences in legality

Technological challenges

- Lack of awareness

- Ineffectiveness of legal measures

Correct Option: Technological challenges

9. What is the role of "getting your foot in the door" in the problemsolving process?

Options:

- It provides a philosophical perspective.

- It prevents direct confrontation.

- It opens the way to extending knowledge.

- It guarantees a correct solution.

Correct Option: It opens the way to extending knowledge.

10. Which of the following is not a programming language?

Options:

- Java

- Python

- HTML

- C++

Correct Option: HTML

1. In searching, If the target value is not in the original list, our approach to searching the list will proceed by dividing the list into:

- a) Not divide
- b) Greater parts
- c) Smaller parts (Correct)
- d) Equal parts

2. Which of the following statement is used for output in C++?

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- a) cout>>
- b) cin>>
- c) cout<< (Correct)
- d) cin>>

3. Establishing a welldefined set of building blocks from which algorithm representations can be constructed. Such a building block is called a _____.

- a) Pile
- b) Block
- c) Primitive (Correct)
- d) Program

4. What analogy is used to emphasize the distinction between an algorithm and its representation?

- a) Story and book
- b) Story and reader
- c) Book and language
- d) Writer and story (Correct)

5. How is pseudocode described?

- a) A lowlevel programming language
- b) A highly formal notational system
- c) A complex programming language
- d) A less formal and intuitive notational system (Correct)

6. A program logic written in an ordinary language illustrating a structure similar to computer instructions is known as _____.

- a) Flowcharts
- b) Pseudo codes (Correct)

c) Algorithms

d) Programs

7. What is the key advantage of assigning precise definitions to primitives that are used in algorithm representation?

- a) It increases the level of detail.
- b) It adds ambiguity to algorithms.
- c) It removes problems of ambiguity (Correct).
- d) It complicates algorithm descriptions.

8. Why does making an action illegal not necessarily stop the action, in the context of legal approaches to network security?

- a) Lack of awareness
- b) International differences in legality
- c) Ineffectiveness of legal measures (Correct)
- d) Technological challenges

9. In the given example, what does the loop do?

```
`while (pH level > 4):`
```

- a) add a drop of sulfuric acid
- b) Adds a drop of sulfuric acid if the pH level is greater than 4. (Correct)
- c) Adds a drop of sulfuric acid regardless of the pH level.
- d) Adds a drop of sulfuric acid if the pH level is less than or equal to 4.

10. What is the purpose of the while loop in the pseudocode routine of the sequential search algorithm?

...

```
while (TargetValue > TestEntry and there remain entries to be considered):
```

```
    Select the next entry in List as TestEntry.
```

```
    if (TargetValue == TestEntry):
```

Declare search a success.

else:

Declare search a failure.

...

- a) To terminate the search
- b) To iterate through the list entries (Correct)
- c) To compare TestEntry with TargetValue
- d) To sort the list

1. For controlling vandalism over network connections, a primary prevention technique to filter out the traffic passing through a point is:

- A) Firewall (Correct Option)
- B) Antivirus software
- C) Proxy server
- D) Auditing software

2. How does the loop structure contribute to the flexibility of an algorithm?

- A) By increasing the errorproneness.
- B) By allowing for a variable number of iterations. (Correct Option)
- C) By explicitly writing the body multiple times.
- D) By reducing the flexibility of the algorithm.

3. Phase 2 of problemsolving steps is _____.

- A) Formulate the algorithm and represent it as a program (Correct Option)
- B) Get an idea of how an algorithmic function might solve the problem

4. What is the alternative term for the "while loop structure" in the context of iterative structures?

- A) Iteration check (Correct Option)

5. In Pseudocode algorithm can be represented as:

- A) Formal way (Correct Option)
- B) Informal way
- C) Dynamic way
- D) Static way

6. When the problemsolving phase "Devise a plan for solving the problem" is translated into program development, it represents:

- A) Formulate the algorithm and represent it as a program (Correct Option)

7. What explains the role of the "Take a sip of tea" step in the context of the algorithm for making a cup of tea and its impact on the overall process?

- A) It is irrelevant to the teamaking algorithm. (Correct Option)

8. The language understood by a computer without translation is known as:

- A) Machine Language (Correct Option)
- B) HighLevel Language
- C) Assembly Language
- D) Command Language

9. What is the key syntax used to announce different substructures within the decisionmaking pseudocode?

- A) Keywords if and else (Correct Option)

10. What is true about a process?

- A) Abstract representation of the machine
- B) Activity of executing a program (Correct Option)

1. Which group of commands in Microsoft Word includes Find, Replace, and Select?

- a) Formatting group
- b) Insert group
- c) Editing group
- d) View group
- Correct Option: c) Editing group

2. In a hash file, hashing identifies the location of a record directly from the _____.

- a) algorithm
- b) bucket
- c) key
- d) index
- Correct Option: c) key

3. Which risk category primarily deals with threats like online scamming and identity theft?

- a) Online Marketing
- b) Electronic Theft
- c) Information Privacy
- d) Contact Risks
- Correct Option: c) Information Privacy

4. Data can come from:

- a) Personal software
- b) Emails
- c) Passwords
- d) Emails
- Correct Option: b) Emails

5. In MS Word, Paste option is a part of the home ribbon group called _____.

- a) Clipboard
- b) Paragraph
- c) Font
- d) Insert
- Correct Option: a) Clipboard

6. In Microsoft Word, what does the user need to click to access the Numbering Library?

- a) Paragraph tab
- b) Numbering tab
- c) Numbering group
- d) Numbering button
- Correct Option: d) Numbering button

7. In Microsoft Word, when would you use the "Select Objects" command?

- a) To go to a specific page in the document
- b) To select all text in the document
- c) To select hidden shapes behind text
- d) To select text with similar formatting
- Correct Option: c) To select hidden shapes behind text

8. The people present around the ewaste gain:

- a) Electronic waste Benefits
- b) Substances
- c) Diseases
- Correct Option: c) Diseases

9. Information technology has _____ overarching standardization in place:

- a) No
- b) Multiple
- c) Old
- d) Complex

Correct Option: b) Multiple

10. Fill in the blank: Data can come from _____.

- a) Personal software
- b) Emails
- c) Emails
- d) Passwords
- Correct Option: b) Emails

1. In Microsoft Word, what does the user need to click to access the Numbering Library?

- A) Numbering tab
- B) Numbering group
- C) Paragraph tab
- D) Numbering button
- **Correct Option: D) Numbering button**

2. In MS Word, You can insert text with special styles using the WordArt command available in the _____ group of Insert Ribbon.

- A) Design
- B) Styles
- C) Illustration

- D) Text

- ****Correct Option: D) Text****

3. When we apply a header, it is shown at:

A) Bottom of the document

B) End page of the document

C) Start page of the document D) Every page of the document

****Correct Option: C) Start page of the document****

4. When editing a document in MS Word, what advantage does the "Find and Replace" feature provide?

- A) Timesaving by avoiding manual search

- B) Autosaving functionality

- C) Automatic spell checking

- D) Font customization options

- ****Correct Option: A) Timesaving by avoiding manual search****

5. In Microsoft Word, which visual indicator typically appears next to the dropdown menu buttons?

- A) A red circle

- B) A right arrow

- C) A left arrow

- D) A down arrow

- ****Correct Option: D) A down arrow****

6. If we want to link two sections of the same document, we generally use:

- A) Cross reference

- B) Bookmark
- C) Hyperlink
- D) Reference
- **Correct Option: A) Cross reference**

7. In a hash file, the hash function involves dividing the keys by the number of buckets available and recording the _____.

- A) remainder
- B) product
- C) quotient
- D) sum

Correct Option: A) remainder

8. What is the advantage of using builtin styles, such as Heading 1?

- A) They require memorization of specific characteristics.
- B) They save time by combining multiple formatting steps into one.
- C) They are only applicable to fontrelated changes.
- D) They limit formatting options.
- **Correct Option: B) They save time by combining multiple formatting steps into one.**

9. Text files, which are _____ in which each logical record is a single symbol encoded using ASCII or Unicode.

- A) flat files
- B) database files
- C) index files

- D) sequential files

- ****Correct Option: A) flat files****

10. Which of the following is NOT a group found in the Home ribbon of MS Word?

- A) Image

- B) Font

- C) Styles

- D) Clipboard

- ****Correct Option: A) Image****

1. Which of the following is a famous example of word processing software?

A) MS Access

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B) MS Word (Correct Option)

C) MS Excel

D) MS PowerPoint

2. The field of linguistics tends towards which direction:

- A) Engineering

- B) Business

- C) AI

- D) Theoretical (Correct Option)

3. What is the most effective approach for protecting children from potential digital risks?

- A) Overlooking strict authoritarian controls

- B) Establishing open communication and guidance (Correct Option)

- C) Allowing unlimited screen time

- D) Avoiding any use of parental controls

4. Which tab becomes visible upon creating a table in Microsoft Word for further table formatting?

- A) Edit Table

- B) Table Tools

- C) View Table

- D) Table Format

5. When using styles to format a document, what advantage does it offer?

- A) Advanced editing features

- B) Increased document security

- C) Consistent application of formatting choices (Correct Option) D) Faster spell checking

6. In Microsoft Word, what does the Quick Access Toolbar provide easy access to?

- A) Internet browsing
- B) Frequently used commands (Correct Option)
- C) System settings
- D) Installed applications

7. Which negative behavior has been facilitated by the anonymity offered by online platforms?

- A) Gaming addiction
- B) Cyber bullying (Correct Option)
- C) Identity theft
- D) Plagiarism

8. Americans throw away pieces of paper each year which is equal to:

- A) 2 billion trees (Correct Option)
- B) 1.5 billion trees C) 2.5 billion trees
- D) 1 billion trees

9. Privacy is the "right to be let alone" is written by:

- A) Von Neumann
- B) Shakespeare
- C) Samuel D. Warren (Correct Option)
- D) John Bardeen

10. In the United States, the Privacy Act of 1974 was to protect citizens from abusive use of databases:

- A) Agencies
- B) Companies
- C) Government (Correct Option)
- D) Public

1. An index for a file contains a list of _____ stored in the file.

- A. directory paths
- B. file names
- C. data types
- D. keys
- Correct Option: D. keys

2. We can encrypt _____.

- A. Emails
- B. Smart city cameras on road
- C. Social sites
- D. Servers
- Correct Option: A. Emails

3. In the context of the environment, computer science has impacts:

- A. Positive
- B. Dangerous
- C. Both positive & negative
- D. Negative
- Correct Option: C. Both positive & negative

4. Software licenses are:

- A. Open source

- B. Free

- C. Proprietary

- D. All of these

- Correct Option: D. All of these

5. Computer security is also known as _____.

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- A. Copyright
- B. Cybersecurity
- C. Privacy
- D. Firewallsecurity
- Correct Option: B. Cybersecurity

6. Which group of commands in Microsoft Word includes Find, Replace, and Select?

- A. Formatting group
- B. View group
- C. Insert group
- D. Editing group
- Correct Option: D. Editing group

7. Which of the following commands is available in the dropdown menu of the "Wrap Text" feature in MS Word?

- A. Top and Bottom
- B. Behind Text
- C. In front of Text
- D. A and B
- Correct Option: A only

8. The "Next footnotes" feature to navigate within Footnotes is available in which tab, in MS Word?

- A. Reference
- B. Review
- C. Design
- D. Help
- Correct Option: A. Reference

9. Computer science helps in faster response times through:

- A. Instant messaging
 - B. Chat
 - C. All of the given
 - D. Emails
- Correct Option: C. All of the given

10. Easy access to online health centers is because of:

- A. Artificial intelligence
 - B. Intelligent agents
 - C. Database
 - D. Computer science
- Correct Option: C. Database

1. A stronger form of cohesion is also called as _____ cohesion.

Options:

- a) Weak
- b) Independent
- c) None functional
- d) Functional

Correct Option: d) Functional

2. What principle is applied by focusing efforts on a concentrated area to increase results most rapidly?

Options:

- a) Newton's Law
- b) Boyle's Law
- c) Pareto principle
- d) Murphy's Law

Correct Option: c) Pareto principle

3. Which one of the following groups controls and enforces the quality control systems?

Options:

- a) DDL
- b) CPL
- c) SQA
- d) SQL

Correct Option: c) SQA

4. The resulting relation after a select operation contains tuples that _____ the specified condition. Options:

- a) match
- b) violate
- c) modify
- d) ignore

Correct Option: a) match

5. What is a software license?

Options:

- a) A document that transfers ownership rights
- b) A permission to change software working
- c) A legal agreement between software developers and users
- d) A legal agreement between software developers and users

Correct Option: c) A legal agreement between software developers and users

6. In case of an equipment malfunction, the DBMS uses the log to reconstruct _____.

Options:

- a) only incomplete transactions
- b) the entire database from scratch

- c) noncommitted transactions
- d) completed transactions since the last backup

Correct Option: d) completed transactions since the last backup

7. Database technology, combined with data mining techniques, is an important _____ tool.

Options:

- a) Data storage
- b) Decisionmaking
- c) Decisionmaking

Correct Option: b) Decisionmaking

8. Which of the following can be incorporated into all the phases of software development?

Options:

- a) Testing
- b) Requirement gathering
- c) Debugging
- d) Designing

Correct Option: a) Testing

9. Reusable unit of software is called:

Options:

- a) Compiler
- b) Component
- c) Assembler
- d) Assembler

Correct Option: b) Component

10. What does a tree structure's hierarchical organization resemble?

Options:

- a) Array
- b) Organization chart
- c) Stack
- d) Graph

Correct Option: b) Organization chart

1. How many common forms of data mining?

- a) 2
- b) 3
- c) 4
- d) 5
- Correct answer: a) 2

2. Which of the following is often integrated with content filters in the context of the internet?

- a) Search engines
- b) Email servers
- c) Internet firewalls
- d) Antivirus software
- Correct answer: c) Internet firewalls

3. Arrange Group is in which ribbon of MS Word?

- a) Insert
- b) Page Layout
- c) Review
- d) References
- Correct answer: b) Page Layout

4. How can you open the Paragraph dialog window in MS Word?

- a) By using the Dialog expander arrow.
- b) By clicking the Format button.
- c) By rightclicking in the document.
- d) By pressing Ctrl+P.
- Correct answer: a) By using the Dialog expander arrow.

5. Each statement in natural language can have:

- a) Unique meaning
- b) Same meaning
- c) One meaning
- d) Multiple meanings
- Correct answer: d) Multiple meanings

6. We can add charts in MSword from group:

- a) Symbols
- b) Illustrations
- c) Apps
- d) Table
- Correct answer: b) Illustrations

7. Where the contents of the Header are placed in an MS Word document?

- a) Right margin
- b) Top margin
- c) Bottom margin
- d) Left margin
- Correct answer: b) Top margin

8. Which shortcut key is used to italicize text in Microsoft Word?

a) Ctrl+u

b) Ctrl+z

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- c) Ctrl+i

- Correct answer: c) Ctrl+i

9. In Microsoft Word, what function does a hyperlink serve in a document?

- a) Formatting text

- b) Deleting text

- c) Adding links to other documents or web pages

- Correct answer: c) Adding links to other documents or web pages

10. In traditional file structures, variations of the basic index concept include constructing an index in a _____ manner.

- a) Chronological

- b) Hierarchical

- c) Linear

- Correct answer: b) Hierarchical

1. Changes in the database schema for a single user involve modifying the overall schema and the subschemas of _____ users involved in the change.

Options:

A) other (Correct)

2. The relational model portrays data as being stored in tables called _____.

Options:

A) Relations (Correct)

3. How does a program counter function as a pointer?

Options:

A) It holds the address of the next instruction (Correct)

4. Operations that are only partially completed in commercial systems might lead to _____ information in the database.

Options:

A) Incomplete (Correct)

5. Today, database technology, combined with _____ techniques,

Options:

A) data mining (Correct)

6. What, according to most practitioners in the software engineering field, is the major cause of cost overruns and late product delivery?

Options:

A) Poor communication and changing requirements (Correct)

7. The _____ term is used for software produced for the mass market and sold in retail stores or downloaded via the Internet.

Options:

A) Commercial offtheshelf (COTS) software (Correct)

8. A _____ is a description of the entire database structure that is used by the database software to maintain the database.

Options:

A) Schema (Correct)

9. Restriction of information to a specific portion of a software system is referred to:

Options:

A) Information hiding (Correct)

10. Weak form of cohesion called _____?

Options:

A) Logical cohesion (Correct)

1. In the context of maintaining employee records, an index is typically used for quick retrieval based on _____.

- A) employee's name
- B) employee's date of birth
- C) employee's department
- D) employee identification numbers
- Correct Option: D) employee identification numbers

2. What does a style in document formatting encompass?

- A) Font name, size, colour, paragraph alignment, and spacing
- B) Only font size
- C) Only shading and borders
- D) Only paragraph alignment
- Correct Option: A) Font name, size, colour, paragraph alignment, and spacing

3. Requiring a certain degree of uniformity of the style, size, and orientation of symbols is a(n):

- A) Disadvantage
- B) Fast processing
- C) Ambiguity
- D) Advantage
- Correct Option: D) Advantage

4. Programming languages are well designed so that each statement has _____ meaning:

- A) Only one
- B) No
- C) Same
- D) Multiple

- Correct Option: A) Only one

5. When does the Mini Toolbar appear in Microsoft Word?

- A) It appears when you select text.
- B) It appears randomly while using Word.
- C) It appears when you save a document.
- D) It appears when you print a document.

- Correct Option: A) It appears when you select text.

6. In MS Word, the option of strike through belongs to group _____.

- A) Insert
- B) Font
- C) Clipboard
- D) Paragraph

- Correct Option: B) Font

7. Gaming addiction can cause problems related to:

- A) Identity theft
- B) Financial
- C) Privacy issues
- D) Environmental

- Correct Option: B) Financial

8. When we apply a header, it is shown at:

- A) End page of the document
- B) Bottom of the document
- C) Start page of the document
- D) Every page of the document

- Correct Option: D) Every page of the document

9. Software licenses provide users with the right to one or more copies of the software without:

- A) Violating copyright

- B) Using license

- C) Legislation

- D) Using copyright

- Correct Option: A) Violating copyright

10. Each statement in natural language can have:

- A) Multiple meanings

- B) One meaning

- C) Unique meaning

- D) Same meaning

- Correct Option: A) Multiple meanings

1. Which of the following is correct for the incremental model?

- All increments are created at once

- Development completes in maximum four increments

- 1st increment is the complex version

- 1st increment is the simplified version

Correct Option: 1st increment is the simplified version

2. What is the primary focus of the design phase in software engineering?

- Identifying problems

- Establishing requirements

- Constructing the software system

- Creating a budgeting plan

Correct Option: Constructing the software system

3. Which of the following relates to Intellectual property laws?

- Liability law
- Islamic law
- Patent law
- System law

Correct Option: Patent law

4. What does the ISO 9000 series of standards address?

- Software development only
- Networking protocols
- Hardware engineering only
- Design, production, installation, and servicing

Correct Option: Design, production, installation, and servicing

5. What does basis path testing aim to achieve?

- Applying efforts in a concentrated area.
- Identifying better strategies.
- Identifying equivalence classes.
- Executing each instruction at least once.

Correct Option: Executing each instruction at least once.

6. What does SDLC stand for in the development environment?

- System Development Life Cycle
- Software Development Life Cycle
- Software Design Life Cycle
- System Design Life cycle

Correct Option: Software Development Life Cycle

7. A typical database application involves two major layers: the application layer and the _____ management layer.

- data
- user
- schema
- database

Correct Option: database management layer

8. To obtain information about an employee, the process of selecting the tuple with the appropriate identification attribute value results in a relation with _____ tuple(s). Few

- Single
- No
- Many

Correct Option: Single

9. ISO makes software _____ for software companies to guarantee quality control.

- Software
- Standards
- Hardware
- Queries

Correct Option: Standards

10. How is the depth of a tree defined?

- The number of nodes from root to leaf in the tree
- The number of only first horizontal layer within the tree
- The number of only leaf nodes in the tree
- The number of top nodes in the tree

Correct Option: The number of nodes from root to leaf in the tree.

1. Most famous word processor is:

- Notepad
- Wordpad
- MSExcel
- MSWord

Correct Option: MSWord

2. Which of the following features is used to add text at the top margin on the page in MS Word?

- Text Box
- Footer
- Comments
- Header

Correct Option: Header

3. To select shapes that are hidden or behind text we can click:

- Select Objects
- Select hidden Select all
- Select shapes

Correct Option: Select Objects

4. If we want to link two sections of the same document we generally use:

- Hyperlink
- Reference
- Bookmark
- Cross reference

Correct Option: Cross reference

5. What is one of the primary purposes of content filtering when integrated into internet firewalls?

- Allowing access to all websites
- Enhancing content accessibility
- Increasing internet speed
- Serving a security purpose

Correct Option: Serving a security purpose

6. The index for a file is usually stored _____.

- as a part of the main file
- separately on a different device
- within the RAM
- within the RAM

Correct Option: separately on a different device

7. The Drop Cap feature can create a large letter at the _____ of a few lines of a paragraph in MS Word.

- Bottom
- Middle
- End
- Beginning

Correct Option: Beginning

8. CANSPAM Act applies in:

- Canada
- US
- UK
- UAE

Correct Option: US

9. In Microsoft Word, which group in the Insert tab is used for adding audio or video elements?

- Symbols
- Media
- Pages

Correct Option: Media

10. In Microsoft Word, the shortcut key for cut is _____.

- Ctrl+i
- Ctrl+X
- Ctrl+V
- Ctrl+C

Correct Option: Ctrl+X

1. Theoretical track is a part of:

- Declarative knowledge
- AI responses
- Amplifying AI domain
- **Correct Option: AI responses**

2. Which of the following is NOT a protection method against risks associated with digital technology?

- Parental control software
- Enabling safety features
- Encouraging excessive screen time
- Web Filtering
- **Correct Option: Encouraging excessive screen time**

3. Learning procedural knowledge usually involves a process:

Procedureanderror

Processanderror

Trialanderror

- Tryanderror

- ****Correct Option: Trialanderror****

4. In MS Word, which group contains the Header and Footer features?

- Text group

- Header & Footer group

- Page group

- Symbol group

- ****Correct Option: Header & Footer group****

5. In how many steps can you format a heading as 16point, bold, Cambria using styles?

- No option available for this formatting

- Three separate steps

- Two separate steps

- One step with a custom style

- ****Correct Option: One step with a custom style****

6. In MS Word, the shortcut key to select the whole text in a document is _____.

- Alt+w

- Alt+w

- Alt+a

- Ctrl+a

- Ctrl+w

- ****Correct Option: Ctrl+a****

7. Which tab should you access to manage the overall design and layout of a table in Microsoft Word?

Table view

Table Design

Table Layout

- Insert Table

- ****Correct Option: Table Design****

8. Which feature of MS Word offers to create special effects like adding artistic flair to text?

- Text Box

- WordArt

- Drop Cap

- SmartArt

- ****Correct Option: WordArt****

9. In a hash file, hashing identifies the location of a record directly from the _____.

- algorithm

- index

- key

- bucket

- ****Correct Option: key****

10. Which of the following is often integrated with content filters in the context of the internet?

- Antivirus software

- Search engines

- Email servers

- Internet firewalls

- ****Correct Option: Internet firewalls****

1. What are the groups available under the Insert tab in Microsoft Word?

Options:

Media Group, Links Group, Research Group

Pages Group, Tables Group, Footnotes Group

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Pages Group, Illustrations Group, Index Group

Correct Option: Pages Group, Tables Group, Illustrations Group

2. Content Risks include:

Options:

- Harmful Advice
- Online scam
- Unsuitable products
- Cyber bullying

Correct Options: Harmful Advice, Online scam, Unsuitable products

3. In Microsoft Word, what is the purpose of entering a word or phrase while adding a hyperlink?

Options:

- Inserting a table
- Creating a new paragraph
- Changing font style
- Displaying the hyperlink text

Correct Option: Displaying the hyperlink text

4. Which of the following is not a Social issue?

Options:

- Identity Theft
- Cyber Bullying
- Contesting Surveillance
- Privacy

Correct Option: Contesting Surveillance

5. How can you make the text bold in Microsoft Word?

Options:

Press Ctrl+u

- Press Ctrl+b
- Press Ctrl+i
- Click the "Undo" button

Correct Option: Press Ctrl+B

6. Which tab should you access to manage the overall design and layout of a table in Microsoft Word?

Options:

- Insert Table
- Table Layout
- Table Design
- Table view

Correct Option: Table Design

7. The classic employee file uses _____ to contain information about a single employee in a company.

Options:

- buckets
- hash functions
- keys
- records

Correct Option: records

8. How can you input text into a table cell in Microsoft Word?

Options:

- Rightclick on the cell and select "Type Text".

- Click once on the cell and start typing.
- Click on Insert tab and start typing.
- Doubleclick on the cell and press Ctrl + T.

Correct Option: Click once on the cell and start typing.

9. In Microsoft Word, how can you access the table option in Microsoft Word?

Options:

- Layout tab > Tables group
- Home tab > Tables group
- References tab > Tables group
- Insert tab > Tables group

Correct Option: Insert tab > Tables group

10. A rapidly expanding subject that is closely associated with database technology is _____, which consists of techniques for discovering patterns in collections of data.

Options:

- text mining
- opening mining
- Sentiment analysis
- data mining

Correct Option: data mining

1. Theoretical track is a part of:

- A. AI domain
- B. Amplifying AI responses
- C. Declarative knowledge

Correct Option: B. Amplifying AI responses

2. Sequential files, like an employee records file, require a _____ format for representing information about each employee.

- A. Complex and variable
- B. Hierarchical
- C. Uniform

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Correct Option: C. Uniform

3. What is the primary purpose of the Styles group in Microsoft Word?

- A. Creating tables
- B. Spell checking
- C. Applying formatting options to text
- D. Inserting images

Correct Option: C. Applying formatting options to text

4. In some cases, the data collection process is readily apparent; in others, it is:

- A. Obvious
- B. Outward
- C. Specious
- D. Subtle

Correct Option: D. Subtle

5. Copyright can be applied to:

- A. Music
- B. Dramatic works
- C. Artistic work
- D. All of these

Correct Option: D. All of these

6. Process of understanding what the characteristics of images mean is step:

Options were incomplete.

7. In the Insert tab of Microsoft Word, where specifically is the Pages group located?

- A. Far left
- B. Far right
- C. Bottom left
- D. Center

Correct Option: B. Far right

8. Word provides you preformatted text boxes through:

- A. Text box
- B. Styles
- C. Text Indentation
- D. Table

Correct Option: B. Styles

9. Programming languages are well designed so that each statement has _____ meaning:

- A. Same
- B. Only one
- C. No
- D. Multiple

Correct Option: B. Only one

10. Actions according to environment knowledge:

- A. Intelligent action
- B. Simplest response
- C. Reflex action
- D. Predefined action

Correct Option: C. Reflex action

1. What are Headers and Footers in an MS Word document primarily used for?

- A) Adjusting page margins

- B) Inserting comments
- C) Adding the document title to all pages (Correct)
- D) Inserting charts

2. Which of the following features is placed in the "Header & Footer" group in MS Word?

- A) WordArt
- B) Link
- C) Border
- D) Page Number (Correct)

3. In the hash file, a record can be retrieved by applying the hash function to the record's identifying key to determine the appropriate _____.

- A) sorting algorithm
- B) bucket location (Correct)
- C) key value
- D) index number

4. Which feature is available in the Arrange group under the layout ribbon in MS Word?

- A) File
- B) Arrangement (Correct)
- C) Writing

5. What term is used by Microsoft to denote text or graphics added in Quick Parts feature of MS Word?

- A) Building Blocks (Correct)
- B) Quick Elements
- C) WordArt
- D) Quick Objects

6. Ctrl+y is used for:

- A) Load
- B) Redo (Correct)

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C) Save

D) Undo

7. Plagiarism is a major problem in:

- A) Education (Correct)

- B) Gaming addiction

- C) Identity theft

- D) Online transaction

8. How is content filtering used to implement company policies?

- A) By blocking internet access for employees.

- B) By allowing unlimited access to all websites.

- C) By filtering out websites unrelated to work. (Correct)

- D) By filtering out websites unrelated to work. (Repeated option)

9. In MS Word, which group you should choose to access the necessary function for pasting text in Microsoft Word?

- A) Voice

- B) Style

- C) Clipboard (Correct)

- D) Paragraph

10. The meaning of a statement in natural language depends on its:

- A) Grammar

- B) Formatting

- C) Context (Correct)

- D) Style

1. _____ is not an Object Oriented Programming Language.

A. HTML

B. C++

C. C#

- D. Java

- Correct Answer: A. HTML

2. What is the iterative model in software development similar to?

- A. A nonproprietary version

- B. A trialanderror approach

- C. The incremental model

- D. The waterfall model

- Correct Answer: C. The incremental model

3. To retrieve information about an employee, we perform _____ operation on the EMPLOYEE relation.

- A. SELECT

- B. INSERT

- C. UPDATE

- D. DELETE

- Correct Answer: A. SELECT

4. Retrieving an employee's job history in an objectoriented database involves asking the _____

to report its job history. A. DBMS

- B. Employee object
- C. Manager
- D. Network
- Correct Answer: B. Employee object

5. The Manufactured Product moves into the Maintenance phase for _____.

- A. Error removal
- B. Repair process
- C. Error detection
- D. Error correction
- Correct Answer: D. Error correction

6. What is the origin of design patterns in software engineering?

- A. Mathematics
- B. Artificial intelligence
- C. Computer science research
- D. Traditional architecture
- Correct Answer: C. Computer science research

7. What field of mathematics is used in basis path testing to identify sets of test data?

- A. Geometry
- B. Probability theory
- Correct Answer: B. Probability theory

8. What does the ISO 9000 series of standards address?

- A. Design, production, installation, and servicing
- B. Software development only
- C. Networking protocols
- D. Hardware engineering only
- Correct Answer: A. Design, production, installation, and servicing

9. The resulting relation after a select operation contains tuples that _____ the specified condition.

- A. Ignore
- B. Violate
- C. Match
- D. Modify

Correct Answer: C. Match

10. What document records the set of requirements that identify the features and services the finished software system must have?

- A. Coding standard document
- B. Software requirements specification
- C. Implementation guide
- D. Project plan
- Correct Answer: B. Software requirements specification

1. Legal notations to control digital ownership are:

Options:

- A. Ethics

B. Digital rules

C. Copyrights

D. Digital mediums

Correct Option: C. Copyrights

2. Font group includes options:

Options:

A. Highlight

B. Typefaces

C. All of these

D. Font size

Correct Option: C. All of these

3. We can encrypt _____:

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Options:

- A. Social sites
- B. Smart city cameras on road
- C. Servers
- D. Emails

Correct Option: D. Emails

4. In the hash file, a record can be retrieved by applying the hash function to the record's identifying key to determine the appropriate _____.

Options:

- A. index number
- B. key values
- C. sorting algorithm
- D. bucket location

Correct Option: D. bucket location

5. When we apply header it is shown at:

Options:

- A. Start page of document
- B. Bottom of document
- C. End page of document
- D. Every page of document

Correct Option: D. Every page of document

6. The hierarchical directory system in operating systems resembles _____ in indexed files.

Options:

- A. layered or tree structure indexes
- B. linked lists
- C. queues
- D. stacks

Correct Option: A. layered or tree structure indexes

7. To choose a bulleting or numbering style in Microsoft Word, which of the following options is correct?

Options:

- A. By clicking the "Save" button.
- B. It's not possible to change the style.
- C. You can select the one you prefer to use.
- D. By applying the "Bold" formatting option.

Correct Option: C. You can select the one you prefer to use.

8. When does the Mini Toolbar appear in Microsoft Word?

Options:

- A. It appears when you open a new document.
- B. It appears when you save a document.
- C. It appears when you select text.
- D. It appears randomly while using Word.

Correct Option: C. It appears when you select text.

9. Learning procedural knowledge usually involves a process:

Options:

- A. Tryanderror
- B. Trialanderror
- C. Processanderror
- D. Procedureanderror

Correct Option: B. Trialanderror

10. Design ribbon can have:

Options:

- A. Word art
- B. Page border
- C. Shapes
- D. Symbols

Correct Options: A. Word art, C. Shapes, D. Symbols

1. How has computer usage impacted our health and fitness?

- Increased physical activity.
- Improved overall fitness.
- Enhanced mental health.
- Sedentary lifestyles. (Correct Option)

2. Where the building blocks selected for the Quick Parts feature are saved in MS Word?

- Footnotes
- Quick Part Gallery (Correct Option)
- Clipboard
- WordArt

3. Easy access to online health centers is because of:

- Intelligent agents
- Database
- Computer science
- Artificial intelligence (Correct Option)

4. One way to identify the EOF is by placing a special record known as a _____ at the end of the file.

- Marker (Correct Option)
- Pointer
- Pointer
- Pointer

5. In which tab and group can you find the Smart Art Button in Microsoft Word?

- Insert tab, Shapes group
- Insert tab, Illustration group (Correct Option)
- Home tab, Illustration group
- Home tab, Shapes group

6. When using styles to format a document, what advantage does it offer?

- Increased document security
- Faster spell checking
- Consistent application of formatting choices (Correct Option)
- Advanced editing features

7. A styles option includes font:

- All of these (Correct Option)
- Colour
- Name
- Size

8. Which of the following significantly increases the chances of fraudulent activity?

- Cyber bullying (Correct Option)
- Terrorism
- Terrorism
- Gaming addiction

1. In Microsoft Word, which of the following is used to locate files or web links that you want to add in a document?

Options:

- A. Hyperlink window

- B. Paragraph
- C. Bookmark
- D. Address bar

Correct Answer: A

2. Hyperlinks have by default color:

Options:

- A. Blue
- B. Purple
- C. Red
- D. Black

Correct Answer: A

3. Matching geometric characteristics technique cannot read:

Options:

- A. Handwritten material
- B. Pictures
- C. Optical characters
- D. Images

Correct Answer: A

4. Turing gave a percentage of a machine that will have a chance to pass Turing test in year:

Options:

- A. 2000
- B. 2012
- C. 2002
- D. 2008

Correct Answer: No specific year provided by Turing

5. Ctrl+Y is used for:

Options:

- A. Redo
- B. Load
- C. Save
- D. Undo

Correct Answer: A

6. Which of the following is a famous example of word processing software?

Options:

- A. MS Word
- B. MS Excel
- C. MS PowerPoint
- D. MS Access

Correct Answer: A

7. WordArt feature of MS Word is used to add _____ in a document.

Options:

- A. Unformatted text
- B. Text with artistic flair
- C. Preformatted tables
- D. Clip art graphics

Correct Answer: B

8. In Microsoft Word, which feature allows you to change a specific word or phrase throughout the entire document effortlessly?

Options:

- A. Format Painter
- B. Find and Replace

- C. Select All
- D. Spell Check

Correct Answer: B

9. Which of the following significantly increases the chances of fraudulent activity?

Options:

- A. Identity theft
- B. Gaming addiction
- C. Terrorism
- D. Cyber bullying

Correct Answer: A

10. In the context of the environment, computer science has impacts:

Options:

- A. Both positive and negative
- B. Positive
- C. Negative
- D. Dangerous

Correct Answer: A

1. Which of the following is not the reason due to which a Software is moved to the maintenance stage?

Options:

- A. Changes done in previous modification introduce the errors.
- B. Changes in software application occur.
- C. Errors are discovered.
- D. Repair process

Correct Option: B

2. What do we call the structures in a tree that consist of a node and the nodes below it?

Options:

- A. Branches
- B. Leaves
- C. Subtrees
- D. Roots

Correct Option: C

3. The process used by the DBMS to undo activities performed by an incomplete transaction is termed _____.

Options:

- A. Restore
- B. Rollback
- C. Revert
- D. Rewind

Correct Option: B

4. A process which is used by the software industry to design, develop and test high quality software is known as:

Options:

- A. Testing process
- B. Software Development manual
- C. Software life cycle

Correct Option: C

5. Which of the following is not involved in the research and standardization of Software Quality Assurance?

Options:

- A. ISO
- B. ACM
- C. IEEE

D. ITM

Correct Option: D

6. The SELECT operation extracts _____ from a relation.

Options:

A. Rows

B. A cell

C. Columns

D. Table

Correct Option: C

7. How does breaking down a software project into manageable pieces contribute to project estimation?

Options:

A. It reduces the need for estimation.

B. It has no impact on estimation.

C. It simplifies the estimation process.

D. It complicates the estimation process.

Correct Option: C

8. A _____ is a collection whose entries have a hierarchical organization similar to that of an organization chart of a typical company.

Options:

A. Tree

B. Stack

C. Graph

D. Queue

Correct Option: A

9. _____ is not an ObjectOriented Programming Language.

Options:

- A. Java
- B. C++
- C. C#
- D. HTML

Correct Option: D

10. _____ is exemplified by two transactions, each of which makes a deduction from the same account.

Options:

- A. Time sharing
- B. Incorrect summary problem
- C. Potential problem
- D. Lost update problem

Correct Option: D

1. By default, where does MS Word display the contents of the Header or Footer?

Options:

- A) On the current page only
- B) On every page of the document
- C) On the first page only
- D) On the last page only

Correct Option: B) On every page of the document

2. Which feature is not available in the "Text" group under the Insert tab in MS Word?

Options:

- A) Date & Time
- B) Signature Line
- C) Object Link
- D) Preformatted tables

Correct Option: D) Preformatted tables

3. WordArt feature of MS Word is used to add _____ in a document.

Options:

- A) Clip art graphics
- B) Text with artistic flair
- C) Preformatted tables
- D) Unformatted text

Correct Option: B) Text with artistic flair

4. What term is used by Microsoft to denote text or graphics added in Quick Parts feature of MS Word?

Options:

- A) Quick Elements
- B) Building Blocks
- C) Quick Objects
- D) WordArt

Correct Option: B) Building Blocks

5. Content Risks include:

Options:

- A) Online scam
- B) Cyberbullying
- C) Harmful Advice

Correct Options: A) Online scam, B) Cyberbullying, C) Harmful Advice

6. In the hash file, a record can be retrieved by applying the hash function to the record's identifying key to determine the appropriate _____.

Options:

- A) index number
- B) bucket location

C) sorting algorithm

D) key value

Correct Option: B) bucket location

7. What is the impact of highprofile cases of online identity theft and fraud on people's behavior?

Options:

A) They have caused people to become more cautious about sharing their personal information.

B) They have made people less careful about their personal information.

C) They have made people more likely to share personal data in chat rooms.

D) They have eliminated the need for personal information protection.

Correct Option: A) They have caused people to become more cautious about sharing their personal information.

8. Programming languages are welldesigned so that each statement has _____ meaning:

Options:

A) Only one

B) Same

C) Multiple

D) No

Correct Option: A) Only one

9. SmartArt was introduced in MS Word version:

Options:

A) 2016

B) 2007

C) 2010

D) 2013

Correct Option: B) 2007

10. In a hash file, if a disproportionate number of keys happen to hash to the same bucket, it may cause _____.

Options:

- A) Efficient retrieval
- B) Even distribution
- C) Clustering
- D) Clustering

Correct Option: C) Clustering

1. In MS Word, the option of bullets is in group _____

Options:

- a) Clipboard
- b) Paragraph
- c) Insert
- d) Font

Correct Option: b) Paragraph

2. Easy access to online health centers is because of:

Options:

- a) Artificial intelligence
- b) Intelligent agents
- c) Database
- d) Computer science

Correct Option: a) Artificial intelligence

3. Arrange Group is in which ribbon of MS Word?

Options:

- a) Review
- b) Page Layout
- c) References

d) Insert

Correct Option: b) Page Layout

4. In Microsoft Word, what function does the Blank Page option in the Insert tab serve?

Options:

a) Insert a table

b) Insert a header/footer

c) Add a new page anywhere in the document

d) Create a cover page

Correct Option: c) Add a new page anywhere in the document

5. The features of _____ group under the Insert tab are used to write the equations in MS Word.

Options:

a) Tables

b) Symbols

c) Illustrations

d) Link

Correct Option: b) Symbols

6. Actions according to environment knowledge:

Options:

a) Simplest response

b) Reflex action

c) Intelligent action

d) Predefined action

Correct Option: b) Reflex action

7. Which of the following is a way to ensure children's safety in the digital space?

Options:

- a) Permitting unlimited online spending
- b) Establishing parent/child communication contracts
- c) Disabling safety features
- d) Overlooking online fraud awareness

Correct Option: b) Establishing parent/child communication contracts

8. Computer science has made hacking bank account:

Options:

- a) Challenging
- b) Difficult
- c) Possible
- d) Impossible

Correct Option: b) Difficult

9. Each directory in a hierarchical system contains links to its _____.

Options:

- a) subindexes
- b) parent directory
- c) sibling directories
- d) root directory

Correct Option: b) parent directory

10. Process of understanding what the characteristics of images means refers to:

Options:

- a) Image understanding
- b) Image identifying
- c) Image processing
- d) Image analysis

Correct Option: a) Image understanding

1. Information that was once buried in arcane records has become accessible because of:

Options:

- Computer
- Database
- Online management
- Artificial intelligence

Correct Option: Online management

2. Selfdriven cars are an example of:

Options:

- Computer
- Robots
- AI
- Electrical machines

Correct Option: AI

3. Matching geometric characteristics technique cannot read:

Options:

- Pictures
- Images
- Optical characters
- Handwritten material

Correct Option: Handwritten material

4. Content filters are part of Internet:

Options:

- Firewalls
- Programs

- Network
- Router

Correct Option: Firewalls

5. The purpose of the Cover Page in Microsoft Word is to:

Options:

- Add footnotes.
- Apply page borders.
- Insert a table.
- Create a title page for the document.

Correct Option: Create a title page for the document.

6. The index for a file is usually stored _____.

Options:

- Separately on a different device
- Within the RAM
- As a part of the main file
- As a separate file on the same device

Correct Option: As a separate file on the same device

7. Insert tab can have a group:

Options:

- Styles
- Clipboard
- All of these

Pages

Correct Option: All of these

8. A rapidly expanding subject that is closely associated with database technology is _____, which consists of techniques for discovering patterns in collections of data.

Options:

- Data mining
- Sentiment analysis
- Text mining
- Opening mining

Correct Option: Data mining

1. How do software engineers often describe the relationship between requirements analysis and design?

- a) Both are focused on how.
- b) Requirements analysis is about what, and design is about how.
- c) Both are focused on what.
- d) Requirements analysis is about how, and design is about what.

Correct Option: b) Requirements analysis is about what, and design is about how.

2. During the implementation phase of software engineering, what task is typically performed?

- a) Writing programs
- b) Requirements gathering c) Creating modular design
- d) System analysis

Correct Option: a) Writing programs

3. What is a major component of system documentation?

- a) Installation manual
- b) Operating manual
- c) Product manual
- d) Source version of all programs in the system

Correct Option: b) Operating manual

4. How are addresses in a machine's main memory encoded and stored?

- a) As a 2dimensional grid
- b) As numeric values
- c) As a pair of rows and columns
- d) As a pair of rows and columns

Correct Option: b) As numeric values

5. In the traditional waterfall model, what is the task of the SQA group before the design stage begins?

- a) Approving software requirements specification
- b) Certifying the conceptual final product
- c) Approving the design
- d) Overseeing the implementation

Correct Option: a) Approving software requirements specification

6. What is the primary purpose of the Creational Design Pattern?

- a) To create instances and promote reuse
- b) To design graphical user interfaces
- c) To create a tightly coupled system

- d) To manufacture physical products

Correct Option: a) To create instances and promote reuse

7. A _____ is a collection whose entries have a hierarchical organization similar to that of an organization chart of a typical company.

a) Stack

b) Tree

- c) Queue

- d) Graph

Correct Option: b) Tree

8. Software Engineering is an engineering discipline that is concerned with:

- a) Theories and methods that underlie computers and software systems

- b) All aspects of software production

- c) How computer systems work

- d) All aspects of computerbased systems development, including hardware, software, and process engineering.

Correct Option: d) All aspects of computerbased systems development, including hardware, software, and process engineering.

9. The new relation formed after a JOIN operation has attributes named by prefixing them with the _____.

- a) Arbitrary numbers

- b) First letter

- c) Arbitrary numbers

- d) Relation of its origin

Correct Option: d) Relation of its origin

10. In the traditional development phase, testing is primarily associated with:

- a) System design
- b) Debugging programs
- c) Software implementation
- d) System analysis

Correct Option: b) Debugging programs

1. Weak form of cohesion called _____?

Options:

- a) Intermodule coupling
- b) Logical cohesion
- c) Intramodule cohesion
- d) Functional cohesion

Correct Option: c) Intramodule cohesion

2. A typical database application involves two major layers: the application layer and the _____ management layer.

Options:

- a) database
- b) data
- c) user
- d) schema

Correct Option: a) database

3. In Factory design pattern, Car is referred to as:

Options:

- a) Character
- b) Class
- c) Abstraction
- d) Instance

Correct Option: c) Abstraction

4. Retrieving an employee's job history in an objectoriented database involves asking the _____ to report its job history.

Options:

- a) network
- b) DBMS

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- c) employee object
- d) manager

Correct Option: c) employee object

5. Which organizations play a role in improving professionalism and establishing standards for software quality control?

Options:

- a) ISO, IEEE, and ACM
- b) NATO, IMF, and UNICEF
- c) NASA, NSA, and CIA
- d) UNESCO, WHO, and WTO

Correct Option: a) ISO, IEEE, and ACM

6. What is testing primarily associated with the traditional development phase?

Options:

- a) Software implementation
- b) Confirming the software product with the software requirements specification.
- c) System design
- d) Requirements analysis

Correct Option: d) Requirements analysis

7. How does a program counter function as a pointer?

Options:

- a) It decodes data in memory cells
- b) It holds the address of the next instruction
- c) It stores numeric values
- d) It stores numeric values

Correct Option: b) It holds the address of the next instruction

8. _____ is the process in which prototypes evolve into the complete (final) system in the incremental model.

Options:

- a) Evolutionary prototyping
- b) Rapid prototyping
- c) Throwaway prototyping
- d) Iterative prototyping

Correct Option: d) Iterative prototyping

9. What does SDLC stand for in the development environment?

Options:

- a) System Development Life Cycle
- b) System Design Life Cycle
- c) Software Development Life Cycle
- d) Software Design Life Cycle

Correct Option: c) Software Development Life Cycle

10. _____ patterns are generally used for the creation of loosely coupled systems.

Options:

- a) Factory Design
- b) Implementation
- c) Database
- d) Implementation

Correct Option: a) Factory Design

1. In an organization chartlike tree, what does each node represent?

Options:

- A. Position (Correct)
- B. Position
- C. Employee D.
- Employee

2. To retrieve information about an employee, we perform _____ operation on the EMPLOYEE relation.

Options:

- A. INSERT
- B. SELECT (Correct)
- C. DELETE
- D. SELECT

3. GOMS model is based on _____.

Options:

- A. hardware architecture
- B. human behaviors (Correct)
- C. machine behavior
- D. software documentation

4. Today, database technology, combined with _____ techniques,

Options:

- A. Sentiment analysis
- B. opening mining
- C. data mining (Correct)
- D. text mining

5. The resulting relation after a select operation contains tuples that _____ the specified condition.

Options:

- A. ignore
- B. match (Correct)

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C. modify

D. match

6. A _____ is a description of the entire database structure that is used by the database software to maintain the database.

Options:

- A. schema (Correct)

- B. subschema

- C. superschema

- D. nonschema

7. Which of the following can be incorporated into all the phases of software development?

Options:

- A. Requirement gathering

- B. Testing (Correct)

- C. Designing

- D. Testing

8. Subschemas are crucial in providing _____ to different users within a database.

Options:

- A. restricted access (Correct)

- B. match

- C. universal access

- D. identical information

9. _____ is the process in which prototypes evolve into the complete (final) system in the incremental model.

Options:

- A. Iterative prototyping
- B. Rapid prototyping
- C. Throwaway prototyping
- D. Evolutionary prototyping (Correct)

10. The links between _____ in an objectoriented database are normally maintained by the DBMS.

Options:

- A. functions
- B. objects (Correct)
- C. local data
- D. forms

1. In a tree, what is the term for nodes at the other extreme, often called leaf nodes?

- a) Terminal nodes
- b) Internal nodes
- c) Parent nodes
- d) Root nodes
- Correct Option: a) Terminal nodes

2. Which of the following best describes opensource development?

- a) A process followed by all the software houses.
- b) A formal method of software development.
- c) A process used for developing most proprietary software in the industry.
- d) A means of producing free software.

- Correct Option: d) A means of producing free software.

3. Boundary value analysis is an example of?

- a) Glassbox testing
- b) Graybox testing
- c) Whitebox testing
- d) Blackbox testing

Correct Option: d) Blackbox testing

4. What is a software license?

- a) A permission to change software working
 - b) A document that transfers ownership rights
 - c) A legal agreement between software developers and user
 - d) A legal notice for copyright infringement
- Correct Option: c) A legal agreement between software developers and users.

5. _____ is not a phase of SDLC.

- a) Problem Identification
 - b) Testing
 - c) Requirement analysis
- Correct Option: b) Testing

6. If information hiding is not properly implemented, what will be the main effect on software program:

- a) Errors occur during module development
- b) Internal compositional structure of modules can damage
- c) It hides all data so important information cannot retrieve.

- d) It can compromise the validity of program modules.
- Correct Option: b) Internal compositional structure of modules can damage.

7. How does breaking down a software project into manageable pieces contribute to project estimation?

- a) It reduces the need for estimation.
- b) It has no impact on estimation.
- c) It simplifies the estimation process.
- d) It complicates the estimation process.

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Correct Option: c) It simplifies the estimation process.

8. How long is a typical patent granted for?

- a) Life time
- b) 20 years
- c) 5 years
- d) 10 years
- Correct Option: b) 20 years.

9. Which organizations play a role in improving professionalism and establishing standards for software quality control?

- a) ISO, IEEE, and ACM
- b) UNESCO, WHO, and WTO
- c) NASA, NSA, and CIA
- Correct Option: a) ISO, IEEE, and ACM

10. Large, multiuser, commercial database systems have _____ stakes compared to personal use systems.

- a) Higher
- b) Lower
- c) Identical
- d) Comparable
- Correct Option: a) Higher

1. Extreme programming (XP) is an example of:

Options:

- A. Evolutionary prototyping

- B. Agile method (Correct)
- C. Rapid prototyping
- D. Throwaway prototyping

2. We use _____ to reduce unnecessary dependencies or effects on other modules.

Options:

- A. Polymorphism
- B. Abstraction
- C. Inheritance
- D. Information hiding (Correct)

3. An objectoriented database consists of objects linked to each other to reflect their _____.

Options:

- A. Sizes
- B. Relationships (Correct)
- C. Colors
- D. None of the above

4. From which engineering areas does research in humanmachine interface design draw heavily?

Options:

- A. Mechanical engineering and electrical engineering
- B. Mechanical engineering and electrical engineering
- C. Civil engineering and chemical engineering
- D. Ergonomics and cognetics (Correct)

5. Why is information about the software's implementation important during maintenance?

Options:

- A. To increase the chance of disruptions.

- B. To explain why the software was implemented as it was (Correct).
- C. To simplify the software development process.
- D. To blur the distinction between technical and user documentation.

6. What task is a programmer charged with during the implementation phase of software development?

Options:

- A. Writing code as per the design (Correct).
- B. System testing
- C. Requirements gathering
- D. Database design

7. One of the advantages of separating application software from the DBMS is to achieve _____, allowing changes in the database without modifying the application software.

Options:

- A. Data independence (Correct)
- B. Data security
- C. User access control
- D. Networking

8. _____ are the sophisticated software packages that are primarily designed for the software engineering environment.

Options:

- A. EDS's
- B. EDI's
- C. IDS's
- D. IDE's (Correct)

9. This conceptual view of the database is called a _____ model.

Options:

- A. Data mining
- B. Database
- C. Data science
- D. Data structure (Correct)

10. Which Template C++ Language offers to the programmer so he/she can easily implement objects for performing the actual role?

Options:

- A. Application Programming Interface
- B. .Net Framework Class Library
- C. NumPy
- D. Standard Template Library (Correct)

1. **Question:** Select the best approach for designing software pattern design.

- Options:

- Minimize coupling and maximize cohesion
- Maximize other options
- Maximize coupling only
- Maximize coupling and minimize cohesion
- Correct Answer: Minimize coupling and maximize cohesion

2. **Question:** In a tree, what is the term for nodes at the other extreme, often called leaf nodes?

- Options:

- Parent nodes
- Internal nodes
- Terminal nodes

- Terminal nodes
- Correct Answer: Terminal nodes

3. **Question:** Which template C++ language offers to the programmer so he/she can easily implement objects for performing the actual role?

- Options:
- .Net Framework Class Library
- Application Programming Interface
- Standard Template Library
- NumPay
- Correct Answer: Standard Template Library

4. **Question:** Why has software engineering struggled to find a rigorous footing, compared to other engineering disciplines?

- Options:
- Inability to develop generic software components
- Lack of engineering principles
- Lack of quantitative techniques in measuring software properties
- Overreliance on prefabricated components
- Correct Answer: Lack of engineering principles

5. **Question:** What is the role of a software analyst in the development process?

- Options:
- Responsible for database management
- Involved with the entire development process, with emphasis on requirements analysis and design
- Focused on the implementation step
- Primarily involved in writing programs

- Correct Answer: Involved with the entire development process, with emphasis on requirements analysis and design

6. **Question:** Retrieving a list of job titles in a specific department involves selecting tuples based on the _____ attribute.

- Options:

- Job title

- Department

- DepartmentRelation

Correct Answer: Department

7. **Question:** The following statement extracts _____ from the EMPLOYEE relation. MAIL < PROJECT Name, Address from EMPLOYEE

- Options:

- Phone numbers

- Names only

- Addresses only

- Names and Addresses

- Correct Answer: Names and Addresses

8. **Question:** Which template does the Java programming language offer to programmers, allowing them to easily implement objects for performing specific roles within an application?

- Options:

- C++ Standard Template Library

- .Net Framework Class Library

- NumPay

- Application Programming Interface (API)

- Correct Answer: Application Programming Interface (API)

9. **Question:** From a layperson's perspective, design is often equated with:

- Options:

- Where

- Why

- What

- How

- Correct Answer: What

10. **Question:** In the case of the incremental model, these prototypes evolve into the complete, final system, a process known as_____.

- Options:

- Throwaway prototyping

- Rapid prototyping

- Agile method

- Agile method

- Correct Answer: Rapid prototyping

1. Today, database technology, combined with _____ techniques.

Options:

a) Opening mining

b) Text mining

c) Sentiment analysis

d) Data mining

Correct Option: d) Data mining

2. In Structure Chart functions are represented by _____.

Options:

- a) Arrows
- b) Rectangles
- c) Circles
- d) Triangles

Correct Option: b) Rectangles

3. What is the layperson's perception of requirements analysis?

Options:

- a) Determining the software accuracy
- b) Deciding how the software system will do it
- c) Determining the software performance
- d) Deciding what the software system is to do

Correct Option: d) Deciding what the software system is to do

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4. What is the primary goal of the requirements analysis phase in the software development life cycle?

Options:

- a) Identify stakeholders
- b) Specify the services the system will provide
- c) Develop the user manual
- d) Code generation

Correct Option: b) Specify the services the system will provide

5. Why is it important for an interface to present all relevant information when a decision is required?

Options:

- a) To confuse the user
- b) To facilitate the user
- c) To rely on the user's memory
- d) To test the user's memory

Correct Option: b) To facilitate the user

6. Which company created the Rational Unified Process (RUP)?

Options:

- a) Apple
- b) IBM
- c) Google

Correct Option: b) IBM

7. Restriction of information to a specific portion of a software system is referred to:

Options:

- a) Information hiding
- b) Information assembler

- c) Component assembler
- d) Cohesion

Correct Option: a) Information hiding

8. Accuracy can be achieved with the help of testing the result of _____ in the entire development process. Options:

- a) Every line of code
- b) Every line of code
- c) Last step
- d) Each intermediate step

Correct Option: d) Each intermediate step

9. The format in which information is displayed by spreadsheet programs is similar to the format used in the _____.

Options:

- a) Relational model
- b) Hierarchical model
- c) Objectoriented model
- d) Network model

Correct Option: a) Relational model

10. What has become a growing concern in the requirements stage of software development projects?

Options:

- a) Humanmachine interface design
- b) Network security
- c) Software testing
- d) Source code optimization

Correct Option: b) Network security

1. ****Opensource development****:

- Options:

- A. A process used for developing most proprietary software in the industry.
- B. A process followed by all the software houses.
- C. A means of producing free software. (Correct)
- D. A formal method of software development.

2. ****In Structure Chart functions are represented by****:

- Options:

- A. Rectangles (Correct)
- B. Triangles
- C. Arrows
- D. Circles

3. ****The role of the software requirements specification in the software development life cycle****:

- Options:

- A. It focuses on user interface design.
- B. It guides the software's deployment.
- C. It serves as a written agreement between all parties concerned. (Correct)
- D. It defines coding standards.

4. ****The relational model portrays data as being stored in tables called****:

- Options:

- A. Records
- B. Entities
- C. Graphs
- D. Relations (Correct)

5. ****Large, multiuser, commercial database systems have****:

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Options:

- A. Identical
- B. Higher (Correct)
- C. Lower
- D. Comparable

6. **What is the beginning of a list called**:

- Options:

- A. Top
- B. Base
- C. Tail
- D. Head (Correct)

7. **A typical database application involves two major layers: the application layer and the**:

- Options:

- A. Database
- B. Schema
- C. Data
- D. Database management layer (Correct)

8. **Which phase of the Software Life Cycle tends to provide a solution for the problem**:

- Options:

- A. Design (Correct)
- B. Implementation
- C. Testing
- D. Analysis

9. **In a stack, what is the term for inserting a new entry at the top**:

- Options:

- A. Pushing (Correct)
- B. Dequeuing
- C. Popping
- D. Removing

10. **A schema describes the _____ database structure used by the database software**:

- Options:

- A. Secondary
- B. External
- C. Partial
- D. Complete (Correct)

1. What is another name for a program counter in the context of CPUs?

- a) Code counter
- b) Index counter
- c) Instruction pointer (Correct Option)
- d) Numeric register

2. What is the role of a component assembler in software development?

- a) A tool for debugging code
- b) A hardware device for assembling computer components
- c) A programming language
- d) Connect/combine software components (Correct Option)

3. What is the significance of ComputerAided Software Engineering (CASE) tools in the software development process?

- a) They hinder progress tracking.
- b) They streamline and simplify various aspects of development. (Correct Option)
- c) They focus solely on theoretical research.
- d) They discourage collaboration among teams.

4. What is the primary focus of the maintenance phase in software engineering?

- a) Identifying the bugs in the software
- b) Studying the program
- c) Repairing software defects (Correct Option)
- d) Redesigning the entire system

5. Database systems emerged as a means of _____ the information stored in organizations.

- a) Restricting
- b) Duplicating
- c) Integrating (Correct Option)
- d) Separating

6. What is the colloquial term for the head of a stack?

- a) Top (Correct Option)
- b) Base
- c) Bottom

7. What task is a programmer charged with during the implementation phase of software development?

- a) System testing
- b) Requirements gathering
- c) Database design
- d) Writing code (Correct Option)

8. What is an aggregate type in programming?

- a) 2dimensional array
- b) Rectangular array of numbers
- c) Block of data items with different data types (Correct Option)

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d) An integer variable

9. The second phase of the development phase of the software development life cycle is:

- a) Testing
- b) Design
- c) Implementation
- d) Requirements analysis (Correct Option)

10. A Car making factory makes car for their client. In the Factory design pattern, Factory is considered as:

- a) Instance
- b) Abstraction
- c) Class (Correct Option)

1. How long is a typical patent granted for?

- a) 5 years
- b) 20 years (Correct)
- c) Life time
- d) 10 years

2. Restriction of information to a specific portion of a software system is referred to:

- a) Information assembler
- b) Cohesion
- c) Information hiding (Correct)
- d) Information hiding

3. Retrieving an employee's job history in an objectoriented database involves asking the _____ to report its job history.

- a) network
- b) manager
- c) DBMS
- d) employee object (Correct)

4. In the traditional waterfall model, what is the task of the SQA group before the design stage begins?

- a) Approving software requirements specification (Correct)
- b) Overseeing the implementation
- c) Certifying the conceptual final product
- d) Approving the design

5. In an organization chartlike tree, what does each node represent?

- a) Employee (Correct)
- b) Position
- c) Department
- d) Manager

6. What is the role of Integrated Development Environments (IDEs) in software engineering?

- a) They focus solely on project planning.
- b) They provide a single, integrated package for developing software (Correct)
- c) They hinder collaboration among developers.
- d) They eliminate the need for project documentation.

7. Which of the following is not involved in the research and standardization of Software Quality Assurance?

- a) IEEE
- b) ACM
- c) ISO
- d) ITM (Correct)

8. Why do many major software contractors require organizations to meet standards?

- a) To ensure quality (Correct)
- b) To increase cost
- c) To decrease efficiency
- d) To promote competition

9. Second phase of the development phase of the software development life cycle is:

- a) Testing
- b) Implementation
- c) Requirements analysis
- d) Design (Correct)

1. Which organizations play a role in improving professionalism and establishing standards for software quality control?

Options:

- ISO
- IEEE
- ACM

Correct Option: ISO, IEEE, and ACM

2. Persistent objects in a database are distinct from transient objects because they are _____.

Options:

- saved after program termination
- discarded after program termination

- created during program execution

- linked to other objects

Correct Option: saved after program termination

3. Why is a stack considered a LIFO structure?

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Options:

- Entries are removed from the middle
- Entries are removed in the reverse order of storage
- Entries are removed from the base
- Entries are removed in the order they were stored

Correct Option: Entries are removed in the reverse order of storage

4. What is the beginning of a list called?

Options:

- Tail
- Top
- Base
- Head

Correct Option: Head

5. Today, database technology, combined with _____ techniques, allows for the extraction of valuable patterns and insights from large datasets.

Options:

- data mining
- text mining
- Sentiment analysis
- opening mining

Correct Option: data mining

6. Which of the following is not the reason due to which a Software is moved to maintenance stage?

Options:

- Changes in software application occurs.
- Changes done in previous modification introduce the errors.

- Repair process
- Errors are discovered.

Correct Option: Repair process

7. From a layperson's perspective, design is often equated with _____.

Options:

- How
- Where
- What
- Why

Correct Option: How

8. Subschemas are crucial in providing _____ to different users within a database.

Options:

- similar access
- identical information
- restricted access
- universal access

Correct Option: restricted access

9. Accuracy can be achieved with the help of testing the result of _____ in the entire development process.

Options:

- Every line of code
- Each intermediate step
- Last step
- Few steps

Correct Option: Each intermediate step

10. We use _____ to reduce unnecessary dependencies or effects on other modules.

Options:

- polymorphism
- abstraction
- information hiding
- inheritance

Correct Option: information hiding

1. What is the primary purpose of the Creational Design Pattern?

Options:

- A) To manufacture physical products
- B) To create a tightly coupled system
- C) To design graphical user interfaces
- D) To create instances and promote reuse

Correct Option: D) To create instances and promote reuse

2. What is a stack in the context of data structures?

Options:

- A) A list of sounds recorded on a CD
- B) A list with entries inserted and removed only at the head
- C) A list with entries arranged sequentially

Correct Option: B) A list with entries inserted and removed only at the head

3. In a tree structure, what is the top node called?

Options:

- A) Leaf node
- B) Parent node
- C) Root node

D) Terminal node

Correct Option: C) Root node

4. Which software testing refers to tests that do not rely on knowledge of the software's interior composition?

Options:

A) Basis path testing

B) Blackbox testing

C) Whitebox testing

D) Glassbox testing

Correct Option: B) Blackbox testing

5. A _____ is a description of the entire database structure that is used by the database software to maintain the database.

Options:

A) Superschema

B) Schema

C) Nonschema

D) Subschema

Correct Option: A) Superschema

6. The new relation formed after a JOIN operation has attributes named by prefixing them with the _____.

Options:

A) Original relation

B) First letter

C) Arbitrary numbers

Correct Option: A) Original relation

7. From a layperson's perspective, design is often equated with:

Options:

- A) How
- B) What
- C) Where
- D) Why

Correct Option: A) How

8. What are the keywords used in the syntax for a SELECT operation?

Options:

- A) JOIN and GROUP BY
- B) UPDATE and WHERE
- C) INSERT and DELETE
- D) SELECT and FROM

Correct Option: D) SELECT and FROM

9. Persistent objects in a database are distinct from transient objects because they are _____.

Options:

- A) Linked to other objects
- B) Linked to other objects
- C) Saved after program termination
- D) Discarded after program termination

Correct Option: C) Saved after program termination

10. DBMS stands for _____.

Options:

- A) Database maintaince system
- B) Database maintaince and storage
- C) Database management Sound
- D) Database management system

Correct Option: D) Database Management System

1. What was the initial focus in the early years of computing regarding software quality?

Options:

- A. Certification programs
- B. Software Analysis
- C. Software engineering procedures
- D. Debugging process

Correct Option: B. Software Analysis

2. A _____ is a description of only that portion of the database pertinent to a particular user's needs.

Options:

- A. nonschema
- B. superschema
- C. subschema
- D. schema

Correct Option: C. subschema

3. Which company created the Rational Unified Process (RUP)?

Options:

- A. Google
- B. Apple
- C. IBM

Correct Option: C. IBM

4. When using PROJECT, if multiple columns are required, they are specified _____.

Options:

- A. Separately
- B. Using quotation marks
- C. Using a comma

D. Using brackets

Correct Option: C. Using a comma

5. What is the role of a software analyst in the development process?

Options:

A. Primarily involved in writing programs

B. Responsible for database management

C. Focused on the implementation step

D. Involved with the entire development process, with emphasis on requirements analysis and design

Correct Option: D. Involved with the entire development process, with emphasis on requirements analysis and design

6. What do we call the structures in a tree that consist of a node and the nodes below it?

Options:

A. Leaves

B. Branches

C. Subtrees

D. Roots

Correct Option: C. Subtrees

7. What category of testing relies on knowledge of the internal composition of the software?

Options:

A. Pinkbox testing

B. Pinkbox testing

C. Graybox testing

D. Blackbox testing

Correct Option: C. Graybox testing

8. To control access to information within a database, database systems often rely on _____ and _____.

Options:

- A. keys, indexes
- B. records, tables
- C. schemas, subschemas
- D. queries, reports

Correct Option: A. keys, indexes

9. Which of the following is incorrect scenario for Shopping Cart Design patterns?

Options:

- A. Do not use in case of single product to sell
- B. User is intended to buy more products
- C. Paying money later on
- D. User needs to buy a single product

Correct Option: D. User needs to buy a single product

1. Why is information about the software's implementation important during maintenance?

Options:

- A. To explain why the software was implemented as it was. (Correct Option)
- B. To increase the chance of disruptions.
- C. To blur the distinction between technical and user documentation.
- D. To simplify the software development process.

2. The Development cycle in XP involves?

Options:

- A. Sequential testing
- B. Monthly releases of the software
- C. Formal documentation
- D. Repeated cycles of analysis, design, implementation, and testing. (Correct Option)

3. What is the role of Integrated Development Environments (IDEs) in software engineering?

Options:

- A. They eliminate the need for project documentation.
- B. They focus solely on project planning.
- C. They provide a single, integrated package for developing software. (Correct Option)
- D. They hinder collaboration among developers.

4. What is the primary purpose of the Creational Design Pattern?

Options:

- A. To create a tightly coupled system
- B. To create instances and promote reuse. (Correct Option)
- C. To manufacture physical products
- D. To design graphical user interfaces

5. What is the significance of ComputerAided Software Engineering (CASE) tools in the software development process?

Options:

- A. They streamline and simplify various aspects of development. (Correct Option)
- B. They hinder progress tracking.
- C. They focus solely on theoretical research.
- D. They discourage collaboration among teams.

6. A process which is used by the software industry to design, develop and test highquality software is known as:

Options:

- A. Development manual
- B. Software life cycle (Correct Option)
- C. Testing process
- D. Software

7. Recurring problems which are handled by the predeveloped module in software design are called _____.

Options:

- A. Design Pattern (Correct Option)
- B. Requirement analysis
- C. Test Pattern
- D. Implementation structure

8. What is a design pattern in the context of software engineering?

Options:

- A. An overview of the software problem
- B. A predeveloped model for solving recurring software problems (Correct Option)
- C. A specific coding language syntax
- D. An overview of the software problem

9. Database systems emerged as a means of _____ the information stored in organizations.

Options:

- A. Separating
- B. Integrating (Correct Option)
- C. Duplicating
- D. Integrating

10. To retrieve the information about an employee, we must select the _____ with the appropriate identification attribute value from the EMPLOYEE relation.

Options:

- A. attributes
- B. tuple (Correct Option)
- C. model
- D. table

1. In MS Word, the option of bullets is in group _____

Options:

- a) Clipboard
- b) Paragraph
- c) Insert
- d) Font

Correct Option: b) Paragraph

2. Easy access to online health centers is because of:

Options:

- a) Artificial intelligence
- b) Intelligent agents
- c) Database
- d) Computer science

Correct Option: a) Artificial intelligence

3. Arrange Group is in which ribbon of MS Word?

Options:

- a) Review
- b) Page Layout
- c) References
- d) Insert

Correct Option: b) Page Layout

4. In Microsoft Word, what function does the Blank Page option in the Insert tab serve?

Options:

- a) Insert a table

- b) Insert a header/footer
- c) Add a new page anywhere in the document
- d) Create a cover page

Correct Option: c) Add a new page anywhere in the document

5. The features of _____ group under the Insert tab are used to write the equations in MS Word.

Options:

- a) Tables
- b) Symbols
- c) Illustrations
- d) Link

Correct Option: b) Symbols

6. Actions according to environment knowledge:

Options:

- a) Simplest response
- b) Reflex action
- c) Intelligent action
- d) Predefined action

Correct Option: b) Reflex action

7. Which of the following is a way to ensure children's safety in the digital space?

Options:

- a) Permitting unlimited online spending
- b) Establishing parent/child communication contracts
- c) Disabling safety features
- d) Overlooking online fraud awareness

Correct Option: b) Establishing parent/child communication contracts

8. Computer science has made hacking bank account:

Options:

- a) Challenging
- b) Difficult
- c) Possible
- d) Impossible

Correct Option: b) Difficult

9. Each directory in a hierarchical system contains links to its _____.

Options:

- a) subindexes
- b) parent directory
- c) sibling directories
- d) root directory

Correct Option: b) parent directory

10. Process of understanding what the characteristics of images means refers to:

Options:

- a) Image understanding
- b) Image identifying
- c) Image processing
- d) Image analysis

Correct Option: a) Image understanding

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