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```
Q. No. 15. What is the output of the following C code snippet?

#include <stdio.h>
int main()
{
  int a=5,b=10,c=15;
  printf("%d ",sizeof(c/=a+b));
  printf("%d",c);
  return(0);
}

A: 4 1

B: 4 15

C: 2 1
```

Clear Answer

D: Compile time error

Q. No. 16. Which of the following function is used to delete an element from the

Mark For Review

Queue?

A OB OC OD

A: Enqueue

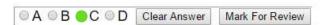
B: Pop

C: Dequeue

D: Push

**Explaination:** 

Dequeue: This function is used to remove (or delete) an element from the front of the queue.



- Q. No. 17. Which of the following is not an application of stack?
  - A: A parentheses balancing program
  - B: Keeping track of local variables at run time
  - C: Syntax analyzer for a compiler
  - Job scheduling

Explaination:

Stacks are commonly used for tasks such as parentheses balancing, keeping track of local variables at runtime, and syntax analysis for compilers, but not typically for job scheduling.

|         | Q. No. 18. Consider the pro   | ocess of balancing symbols using stack. What characters   |
|---------|---|---|
|         | will be pushed into the sta   | ck?   |
|         | A: Operators B: Elements in the expres C: Open brackets D: Closing brackets             | Explaination: This is because, in a symbol balancing algorithm, open brackets are typically pushed onto the stack as they are encountered, and then popped off when their corresponding closing brackets are found.   |
| ⊚A ⊚B   | C D Clear Answer Mark For   | Review  |
|         | Q. No. 19. Which sorting a (worst, best and average                                     | Igorithm has the same time complexity for all the cases ge)?  |
|         | A: Quick B: Merge C: Insertion D: Selection   | Explaination: The selection sort algorithm has a time complexity of O(n^2) regardless of the input data's initial order.  |
|         | Q. No. 20. A tree with n noo  | les has   |
| O A O B | A: 2n edges B: n² edges C: nlog n - 1 edges D: n - 1 edges  © C D Clear Answer Mark For | Review  |
|         |   | owing is not a collision resolution technique in hashing?   |
|         | B: Separate chaining  | Explaination: Poling is a process used in various domains like network communications and operating systems for checking the status of an entity. Open addressing, separate chaining, and probing are all valid collision resolution techniques in hashing. |

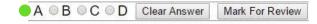
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#### Q. No. 22. Which of the following is not a property of an AVL tree?

- A: AVL tree need not be a binary tree
- B: It is height balanced tree
- C: Sub-trees are at a height difference of one
- D: Rotations are used to balance the tree

#### Explaination:

This statement is not true because an AVL tree is a type of binary search tree that is height-balanced.



Explaination: Friend functions in C++ are a way to

grant access to private and protected members of a class from outside

the class, but they are not member functions themselves and are not

defined within the class scope

### Q. No. 23. Which one of the following is correct w.r.t friend function?

- It is defined outside the class scope with right to access both private and protected members of a class
  - B: It is defined inside the class scope with right to access private and protected members of a class
  - C: It is a static member function with right to access only private members of a class
  - D: It is defined outside the class scope with right to access only private members of a class

# Q. No. 24. class XYZ: public ABC1, public ABC2 {} is an example of

- A: Polymorphic inheritance
- B: Multilevel inheritance
- Multiple Inheritance
- D: Hierarchical inheritance

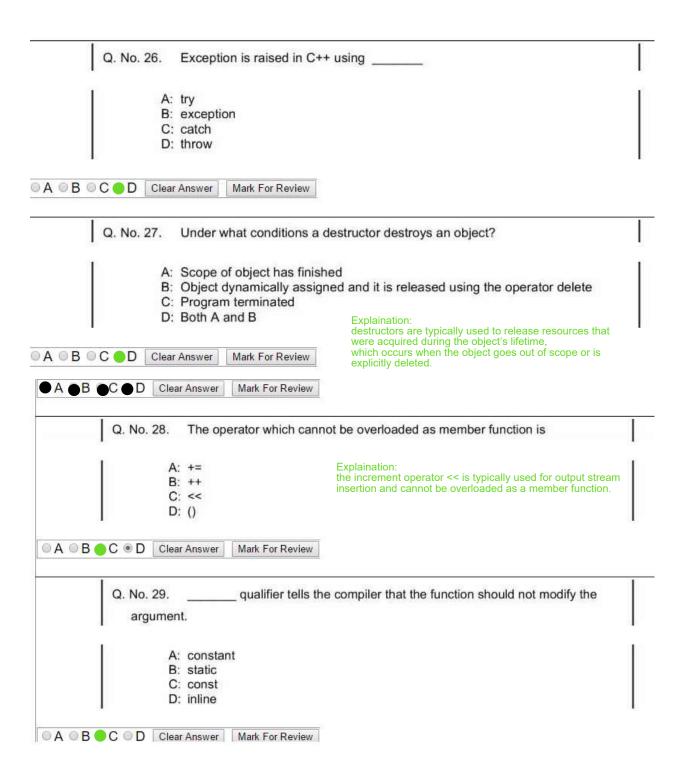
## Explaination:

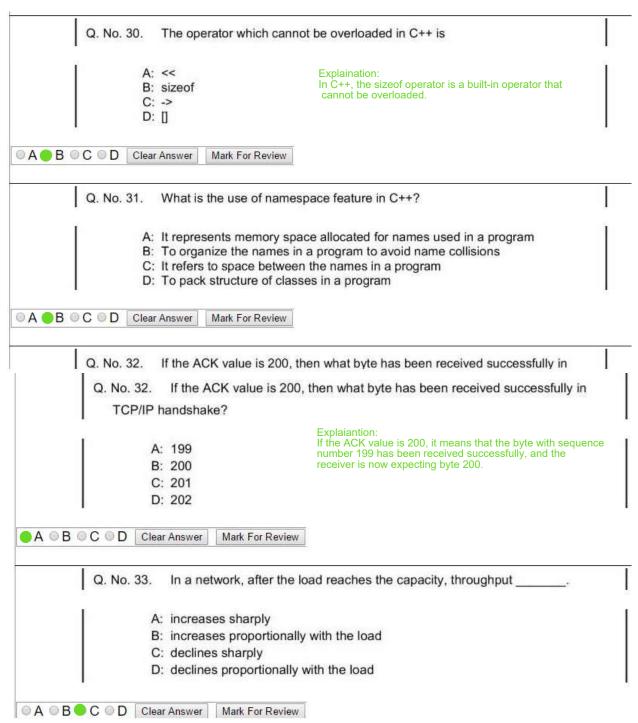
The code snippet demonstrates multiple inheritance, where a single derived class inherits from more than one base class.



- Q. No. 25. When we create an instance of a class (object), we access the object's members using the \_\_\_\_\_\_ operator.
  - A: insertion
  - B: modification
  - C: extraction
  - D: dot

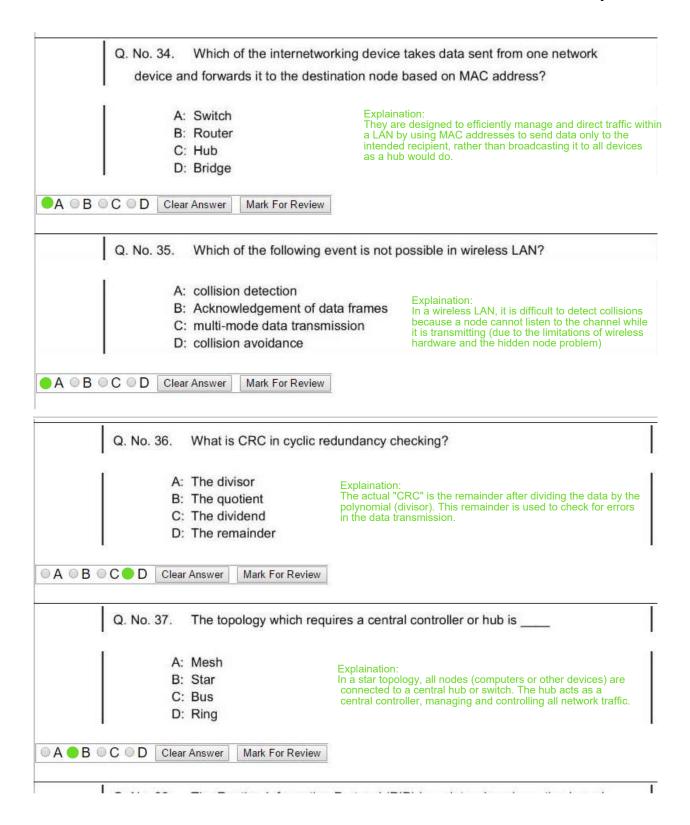






Explaination:

When the load reaches or exceeds the network's capacity, the throughput generally declines sharply due to factors such as packet loss, increased collisions, and the need for retransmissions in TCP/IP networks.



|         | Q. No. 38. The Routing Information Protocol (RIP) is an intra-domain routing by |  | mation Protocol (RIP) is an intra-domain routing based  |
|---------|---|--|---|
|         | on  | routing algori                                       | ithm.   |
| A @ B ( | B:<br>C:<br>D:  | distance vector<br>link state<br>path vector<br>OSPF | Explaination: In RIP, routers periodically exchange entire routing tables with their immediate neighbors. Each router uses this information to update its own routing table, based on the distance (usually the hop count) to the destination network.  |
|         | Q. No. 39.  |  | sferred from server A to client B in the same session f TCP connections between A and B is  |
|         | B:  | 9<br>10<br>11<br>12                                  | Explaination: FTP uses a single, persistent TCP connection for control commands between the client and the server. There will be 1 control connection. There will be 10 data connections (one for each file transfer). Hence. 11  |
|         | Q. No. 40.  | is a s   | subset of a network that includes all the routers but   |
|         | A:<br>B:<br>C:  | Spanning Tree LEACH Spider Structure Spider Tree     | Explaination: A Spanning Tree is a subset of a network that includes all the routers (or nodes) but contains no loops. It ensures that there is a unique path between any pair of nodes, effectively preventing cycles and redundancy in the network.   |
| A OB    | OC OD Clea  | r Answer   Mark For R                                | Review  |
|         | Q. No. 41.<br>seven lay   | A connecting devi                                    | ice that operates in all five layers of the Internet model or s called  |
|         | (000)   | Repeater<br>Bridge<br>Router<br>Gateway              | Explaination: A gateway is a network device that acts as an entrance to another network, often translating data from one protocol to another, allowing different networks to communicate with each other. It operates across all layers of the networking models, from the physical layer to the application layer, to facilitate this comprehensive functionality. |

