Q.1  Quick sort is a \_\_\_\_\_\_\_\_\_\_  
\*

a) greedy algorithm

b) divide and conquer algorithm

c) dynamic programming algorithm

d) backtracking algorithm

Q.2  Which one of the following would breach the integrity of a system?\*

a. Looking the room to prevent theft

b. Full access rights for all users

c. Fitting the system with an anti-theft device

d. Protecting the device against willful or accidental damage

Q.3  Which is the worst method of choosing a pivot element?  
\*

a) first element as pivot

b) last element as pivot

c) median-of-three partitioning

d) random element as pivot

Q.4  Which is the safest method to choose a pivot element?  
\*

a) choosing a random element as pivot

b) choosing the first element as pivot

c) choosing the last element as pivot

d) median-of-three partitioning method

Q.5  Which SQL keyword is used to sort the result-set?  
\*

a) ORDER BY

b) SORT

c) ORDER

d) SORT BY

Q.6  Which software prevents the external access to a system?\*

a. Firewall

b. Gateway

c. Router

d. Virus checker

Q.7  Which of the following methods is the most effective for picking the pivot element?  
\*

a) first element

b) last element

c) median-of-three partitioning

d) random element

Q.8  What happens to the thread when garbage collection kicks off?\*

A. The thread continues its operation

B. The thread is paused while garbage collection runs

C. Garbage collection cannot happen until the thread is running

D. The thread and garbage collection do not interfere with each other

Q.9  Which of the following is not an exchange sort?  
\*

a) Bubble Sort

b) Quick Sort

c) Partition-exchange Sort

d) Insertion Sort

Q.10  What does the ALTER TABLE clause do?  
\*

a) The SQL ALTER TABLE clause modifies a table definition by altering, adding, or deleting table columns and/or constraints

b) The SQL ALTER TABLE clause is used to insert data into database table

c) THE SQL ALTER TABLE deletes data from database table

d) The SQL ALTER TABLE clause is used to delete a database table

Q.11  Which statement is true?\*

A. Objects with at least one reference will never be garbage collected.

B. Objects from a class with the finalize() method overridden will never be garbage collected.

C. Objects instantiated within anonymous inner classes are placed in the garbage collectible heap.

D. All objects that are eligible for garbage collection will be garbage collected by the garbage collector.

Q.12  Which of the following best describes uploading information?\*

a. Sorting data on a disk drive

b. Sending information to a host computer

c. Receiving information from a host computer

d. Sorting data on a hard drive

Q.13  Which of the following is good for sorting arrays having less than 100 elements?  
\*

a) Quick Sort

b) Selection Sort

c) Merge Sort

d) Insertion Sort

Q.14  Which of the following has the highest memory requirement?\*

A. Stack

B. Class

C. JVM

D. Heap

Q.15 Predict the output of the following pseudocode.

Integer value, n

Set value = 1, n = 45

while(value less than equal to n)

 value = value << 1

 end loop

 Print value

\*

A 16

B 32

C 64

D 36

Q.16 Integer a, b, c

Set c = 12, b = 4  
a = c / b  
c = b >> a  
Print c

\*

A 2

B 0

C 6

D 4

Q.17  Which of the following is not an advantage of optimized bubble sort over other sorting techniques in case of sorted elements?  
\*

a) It is faster

b) Consumes less memory

c) Detects whether the input is already sorted

d) Consumes less time

Q.18 Which of the following is a garbage collection technique?\*

A. Cleanup model

B. Sweep model

C. Mark and sweep model

D. Space management model

Q.19 What will be the output of the following Java code?

**class** 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] + " ");

                i++;

            }

        }

    }

\*

a) 0 2 4 6 8

b) 1 3 5 7 9

c) 0 1 2 3 4 5 6 7 8 9

d) 1 2 3 4 5 6 7 8 9 10

Q.20 Which of the following statements could be valid with respect to the ICMP (Internet Control Message Protocol)?\*

a. It reports all errors which occur during transmission.

b. A redirect message is used when a router notices that a packet seems to have been routed wrongly.

c. It informs routers when an incorrect path has been taken.

d. The "destination unreachable" type message is used when a router cannot locate the destination.

Q.21  Which of the following is not an advantage of a priority queue?  
\*

a) Easy to implement

b) Processes with different priority can be efficiently handled

c) Applications with differing requirements

d) Easy to delete elements in any case

Q.22  Which of these class is super class of all the events?\*

A. ItemEvent

B. EventClass

C. ActionEvent

D. EventObject

Q.23  Which of the following IP addresses can be used as (a) loop-back addresses?\*

a. 0.0.0.0

b. 127.0.0.1

c. 255.255.255.255

d. 0.255.255.255

Q.24   When the mail server sends mail to other mail servers it becomes \_\_\_ ?\*

a. SMTP client

b. SMTP server

c. Peer

d. Master

Q.25  What does a Data Type in Java refers to?\*

A. The place where data is stored

B. The technique how data is retreived

C. The type or variety of data being handled for reading and writing

D. None of the above

Q.26  In linked list implementation of a queue, front and rear pointers are tracked. Which of these pointers will change during an insertion into EMPTY queue?  
\*

a) Only front pointer

b) Only rear pointer

c) Both front and rear pointer

d) No pointer will be changed

Q.27 After line 11 runs, how many objects are eligible for garbage collection?

class X2 {

public X2 x;

public static void main(String [] args) {

X2 x2 = new X2(); /\* Line 6 \*/

X2 x3 = new X2(); /\* Line 7 \*/

x2.x = x3;

x3.x = x2;

x2 = new X2();

x3 = x2; /\* Line 11 \*/

doComplexStuff();

}

}

A. 0

B. 1

C. 2

D. 3

Q.28  Which of the following is correct IPv4 address?\*

a. 124.201.3.1.52

b. 01.200.128.123

c. 300.142.210.64

d. 10110011.32.16.8

e. 128.64.0.0

Q.29  Which statement is true?\*

A. The garbage collector uses a mark and sweep algorithm.

B. If object 1 refers to object 2, then object 2 can't be garbage collected.

C. Calling Runtime.gc() will cause eligible objects to be garbage collected.

D. If an object can be accessed from a live thread, it can't be garbage collected.

Q.30  A proxy server is used as the computer?\*

a. with external access

b. acting as a backup

c. performing file handling

d. accessing user permissions