

7/11/23, 10:12 PM

OS TEST

OS TEST

35 ques

Total points 32/35 

✗ The systems which allow only one process execution at a time, are called _____ 0/1

- a) uniprogramming systems
- b) uniprocessing systems
- c) unitasking systems
- d) none of the mentioned

✗

Correct answer

- b) uniprocessing systems

✓ In operating system, each process has its own _____

1/1

- a) address space and global variables
- b) open files
- c) pending alarms, signals and signal handlers
- d) all of the mentioned

✓

✓ What is the ready state of a process?

1/1

- a) when process is scheduled to run after some execution
- b) when process is unable to run until some task has been completed
- c) when process is using the CPU
- d) none of the mentioned

✓



✓ A set of processes is deadlock if _____

1/1

- a) each process is blocked and will remain so forever
- b) each process is terminated
- c) all processes are trying to kill each other
- d) none of the mentioned



✓ The address of the next instruction to be executed by the current process 1/1 is provided by the _____

- a) CPU registers
- b) Program counter
- c) Process stack
- d) Pipe



✓ The number of processes completed per unit time is known as _____ 1/1

- a) Output
- b) Throughput
- c) Efficiency
- d) Capacity



✓ Which of the following is not the state of a process?

1/1

- a) New
- b) Old ✓
- c) Waiting
- d) Running

✓ The processes that are residing in main memory and are ready and waiting to execute are kept on a list called _____

1/1

- a) job queue
- b) ready queue ✓
- c) execution queue
- d) process queue

✓ Which scheduling algorithm allocates the CPU first to the process that requests the CPU first?

1/1

- a) first-come, first-served scheduling ✓
- b) shortest job scheduling
- c) priority scheduling
- d) none of the mentioned



✓ In priority scheduling algorithm, when a process arrives at the ready queue, 1/1 its priority is compared with the priority of _____

- a) all process
- b) currently running process
- c) parent process
- d) init process



✓ Process are classified into different groups in _____

1/1

- a) shortest job scheduling algorithm
- b) round robin scheduling algorithm
- c) priority scheduling algorithm
- d) multilevel queue scheduling algorithm



✓ Which one of the following can not be scheduled by the kernel?

1/1

- a) kernel level thread
- b) user level thread
- c) process
- d) none of the mentioned



✓ With round robin scheduling algorithm in a time shared system _____ 1/1

- a) using very large time slices converts it into First come First served scheduling algorithm ✓
- b) using very small time slices converts it into First come First served scheduling algorithm
- c) using extremely small time slices increases performance
- d) using very small time slices converts it into Shortest Job First algorithm

✓ The real difficulty with SJF in short term scheduling is _____ 1/1

- a) it is too good an algorithm
- b) knowing the length of the next CPU request ✓
- c) it is too complex to understand
- d) none of the mentioned

✓ Which of the following condition is required for a deadlock to be possible? 1/1

- a) mutual exclusion
- b) a process may hold allocated resources while awaiting assignment of other resources
- c) no resource can be forcibly removed from a process holding it
- d) all of the mentioned ✓



✓ A system is in the safe state if _____

1/1

- a) the system can allocate resources to each process in some order and still avoid a deadlock
- b) there exist a safe sequence
- c) all of the mentioned
- d) none of the mentioned



✓ What are Multithreaded programs?

1/1

- a) lesser prone to deadlocks
- b) more prone to deadlocks
- c) not at all prone to deadlocks
- d) none of the mentioned



✗ Every time a request for allocation cannot be granted immediately, the detection algorithm is invoked. This will help identify _____

0/1

- a) the set of processes that have been deadlocked
- b) the set of processes in the deadlock queue
- c) the specific process that caused the deadlock
- d) all of the mentioned



Correct answer

- a) the set of processes that have been deadlocked



✓ Messages sent by a process _____

1/1

- a) have to be of a fixed size
- b) have to be a variable size
- c) can be fixed or variable sized
- d) none of the mentioned



✓ . What is Interprocess communication?

1/1

- a) allows processes to communicate and synchronize their actions when using the same address space
- b) allows processes to communicate and synchronize their actions
- c) allows the processes to only synchronize their actions without communication
- d) none of the mentioned



✓ What else is a command interpreter called? *

1/1

- command
- shell
- kernel
- prompt



✓ Banker's algorithm is used? *

1/1

- To prevent deadlock
- To deadlock recovery
- To solve the deadlock
- None of these



✗ _____ format specifier can be supplied as argument to date command *0/1
to display current date in DD/MM/YY format.

- +%S
- +%D
- +%d/%m/%y
- none



Correct answer

- +%D

✓ Which of these can be returned by the operator &? *

1/1

- Integer
- Boolean
- Character
- Integer or Boolean



✓ An expression involving byte, int, and literal numbers is promoted to which of these? *1/1

- int
- long
- byte
- float

✓

✓ What will be the error in the following Java code? * 1/1

```
byte b = 50;  
b = b * 50;
```

- A. b can not store the result 2500, limited by its range.
- B. * operator has converted b * 50 into int, which can not be converted to byte without casting. ✓
- C. b can not contain value 50.
- D. No error in this code



- ✓ Consider the following set of processes, the length of the CPU burst time *1/1 given in milliseconds.

Process Burst time

P1	6
P2	8
P3	7
P4	3

Assuming the above process being scheduled with the SJF scheduling algorithm.

- a) The waiting time for process P1 is 3ms
- b) The waiting time for process P1 is 0ms
- c) The waiting time for process P1 is 16ms
- d) The waiting time for process P1 is 9ms



- ✓ An SJF algorithm is simply a priority algorithm where the priority is *1/1

-
- a) the predicted next CPU burst
 - b) the inverse of the predicted next CPU burst
 - c) the current CPU burst
 - d) anything the user wants



✓ A solution to the problem of indefinite blockage of low – priority processes is _____ *1/1

- a) Starvation
- b) Wait queue
- c) Ready queue
- d) Aging



✓ A situation where several processes access and manipulate the same data concurrently and the outcome of the execution depends on the particular order in which access takes place is called _____ *1/1

- a) data consistency
- b) race condition
- c) aging
- d) starvation



✓ A minimum of _____ variable(s) is/are required to be shared between processes to solve the critical section problem *1/1

- a) one
- b) two
- c) three
- d) four



✓ Bounded waiting implies that there exists a bound on the number of times a process is allowed to enter its critical section _____ *1/1

- a) after a process has made a request to enter its critical section and before the request is granted ✓
- b) when another process is in its critical section
- c) before a process has made a request to enter its critical section
- d) none of the mentioned

✓ Concurrent access to shared data may result in _____ * 1/1

- a) data consistency
- b) data insecurity
- c) data inconsistency ✓
- d) none of the mentioned

✓ Semaphore is a/an _____ to solve the critical section problem. * 1/1

- a) hardware for a system
- b) special program for a system
- c) integer variable ✓
- d) none of the mentioned



✓ What are Spinlocks? *

1/1

- a) CPU cycles wasting locks over critical sections of programs
- b) Locks that avoid time wastage in context switches
- c) Locks that work better on multiprocessor systems
- d) All of the mentioned



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JAVA CCEE Test 1

JAVA CCEE Test 1

TIME-45 min

40 questions

What is the range of byte data type in Java?

1 point

- None of the mentioned
- 2147483648 to 2147483647
- 128 to 127
- 32768 to 32767

[Clear selection](#)

what will be the output of following code?

1 point

```
class increment
{
    public static void main(String args[])
    {
        int g = 3;
        System.out.print(++g * 8);
    }
}
```

- 25
- 24
- 32
- 33

[Clear selection](#)



conversion for automatic type Which of these is necessary condition in Java? 1 point

- The destination type is smaller than source type
- The destination type is larger than source type
- The destination type can be larger or smaller than source type
- None of the mentioned

[Clear selection](#)

If an expression contains double, int, float, long, then the whole expression 1 point will be promoted into which of these data types?

- long
- int
- double
- float

[Clear selection](#)



what will be the output of following code?

1 point

```
class c
{
    public void main( String[] args )
    {
        System.out.println( "Hello" + args[0] );
    }
}
```

- Hello c
- Hello
- Hello world
- Runtime Error

[Clear selection](#)



what will be the output of following code?

1 point

```
class char_increment
{
    public static void main(String args[])
    {
        char c1 = 'D';
        char c2 = 84;
        c2++;
        c1++;
        System.out.println(c1 + " " + c2);
    }
}
```

- UE
- VE
- EU
- UF

[Clear selection](#)



what will be the output of following code?

1 point

```
class array_output
{
    public static void main(String args[])
    {
        char array_variable [] = new char[10];
        for (int i = 0; i < 10; ++i)
        {
            array_variable[i] = 'i';
            System.out.print(array_variable[i] + "");
        }
    }
}
```

- 1 2 3 4 5 6 7 8 9 10
- 0 1 2 3 4 5 6 7 8 9 10
- i j k l m n o p q r
- i i i i i i i i

Clear selection



Which of these is an incorrect array declaration?

1 point

- int arr[] = new int[5]
- int [] arr = new int[5]
- int arr[] = new int[5]
- int arr[] = int [5] new

[Clear selection](#)

Which one is a valid declaration of a boolean?

1 point

- boolean b1 = 1;
- boolean b4 = 'true'
- boolean b2 = 'false';
- boolean b3 = false;

[Clear selection](#)



what will be the output of following code?

1 point

```
class array_output
{
    public static void main(String args[])
    {
        int array_variable [] = new int[10];
        for (int i = 0; i < 10; ++i)
        {
            array_variable[i] = i;
            System.out.print(array_variable[i] + " ");
        }
    }
}
```

0 2 4 6 8

1 3 5 7 9

0 1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 8 9 10

Clear selection



Which of these are selection statements in Java?

1 point

- if()
- for()
- continue
- break

[Clear selection](#)

what will be the output of following code?

1 point

```
class selection_statements
{
    public static void main(String args[])
    {
        int var1 = 5;
        int var2 = 6;
        if ((var2 = 1) == var1)
            System.out.print(var2);
        else
            System.out.print(++var2);
    }
}
```

- 4
- 2
- 3
- 1

[Clear selection](#)



Which component is responsible for converting bytecode into machine specific code?

1 point

- JVM
- JDK
- JIT
- JRE

[Clear selection](#)

What is use of interpreter?

1 point

- They convert bytecode to machine language code
- They read high level code and execute them
- They are intermediated between JIT and JVM
- It is a synonym for JIT

[Clear selection](#)

What is a default value of string?

1 point

- 0
- null
- 0.0d
- false

[Clear selection](#)

If class C inherits class B. And B has inherited class A. Then while creating the object of class C, what will be the sequence of constructors getting called? 1 point

- Constructor of A then C, finally of B
- Constructor of C then B, finally of A
- Constructor of C then A, finally B
- Constructor of A then B, finally C

[Clear selection](#)

Which among the following is true for copy constructor? 1 point

- The argument object is passed by reference
- It can be defined with zero arguments
- Used when an object is passed by value to a function
- Used when a function returns an object

[Clear selection](#)



what will be the output of following code?

1 point

```
class student
{
    int marks;
    public: student(){}
    student(int x)
    {
        marks=x;
    }
};

main()
{
    student s1(100);
    student s2();
    student s3=100;
    return 0;
}
```

- Object s3, syntax error
- Only object s1 and s2 will be created
- Program runs and all objects are created
- Program will give compile time error



Which among the following function can be used to call default constructor 1 point implicitly in java?

- this()
- that()
- super()
- sub()

[Clear selection](#)

If a function has to be called only by using other member functions of the class, what should be the access specifier used for that function? 1 point

- Private
- Protected
- Public
- Default

[Clear selection](#)



what will be the output of following code?

1 point

```
class A
{
    private : int marks; char name[20];
    public :
        A(int x=100)
        {
            marks=x;
        }
};
```

- Objects can be created with one parameter or without parameter
- Object can be created only with one parameter
- Object can be created with more than one parameter
- Objects can be create only without parameter

[Clear selection](#)

Choose the correct option for the code given below.

```
class A{ static int c=0;
public: A(){ c++; } };
```

1 point

- Constructor will make c=1 for each object created
- Constructor will make c=0 for each object created
- Constructor will keep number of objects created
- Constructor will just initialize c=0 then increment by 1

[Clear selection](#)



What are local classes?

1 point

- Classes declared inside a package
- Classes declared inside a function
- Classes declared inside a class
- Classes declared inside structure

[Clear selection](#)

All the member functions of local classes are _____ by default.

1 point

- Static
- Inline
- Abstract
- Virtual

[Clear selection](#)



1 point

What will be the output of the following Java code?

```
1. class test
2. {
3.     int a;
4.     int b;
5.     void meth(int i , int j)
6.     {
7.         i *= 2;
8.         j /= 2;
9.     }
10. }
11. class Output
12. {
13.     public static void main(String args[])
14.     {
15.         test obj = new test();
16.         int a = 10;
17.         int b = 20;
18.         obj.meth(a , b);
19.         System.out.println(a + " " + b);
20.     }
21. }
```

- 10 20
- 20 10
- 20 40
- 40 20

[Clear selection](#)



Which concept will result in derived class with more features (consider maximum 3 classes)?

1 point

- Single inheritance
- Multiple inheritance
- Multilevel inheritance
- Hierarchical inheritance

[Clear selection](#)

Which constructor will be called first from the classes involved in single inheritance from object of derived class?

1 point

- Base class constructor
- Derived class constructor
- Both class constructors at a time
- Runtime error

[Clear selection](#)

Why do we need to handle exceptions?

1 point

- To prevent abnormal termination of program
- To encourage exception prone program
- To avoid syntax errors
- To save memory

[Clear selection](#)

Which is the universal exception handler class?

1 point

- Object
- Math
- Errors
- Exceptions

[Clear selection](#)

The catching of base class exception _____ in java.

1 point

- a) After derived class is not allowed by compiler
- b) Before derived class is not allowed by compiler
- c) Before derived class is allowed
- d) After derived class can't be done

[Clear selection](#)

If a catch block accepts more than one exceptions then _____

1 point

- a) The catch parameters are not final
- b) The catch parameters are final
- c) The catch parameters are not defined
- d) The catch parameters are not used

[Clear selection](#)



Which among the following is true for upcasting in inheritance?

1 point

- a) Downward to the inheritance tree
- b) Upward to the inheritance tree
- c) Either upward or downward
- d) Doesn't apply on inheritance

[Clear selection](#)

Which property is shown most when upcasting is used?

1 point

- a) Code reusability
- b) Code efficiency
- c) Complex code simple syntax
- d) Encapsulation

[Clear selection](#)

Upcasting is _____ without an explicit type cast.

1 point

- a) Always allowed for public inheritance
- b) Always allowed for protected inheritance
- c) Always allowed for private inheritance
- d) Not allowed

[Clear selection](#)



What happens when new fails?

1 point

- a) Returns zero always
- b) Throws an exception always
- c) Either throws an exception or returns zero
- d) Terminates the program

[Clear selection](#)

The new operator _____

1 point

- a) Can allocate reference types too
- b) Doesn't allocate reference types
- c) Can allocate reference to objects
- d) Doesn't allocate any data

[Clear selection](#)

Which among the following is added in grammar of new operator?

1 point

- a) Finalize
- b) Arg
- c) Initializer
- d) Allocator

[Clear selection](#)



Which among the following is false?

1 point

- a) Object must be created before using members of a class
- b) Memory for an object is allocated only after its constructor is called
- c) Objects can't be passed by reference
- d) Objects size depends on its class data members

[Clear selection](#)

The object can't be _____

1 point

- a) Passed by reference
- b) Passed by value
- c) Passed by copy
- d) Passed as function

[Clear selection](#)

class student { int rollno; char name[20]; static int studentno; };

1 point

- a) 20
- b) 22
- c) 24
- d) 28

[Clear selection](#)

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[Clear form](#)



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WTP TEST

WTP TEST

Total points 28/40 

Time--45 min, 40 question

✓ Which of the following tag is used to insert a line-break in HTML?

1/1

-

- <a>
- <pre>
-



✗ Which character is used to represent the closing of a tag in HTML?

0/1

- \
- !
- /
- .



Correct answer

- /



X How to add a background color in HTML?

0/1

- <marquee bg color: "red">
- <marquee bg-color = "red">
- <marquee bgcolor = "red">
- <marquee color = "red">

X**Correct answer**

- <marquee bgcolor = "red">

✓ Which of the following attribute is used to provide a unique name to an element? 1/1

- class
- id
- type
- None of the above

✓**✓ Which of the following HTML tag is used to display the text with scrolling effect?** 1/1

- <marquee>
- <scroll>
- <div>
- None of the above

✓

✗ Which of the following is the correct way to send mail in HTML?

0/1

-
-
- <mail xy@y</mail>
- None of the above

✗

Correct answer

-

✓ Which of the following HTML attribute is used to define inline styles?

1/1

- style
- type
- class
- None of the above

✓

✓ A program in HTML can be rendered and read by -

1/1

- Web browser
- Server
- Interpreter
- None of the above

✓



✓ Which of the following are the attributes of the tag?

1/1

- method
- action
- Both (a) & (b)
- None of the above



✓ Which of the following is the correct syntax to make the background-color of all paragraph elements to yellow? 1/1

- p {background-color : yellow;}
- p {background-color : #yellow;}
- all {background-color : yellow;}
- all p {background-color : #yellow;}



✗ Which of the following property is used as the shorthand property for the padding properties? 0/1

- padding-left
- padding-right
- padding
- All of the above



Correct answer

- padding



✓ The CSS property used to specify the transparency of an element is -

1/1

- opacity
- filter
- visibility
- overlay



✓ The CSS property used to specify whether the text is written in the horizontal or vertical direction?

1/1

- writing-mode
- text-indent
- word-break
- None of the above



✓ The CSS property used to draw a line around the elements outside the border?

1/1

- border
- outline
- padding
- line



✗ Which of the following class in Bootstrap is used to provide a responsive fixed width container? 0/1

- container-fixed
- container-fluid
- container
- All of the above

✗

Correct answer

- container

✓ How many columns are allowed in a bootstrap grid system? 1/1

- 2
- 12
- 3
- 5

✓

✓ Which of the following class in bootstrap is used to create a big box for calling extra attention? 1/1

- .box
- .container
- .container-fluid
- .jumbotron

✓

✓ The correct syntax of creating a standard navigation bar is -

1/1

- <nav class="navigationbar navbar">
- <nav class="navbar navbar-default">
- <nav class="nav navbar">
- <nav class="navbar default">



✗ Which of the following is the correct syntax of creating a standard navigation tab?

0/1

- <ul class="navigation nav-tabs">
- <ul class="nav tab">
- <ul class="nav nav-tabs">
- <ul class="navigation tabs">



Correct answer

- <ul class="nav nav-tabs">

✓ Which of the following class is used to create a black navigation bar?

1/1

- .navbar-default
- .navbar-inverse
- .navbar-black
- .navbar-dark



✓ The plugin used to create a cycle through elements as a slideshow is - 1/1

- slideshow
- scrollspy
- carousel
- None of the above



✓ Which of the following class in Bootstrap is used to create a basic list group? 1/1

- .grouped-list
- .select-list
- .list-group
- Option 4



✗ Which of the following class in Bootstrap is used to add a zebra-stripe to a table? 0/1

- .tab-striped
- .zebra-strip
- .table-striped
- .table-striped



Correct answer

- .table-striped



✓ Which of the following class in Bootstrap is used to create a large button? 1/1

- .btn-xl
- .btn-lrg
- .btn-large
- .btn-lg



✗ Which of the following plugin in Bootstrap is used to create a modal window? 0/1

- popup
- alert
- modal
- window



Correct answer

- modal

✓ The class in Bootstrap which is used to specify the collapsible elements is 1/1

-
- .collapse
- .carousel
- .pager
- None of the above



✓ The class used for creating the small size wells is -

1/1

- .well-small
- .well-short
- .well-lg
- .well-sm



✓ Which of the following is the correct syntax to insert search icon?

1/1

-
-
-
-



✓ Which of the following is correct method to add a success button?

1/1

- <button class = "btn btn-success"> success </button>
- <button class = "btn button-success"> success </button>
- <button class = "button btn-success"> success </button>
- <button class = "button btn-primary"> success </button>



✓ Is it true that the Bootstrap grid system works across multiple devices? 1/1

- True ✓
- False
- Can't say
- May be

✓ The class "xs" in Bootstrap is used for - 1/1

- tablets
- phones ✓
- desktop
- All of the above

✗ Which of the following class in Bootstrap is used to create an animated progress bar? 0/1

- .active
- .progress-success
- .progress-active ✗
- None of the above

Correct answer

- .active



- ✓ The element _____ simply groups items within an enclosed dd tag, 1/1 though it may associate them with a caption defined by a dt tag.

- object
- figure
- embed
- collect

✓

- ✓ The _____ element is used to render simple graphics such as line art, 1/1 graphs, and other custom graphical elements on the client side.

- metadata
- css
- canvas
- art

✓



✗ . Consider the following markup and answer the question that follow.

0/1

```
<source src="html_5.mp4" type="video/mp4"><source src="html_5.ogv"  
type="video/ogg">What is the need to add multiple file formats for the  
same file?
```

- To provide fallback support
- To address the media support problem
- To provide fallback support & address the media support problem
- To provide foul back support

✗

Correct answer

- To provide fallback support & address the media support problem

✓ In HTML Audio/Video DOM, _____ sets or returns whether the audio/video should be loaded when the page loads.

1/1

- preload
- autoplay
- buffered
- controller

✓



✓ Which of the following is not a HTML5 tag?

1/1

- <video>
- <source>
- <track>
- <slider>



✗ Which of the following HTML Video – Media Type is not supported in IE? 0/1

- WebM
- MP4
- Ogg
- MP4 FLAC



Correct answer

- Ogg



✗ In HTML Audio/Video DOM, _____ returns a TimeRanges object representing the buffered parts of the audio/video.

0/1

- preload
- networkState
- buffered
- controller

✗

Correct answer

- buffered

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DS-1

DS-1

Total points 33/40 

time: 45 min

What are the 3 depth traversals for a tree data structure?

1/1

- Pre-, In- and Post-order
- Pro-, In- and Past-order
- Pre-, Out- and Post-order
- Pre-, In- and New-order

Which of these tree traversal methods is used to output the contents of a binary tree in ascending order?

- Pre-Order
- In-Order
- Post-Order
- Monastic Orders

Root

1/1

- data structure similar to a graph, with no loops.
- an object in a graph also known as a vertex
- a join of relationship between nodes - also know as an arc
- the starting node in a rooted tree structure from which all other nodes branch off



A Kind of tree where every node in a tree can have at most two children.

0/1

- Binary Tree
- Binary Expression Tree
- Tree
- Binary Search Tree

Which of the following trait of a hash function is most desirable?

0/1

- it should cause less collisions
- it should cause more collisions
- it should occupy less space
- it should be easy to implement

What is the advantage of using a doubly linked list for chaining over singly linked list?

- it takes less memory
- it is easy to implement
- it makes the process of insertion and deletion faster
- it causes less collisions



What is the worst case search time of a hashing using separate chaining algorithm?

0/1

- O(N log N)
- O(N)
- O(N^2)
- O(N^3)

Which of the following is not a collision resolution technique?

1/1

- Separate chaining
- Linear probing
- Quadratic probing
- Hashing

The case in which a key other than the desired one is kept at the identified location is called?

0/1

- Hashing
- Collision
- Chaining
- Open addressing



What is the load factor?

1/1

- Average array size
- Average key size
- Average chain length
- Average hash table length

Which data structure uses hashing to store information with constant lookup time?

1/1

- Hash table
- 1D Array
- Linked List
- 2D Array
- Stack

Advantages of linked list representation of binary trees over arrays? *

1/1

- a) dynamic size
- b) ease of insertion/deletion
- c) ease in randomly accessing a node
- d) both dynamic size and ease in insertion/deletion



Disadvantages of linked list representation of binary trees over arrays? *

0/1

- a) Randomly accessing is not possible
- b) Extra memory for a pointer is needed with every element in the list
- c) Difficulty in deletion
- d) Random access is not possible and extra memory with every element

A linear collection of data elements where the linear node is given by means of pointer is called? *1/1

- a) Linked list
- b) Node list
- c) Primitive list
- d) Unordered list

The concatenation of two lists can be performed in O(1) time. Which of the following variation of the linked list can be used? *1/1

- a) Singly linked list
- b) Doubly linked list
- c) Circular doubly linked list
- d) Array implementation of list



In a stack, if a user tries to remove an element from an empty stack it is called *1/1

- a) Underflow
- b) Empty collection
- c) Overflow
- d) Garbage Collection

Entries in a stack are “ordered”. What is the meaning of this statement? *

1/1

- a) A collection of stacks is sortable
- b) Stack entries may be compared with the ‘<’ operation
- c) The entries are stored in a linked list
- d) There is a Sequential entry that is one by one

Which of the following is not the application of stack? *

0/1

- a) A parentheses balancing program
- b) Tracking of local variables at run time
- c) Compiler Syntax Analyzer
- d) Data Transfer between two asynchronous process



Here is an infix expression: $4 + 3 * (6 * 3 - 12)$. Suppose that we are using the usual stack algorithm to convert the expression from infix to postfix notation. The maximum number of symbols that will appear on the stack AT ONE TIME during the conversion of this expression? *1/1

- a) 1
- b) 2
- c) 3
- d) 4

What kind of linked list is best to answer questions like “What is the item at position n?” *1/1

- a) Singly linked list
- b) Doubly linked list
- c) Circular linked list
- d) Array implementation of linked list

Linked list is considered as an example of _____ type of memory allocation. *1/1

- a) Dynamic
- b) Static
- c) Compile time
- d) Heap



In Linked List implementation, a node carries information regarding

*1/1

- a) Data
- b) Link
- c) Data and Link
- d) Node

Linked list data structure offers considerable saving in _____ *

1/1

- a) Computational Time
- b) Space Utilization
- c) Space Utilization and Computational Time
- d) Speed Utilization

Which of the following application makes use of a circular linked list? *

0/1

- a) Undo operation in a text editor
- b) Recursive function calls
- c) Allocating CPU to resources
- d) Implement Hash Tables



Which of the following is false about a circular linked list? *

1/1

- a) Every node has a successor
- b) Time complexity of inserting a new node at the head of the list is O(1)
- c) Time complexity for deleting the last node is O(n)
- d) We can traverse the whole circular linked list by starting from any point

In postorder traversal of binary tree right subtree is traversed before visiting root. *1/1

- a) True
- b) False

What is the possible number of binary trees that can be created with 3 nodes, giving the sequence N, M, L when traversed in post-order. *1/1

- a) 15
- b) 3
- c) 5
- d) 8



A binary search tree contains values 7, 8, 13, 26, 35, 40, 70, 75. Which one of the following is a valid post-order sequence of the tree provided the pre-order sequence as 35, 13, 7, 8, 26, 70, 40 and 75? *1/1

- a) 7, 8, 26, 13, 75, 40, 70, 35
- b) 26, 13, 7, 8, 70, 75, 40, 35
- c) 7, 8, 13, 26, 35, 40, 70, 75
- d) 8, 7, 26, 13, 40, 75, 70, 35

A full binary tree can be generated using ____ * 1/1

- a) post-order and pre-order traversal
- b) pre-order traversal
- c) post-order traversal
- d) in-order traversal

The steps for finding post-order traversal are traverse the right subtree, traverse the left subtree or visit the current node. *1/1

- a) True
- b) False



The pre-order and in-order are traversals of a binary tree are T M L N P O Q and *1/1 L M N T O P Q. Which of following is post-order traversal of the tree?

- a) L N M O Q P T
- b) N M O P O L T
- c) L M N O P Q T
- d) O P L M N Q T

The difference between the external path length and the *
internal path length of a
binary tree with n internal nodes is?

1/1

- 1
- n
- n+1
- 2n



Suppose a binary tree is constructed with n nodes, * such that each node has exactly either zero or two children.

1/1

The maximum height of the tree will be?

- a) $(n+1)/2$
- b) $(n-1)/2$
- c) $n/2 - 1$
- d) $(n+1)/2 - 1$

In full binary search tree every * internal node has exactly two children. If there are 100 leaf nodes in the tree, how many internal nodes are there in the tree?

1/1

- 25
- 49
- 99
- 101



which type of traversal of binary search tree outputs *
the value in sorted order?

1/1

- a) Pre-order
- b) In-order
- c) Post-order
- d) None

A binary search tree is formed from the sequence *
6, 9, 1, 2, 7, 14, 12, 3, 8, 18. The
minimum number of nodes required to
be added in to this tree to form an extended
binary tree is?

1/1

- a) 3
- b) 6
- c) 8
- d) 11



When a binary tree is converted in to an y *
extended binary tree, all the nodes of a
binary tree in the external node becomes

1/1

- a) Internal nodes
- b) External nodes
- c) Root nodes
- d) None

If n elements are sorted in a binary search tree. *

1/1

What would be the asymptotic
complexity to search a key in the tree?

- a) $O(1)$
- b) $O(\log n)$
- c) $O(n)$
- d) $O(n \log n)$



The post order traversal of binary tree is DEBFCA. *

1/1

Find out the pre order
traversal.

- A. ABFCDE
- B. ADBFEC
- C. ABDEC F
- D. ABDCEF

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Database -1

Database -1

Total points 28/40 

✓ 3. The join which performs Cartesian product is called _____.*

1/1

- a. Left join
- b. Left outer join
- c. Right outer join
- d. Cross join



✓ 4. The BLOB datatype stores what type of data?

*1/1

- a. Character data
- b. binary data
- c. numeric data
- d. ASCII data



✓ 5. In case a lock is requested for, in the cursor's query, the lock is actually *1/1 achieved when you _____ the cursor.

- a. Declare
- b. Open
- c. Fetch(from the cursor)
- d. Close



✓ 6. _____ option can be used with the query of the cursor to obtain a *1/1 lock on the rows opened by the cursor

- a. FOR LOCK
- b. FOR UPDATE ✓
- c. FOR CHANGE
- d. FOR EXPLICIT

✗ 7. The _____ statement retrieves the current row and advances the *0/1 cursor to the next row.

- a. SET
- b. GET
- c. MOVE ✗
- d. None of the above

Correct answer

- d. None of the above



✗ 8. The close statement disables the cursor and the active set becomes *0/1 undefined.

- a. True
- b. False

✗

Correct answer

- a. True

✓ 9. _____ is the sequence of steps for handling Explicit cursors *

1/1

- a. Declare–Fetch and Process Iteratively–Open—Close
- b. Declare—Open—Close-- Fetch and Process Iteratively
- c. Declare–Open–Fetch and Process Iteratively–Close
- d. Open—Declare–Fetch and Process Iteratively–Close

✓

✓ 10. The _____ step actually executes the SELECT query associated *1/1 with an Explicit cursor

- a. Declare
- b. Open
- c. Fetch
- d. Close

✓



✓ 11. In MySQL, we can use _____ for single line comment. *

1/1

- a. **
- b. --
- c. \\
- d. //



✓ 12. In MySQL, A _____ variable can store a logical true or false value. *

1/1

- a. Char
- b. Binary
- c. Boolean
- d. Logical



✗ 13. Which of the following statements is true about while loops? *

0/1

- a. Explicit exit statements are required in while loops. ✗
- b. Counter variables are required in while loops.
- c. An if-then statement is needed to signal when a while loop should end.
- d. All exit conditions for while loops are handled in the exit when clause.

Correct answer

- b. Counter variables are required in while loops.



✓ 14. Comments in a MySQL code are inserted using *

1/1

- a. --
- b. /* */
- c. Both (1) and (2)
- d. #



✓ 15. Which of the following is true? *

1/1

- a. For nested blocks an object defined in a parent block is available within all its child blocks (nested blocks).
- b. The reverse is not true; objects defined in a child block are not visible to the parent.
- c. If a nested block defines an object with the same name as an object in its parent block then only the local object is visible.
- d. All of the above



✗ 16. The MySQL blocks can contain _____ & _____ statements *0/1

- a. DML,DCL
- b. DML,DDL
- c. GRANT,REVOKE
- d. TCL,DML

Correct answer

- d. TCL,DML

✗ 17. MySQL extends SQL by adding control structures found in other procedural language. *0/1

- a. True
- b. False

Correct answer

- a. True



✓ 18. _____ is a compulsory section of a MySQL block. *

1/1

- a. Declaration section marked by the keyword DECLARE
- b. Executable section marked by the keyword BEGIN END
- c. Exception section marked by the keyword EXCEPTION
- d. All of the above

✓ 19. _____ loop if used properly can be used to ensure that the statements within the loop are executed iteratively but at least once.

*1/1

- a. Repeat
- b. While loopend loop;
- c. for I in 1..10 loop end loop;
- d. All of the above

✗ 20. Identifiers in MySQL can contain upto _____ characters. *

0/1

- a. 255
- b. 30
- c. 1000
- d. none

Correct answer

- b. 30



✓ 21. The ability to query data, as well as insert, delete, and alter tuples, is *1/1 offered by _____

- a) TCL (Transaction Control Language)
- b) DCL (Data Control Language)
- c) DDL (Data Definition Langauge)
- d) DML (Data Manipulation Langauge)



✓ 22. The given Query can also be replaced with_____: *1/1
SELECT name, course_id FROM instructor, teaches WHERE instructor_ID= teaches_ID;

- Select name, course_id from teaches,instructor where instructor_id=course_id;
- Select name, course_id from instructor natural join teaches;
- Select name, course_id from instructor;
- Select course_id from instructor join teaches;



✓ 23. Which one of the following given statements possibly contains the error? *1/1

- select * from emp where empid = 10003;
- select empid from emp where empid = 10006;
- select empid from emp;
- select empid where empid = 1009 and Lastname = 'GELLER';



✗ 24. What do you mean by one to many relationships? *

0/1

- One class may have many teachers
- One teacher can have many classes
- Many classes may have many teachers
- Many teachers may have many classes

✗

Correct answer

- One teacher can have many classes

✗ 25. Which of the following is a top-down approach in which the entity's higher level can be divided into two lower sub-entities? *0/1

- Aggregation
- Generalization
- Specialization
- All of the above

✗

Correct answer

- Specialization



✓ 26. Which one of the following commands is used to restore the database to the last committed state? *1/1

- Savepoint
- Rollback
- Commit
- Both A & B

✓

✓ 27. The term "SQL" stands for * 1/1

- Standard query language
- Sequential query language
- Structured query language
- Server-side query language

✓

✓ 28. For what purpose the DML is provided? * 1/1

- Addition of new structure in the database
- Manipulation & processing of the database
- Definition of the physical structure of the database system
- All of the above

✓



✓ 29. The term "ODBC" stands for _____ *

1/1

- Oral database connectivity
- Oracle database connectivity
- Open database connectivity
- Object database connectivity



✓ 30. Which one of the following keyword is used to find out the number of values in a column? *1/1

- TOTAL
- COUNT
- SUM
- ADD



✓ What type of join is needed when you wish to include rows that do not have matching values? *1/1

- Equi-join
- Natural join
- Outer join
- All of the above.



✗ What type of join is needed when you wish to return rows that do have matching values? *0/1

- A. Equi-join
- B. Natural join
- C. Outer join
- D. All of the above.

✗

Correct answer

- D. All of the above.

✓ Which of the following is true concerning a procedure? * 1/1

- A. You do not create them with SQL.
- B. They do not need to have a unique name.
- C. They include procedural and SQL statements.
- D. They are the same thing as a function.

✓

✓ A CASE SQL statement is which of the following? * 1/1

- A. A way to establish an IF-THEN-ELSE in SQL.
- B. A way to establish a loop in SQL.
- C. A way to establish a data definition in SQL.
- D. All of the above.

✓



✗ Which of the following statements is true concerning routines and triggers? *0/1

- A. Both consist of procedural code.
- B. Both have to be called to operate.
- C. Both run automatically.
- D. Both are stored in the database.

✗

Correct answer

- A. Both consist of procedural code.

✗ Which of the following is one of the basic approaches for joining tables? *0/1

- A. Subqueries
- B. Union Join
- C. Natural join
- D. All of the above

✗

Correct answer

- D. All of the above



✓ Which of the following is true concerning systems information in an RDBMS?

*1/1

- A. RDBMS store database definition information in system-created tables.
- B. This information can be accessed using SQL.
- C. This information often cannot be updated by a user.
- D. All of the above.

✓

✓ The following SQL is which type of join: SELECT CUSTOMER_T.

1/1

CUSTOMER_ID, ORDER_T.CUSTOMER_ID, NAME, ORDER_ID FROM
CUSTOMER_T,ORDER_T WHERE CUSTOMER_T.CUSTOMER_ID = ORDER_T.
CUSTOMER_ID

- A. Equi-join
- B. Natural join
- C. Outer join
- D. Cartesian join

✓



✓ A UNION query is which of the following?

1/1

- A. Combines the output from no more than two queries and must include the same number of columns.
- B. Combines the output from no more than two queries and does not include the same number of columns.
- C. Combines the output from multiple queries and must include the same number of columns.
- D. Combines the output from multiple queries and does not include the same number of columns.

✓ Which of the following is a correlated subquery? *

1/1

- A. Uses the result of an inner query to determine the processing of an outer query.
- B. Uses the result of an outer query to determine the processing of an inner query.
- C. Uses the result of an inner query to determine the processing of an inner query.
- D. Uses the result of an outer query to determine the processing of an outer query.

✓ Which function is used to return the current date and time in SQL? *

1/1

- a) CURRENT_TIMESTAMP
- b) NOW
- c) SYSDATE
- d) GETDATE



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✓ Which of the following statements is true regarding the scope of 'request' 1/1
in JSP?

- C. References to objects with request scope are stored in the request object
- A. Option 1 Objects with request scope are accessible from pages processing the same request where they were created
- D. All of the above ✓
- B. All references to the object shall be released after the request is processed; in particular, if the request is forwarded to a resource in the same run time, the object is still reachable



✓ What is the correct syntax for annotation wiring?

1/1

- <annotation-context:config /> to bean configuration.
- <annotation-config /> to bean configuration.
- <annotation-context-config /> to bean configuration.
- <context:annotation-config/> to bean configuration.



✓ Beans can be created by which of the following properties?

1/1

- Scope
- Property
- Class
- It's own constructor



✗ A bean can have more than one name using multiple id attributes?

0/1

- True
- False



Correct answer

- True



✗ The annotations must be added to the implementation class but not the interface 0/1

- True
- False

✗

Correct answer

- True

✓ Attribute used to handle web flow requests. 1/1

- servlet-mapping
- servlet-attr
- servlet-flow
- servlet-requests1

✓

✗ . Which HTTP method is not considered as idempotent? 0/1

- Get
- post
- Put
- Head

✗

Correct answer

- Put



✓ . Which method is used by servlet to handle form data from a client?

1/1

- HttpServlet.doPost()
- HttpServlet.doPut()
- HttpServlet.doHead()
- ServletRequest doGet()



✗ . Which types define the methods getAttribute() and setAttribute()?

0/1

- HttpSession
- ServletContext
- ServletRequest
- All of the above



Correct answer

- ServletRequest

✓ . _____ bean can have persistent relationship with other entity beans.

1/1

- CMP
- Entity
- BMP
- Message-driven beans



✓ SessionFactory is a thread-safe object.

1/1

True



false

✗ Which of the following methods hits database always?

0/1

load()



loadDatabase()

getDatabase()

get()

Correct answer

get()

✓ Which of the following is not an advantage of Hibernate Criteria API?

1/1

Allows to use aggregate functions

Cannot order the result set



Allows to fetch only selected columns of result

Can add conditions while fetching results



- ✓ Spring HibernateTemplate can simplify your DAO implementation by managing sessions and transactions for you.

1/1

- True
 False



- ✓ Sessionfactory can manage contextual sessions for you and allows you to retrieve them by the:-

- getSession() method
 getCurrent() method
 getCurrentSession() method
 none of the mentioned



- ✓ DAO methods require access to the session factory, which can be injected:-

1/1

- a setter method
 constructor argument
 none of the mentioned
 all of the mentioned



✓ Spring provides to simplify your DAO implementation by managing entitymanagers and transactions for you:-

1/1

- HibernateTemplate
- JpaTemplate
- SpringTemplate
- None of the mentioned



✓ You can assign a component name in this annotation and have the session factory autowired by the Spring IoC container with @Autowired.

1/1

- True
- False



✓ A set of persistent annotations for you to define mapping metadata.

1/1

- JPA
- JSR
- XML
- None of the mentioned



- ✗ Each entity class to be persisted by an ORM framework, a default constructor with no argument is required.

0/1

- True
 False

✗

Correct answer

- True

- ✓ What are the major components of the JDBC?

1/1

- DriverManager, Driver, Connection, Statement, and ResultSet
 DriverManager, Driver, Connection, and Statement
 DriverManager, Statement, and ResultSet
 DriverManager, Connection, Statement, and ResultSet

✓

- ✓ Which of the following method is used to perform DML statements in JDBC?

1/1

- executeResult()
 executeQuery()
 executeUpdate()
 execute()

✓



✓ Which methods are required to load a database driver in JDBC?

1/1

- getConnection()
- registerDriver()
- forName()
- Both b and c



✓ JDBC API supports _____ and _____ architecture model for accessing the database.

1/1

- Two-tier
- Three-tier
- Both a and b
- Only b



✓ Which of the following is not a jsp directive?

1/1

- include
- page
- scriptlet
- useBean



✓ How many JDBC driver types does Sun define?

1/1

- One
- Two
- Three
- Four



✓ The difference between Servlets and JSP is the

1/1

- A.translation
- B. compilation
- C. syntax
- D. Both A and B



✓ Which option is true about session scope?

1/1

- A. Objects are accessible only from the page in which they are created
- B. Objects are accessible only from the pages which are in same session
- C. Objects are accessible only from the pages which are processing the same request
- D. Objects are accessible only from the pages which reside in same application



✗ The method forward(request, response) will

0/1

- A. return back to the same method from where the forward was invoked
- B. not return back to the same method from where the forward was invoked and ✗ the web pages navigation continues
- C. Both A and B are correct
- D. None of the above

Correct answer

- A. return back to the same method from where the forward was invoked

✓ JSP includes a mechanism for defining or custom tags. 1/1

- A. static attributes
- B. local attributes
- C. dynamic attributes ✓
- D. global attributes



✓ Why DB connections are not written directly in JSPs?

1/1

- A.. Response is slow
- B. Not a standard J2EE architecture
- C. Load Balancing is not possible
- D. Both B and C
- Other:



✓ How many jsp implicit objects are there and these objects are created by the web container that are available to all the jsp pages?

1/1

- A.8
- B. 9
- C. 10
- D. 7



✓ Why use Request Dispatcher to forward a request to another resource, instead of using a sendRedirect?

1/1

- A.Redirects are no longer supported in the current servlet API
- B. Redirects are not a cross-platform portable mechanism
- C. The RequestDispatcher does not use the reflection API
- D. The RequestDispatcher does not require a round trip to the client, and thus is more efficient and allows the server to maintain request state



✓ Which attribute specifies a JSP page that should process any exceptions 1/1 thrown but not caught in the current page?

- A. The ErrorPage Attribute
- B. The IsErrorPage Attribute
- C. Both A & B
- D. None of the above



✓ JDBC is a interface, which means that it is used to invoke SQL 1/1 commands directly

- A. low-level
- B. middle-level
- C. higher-level
- D. user



✓ What is JDBC?

1/1

- A. java compiler
- B. Java API
- C. Java interpreter
- D. Both A and B



✓ . Dynamic interception of requests and responses to transform the information is done by

1/1

- A.servlet container
- B. servlet config
- C. servlet context
- D. servlet filter

✓

✓ This is a software distribution model in which applications are hosted by a vendor or service provider and made available to customers over a network, typically the Internet.

1/1

- A.Platform as a Service (PaaS)
- B. Infrastructure as a Service (IaaS)
- C. Software as a Service (SaaS)
- D. None

✓



✗ What is the initial contact point for handling a web request in a Page-Centric architecture?

0/1

- A. A JSP page
- B. A JavaBean
- C. A servlet
- D. A session manager

✗

Correct answer

- A. A JSP page

✓ How to send data in get method?

1/1

- A. We can't
- B. Through url
- C. Through payload
- D. None of these

✓

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