

Cisco HackerRank MCQ Crash Practice Sheet

MCQ Crash Practice - Cisco Prep (OS, DBMS, CN, OOP, Time Complexity)

Operating Systems:

1. Which scheduling algorithm gives minimum average waiting time?

- A) FCFS B) Round Robin C) SJF D) Priority

Ans: C

2. What causes a deadlock?

- A) Low memory
B) High CPU load
C) Mutual exclusion, hold and wait, no preemption, circular wait
D) Paging

Ans: C

3. Context switching happens between:

- A) Threads only B) Processes only
C) Processes and threads D) None of these

Ans: C

DBMS:

4. What does 3NF prevent?

- A) Insertion anomaly B) Functional dependency
C) Transitive dependency D) Lossless join

Ans: C

5. Which of the following is not a type of SQL join?

- A) Inner join B) Outer join C) Cross join D) Parallel join

Ans: D

6. Which is true for a candidate key?

- A) Unique + Not Null B) Only Unique

C) Can be NULL D) Always foreign key

Ans: A

Computer Networks:

7. Which protocol is connection-oriented?

A) UDP B) IP C) TCP D) HTTP

Ans: C

8. In OSI model, routing is done at which layer?

A) Transport B) Network C) Data Link D) Session

Ans: B

9. What is the default subnet mask for Class C?

A) 255.0.0.0 B) 255.255.0.0 C) 255.255.255.0 D) 255.255.255.255

Ans: C

Object-Oriented Programming:

10. What is function overloading?

A) Same function name, different return types

B) Same function name, different parameters

C) Multiple classes with same function

D) Inheritance of base class

Ans: B

11. What is virtual function used for?

A) Early binding B) Overriding C) Constructor chaining D) Inheritance only

Ans: B

Time Complexity:

12. Time complexity of binary search?

A) $O(n)$ B) $O(\log n)$ C) $O(n \log n)$ D) $O(1)$

Ans: B

13. Time complexity of merge sort?

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

Ans: C

14. Best case time for linear search?

A) $O(n)$ B) $O(n^2)$ C) $O(1)$ D) $O(\log n)$

Ans: C

15. Which of these has worst case $O(n^2)$?

A) Merge Sort B) Quick Sort (naive pivot) C) Heap Sort D) Insertion Sort

Ans: D